

DISTANCE 02

with essays by

Cassie McDaniel

Sharlene King

Francisco Inchauste

<http://distance.cc>

DISTANCE 02

concerns *extracurriculars*.

Wherein:

Cassie McDaniel asserts that we can change the world more easily when we're embedded in foreign situations.

Sharlene King wants us to create homework for ourselves, so we can improve our own skills.

Francisco Inchauste proposes a way to restore meaning and significance to what and how we build.



DISTANCE's essays don't exist in a vacuum. We encourage you to excerpt and discuss these essays with others. You have free reign to quote as much as you need to get your point across. Good writing begins conversations, and we're listening. Visit *Distance's* website at <http://distance.cc> to read and remark on others' responses.

If you have any questions, email us at we@distance.cc and we'll make it right.

Publisher's thoughts

by Nick Disabato

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Nary a month after our first issue's launch party, our second issue is in the can. I'm extremely proud of our authors and their essays, and I'm honored and humbled that you have chosen to stay with us.

I have two goals with *Distance*: to elevate the quality of conversation about our field, and to expose unheard, talented people to a wider audience. I know that neither goal is terribly novel or interesting, but they're increasingly difficult to achieve. I'm patient enough to know that it may take a long time before we start to see any meaningful change. In the meantime, I love helping others make each issue that we put out the door.

Our first issue was a grab bag: each essay had a different subject area, critical angle, and research direction. This is my first attempt at refining and focusing a conversation around a specific goal. As I line up authors for each future issue of *Distance*, whomever signs on first will be able to determine the issue's theme—which, in turn, will affect the other two essays. Themes are broad so an author's goal can stay open-ended, though: interesting ideas may come from far-flung places, resisting immediate connection and inference.

As you might have guessed from the front cover, *Distance* 02 is about **extracurriculars**. What do we do outside our day-to-day work? How does our work environment affect us? And how can our work be meaningfully received by our audiences? We offer one way forward for each of these questions, and we seek your input.

Our website, at <http://distance.cc>, provides a handful of ways you can join the conversation—but the easiest is on your own turf. Post about our essays on your blog. Tweet your initial thoughts [@distance](https://twitter.com/distance). Send us an email, at we@distance.cc, about what you think. Rip our work apart; make it better.

Thanks again for reading, and for all of your ongoing support. Hope you're well.

Nick Disabato

May 30, 2012

Authors' thanks

Cassie McDaniel: An enormous thank you to my husband, Mark Staplehurst (aka [@britburger](#)), for putting up with months of late nights and stolen weekends while I worked on this essay. Not only did he consistently break one of our rules by cooking for me *and* doing the dishes, he also helped me un-muddle my expressions, offering suggestions and improvements to the writing when they were most needed. Thanks as well to Nancy Kay Clark, editor of Design Edge Canada; and to the writers group at High Park Library in Toronto, who helped me focus the essay and spurred me on toward the finish line with nice things things to say (even if they weren't true).

Sharlene King would like to thank the Chicago Public Library for their incredibly low late fees, extenuating patience, and proximity to work; Nicole, my partner, who in spite of her unending disinterest in design has found me interesting and tolerable; Nick Disabato, for his perpetual state of concern and generosity; and the entire Chicago design community—you know who you are, you pretty young things.

Francisco Inchauste would like to thank the kind editor of this wondrous publication, Nick Disabato, for asking me to be a part of this special thing. Through this essay, I was able to synthesize a perspective on the kind of design I believe in, and hope more of us can practice it in the future. I appreciate some early feedback from Rian van der Merwe that helped to hone the premise. Thank you, reader, because this idea will only come to life through your interpretation, dissidence, and proselytizing. I'm indebted to the writings of Umair Haque for providing great insight into how we can measure meaningful things. I'd also like to thank my wife, Megan, and our amazing kids for showing me what a meaningful life is all about.

Note on citations

Distance exists in quite a few forms: book, PDF, ePub, and Kindle. We know that people read all sorts of ways, and we want the text to fit your reading habits, not the other way around. 1

Most citation methods refer to a work's page number, but only two of *Distance*'s forms have discrete pages. Consistent, understandable citation by page number is impossible, so wayfinding must exist within the actual text. 2

In an attempt to solve this problem, *Distance* doesn't have page numbers. Instead, each essay's paragraph has a little number to the right, as seen here. *These numbers will always be consistent among each format of an issue of Distance.* 3

This is similar to the convention of “purple numbers” in blogging,¹ and it will remove any ambiguity about what's being referenced. As a rule of thumb, where a page number would go, use the **paragraph number** instead. 4

For example, MLA citation should look like Whipple, Jon. “What Designers Know.” *Distance* 01: 14–17 for the 14th through 17th paragraphs of Jon Whipple's essay in our first issue. 5

1. See also CIM Community, “Purple Numbers”, <http://dsn.tc/01x-01> and Simon Willison, “PLinks”, <http://dsn.tc/01x-02>.

I sense a new attitude of buckling down to change entire organizations, to increase public and governmental awareness of the importance of our work, and to seek out opportunities to affect the lives of millions.

—Cennydd Bowles, *A Changing Tide*,
at <http://dsn.tc/o2x-02>

The multiplexed multiplicity of personality and identity drives us deeper into the self to search for what cannot be reproduced, devalued, commodified, into the world of intentions, subjective states, secrets. We flock to the aura of the artwork and to the Platonic self: an unmediated self of inimitable, irreducible, meaningful purity. We vigilantly test for forgeries and phonies.

We want what the camera cannot show: a person's fidelity to his innate truth. We want the soul we doubt, the core we have learned isn't there. We want the antidote to personality, the desperate and neurotic fictions of the performative self. We want the inner, abiding fact: may it abide beyond death.

—Mills Baker, *Authenticity and the Deformation of Character*,
at <http://dsn.tc/o2x-01>

The Embedded Designer

Changing the world in far-flung industries.

by **Cassie McDaniel**

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1 WHEN I FINISHED SCHOOL, I decided not to find a job right away. Instead, I sold almost everything I owned, stuffed what remained into two bulging suitcases, and bought a one-way ticket to London. Some people told me I was brave (*You've never been to Europe?*); others told me not to go (*It isn't safe for Americans*). I ignored everyone: I was too excited about curry houses on every street corner to worry about visas, exchange rates, or foreign prisons.

2 In my first couple of months there, I learned the street names fairly quickly, but I never really knew where I was. I was terrified of the surge of rush-hour commuters on the Underground. I wore an unruly orange blouse in a sea of blacks and greys. I recognized accents I nevertheless couldn't understand. Over time, I adjusted. Trash became rubbish, America became the States, statements became questions, and Jay-Z became Jay-Zed. I came to appreciate how London's meandering sprawl reveals a long and layered history—even if wayfinding proved impossible.

3 A year later, I stood in Waterloo station as hoards of people rushed by to catch their trains. I looked up at the fifty-foot-tall ceilings, the four-faced clock, the vaulted glass roof, the black soot on meticulously engraved walls, and I realized: I had begun to take these things for granted. I had unconsciously acclimated to an entirely new environment, and now I became aware of a monumental internal shift. I recalled my first glimpse of London from the airplane window—the jumble of matchbox flats and the olive-green Thames snaking its way through the chaos—and realized how far I was from everything I used to know, how different I would seem to people who knew me back home.

4 This Waterloo moment allowed me to reconcile the tough parts about living abroad with the payoff of personal growth. I realized I could adapt to a new environment simply by being immersed in its culture.

Design needs its own Waterloo moment. To get there, we designers need to look to unfamiliar problems in new territories, especially within other industries. In doing this we will find that thoughtful design can be applied everywhere—a simple idea that holds an endless potential for us to not only grow as designers, but to change the world.

Working inside-out

Scott Thomas saw the potential for disruption when he was offered a position at Barack Obama’s ‘08 campaign headquarters.¹ It only took a day for Thomas to accept the offer and trade in his freelance life for a full-time gig.

Over the following year, Thomas built a team capable of designing on the fly in response to immediate campaign needs. It was critical to embed the team directly into the campaign, rather than to hire freelancers, because insight into the culture for which they were designing proved a valuable asset. For example, if Thomas had been asked to implement a stack of posters or stickers, such a predetermined solution would have limited the design possibilities that allowed greater insight and cohesion within the whole campaign.

Closed briefs, such as designing posters or stickers, menus, websites, or book covers, result in simple assets. These projects are often easy and profitable; they are simple to cost out and familiar to execute. Alternatively, open briefs, which call for designers to completely re-imagine how people interact with our clients, are few and far between and are usually considered too ambitious for existing budgets.

Yet closed briefs often indicate a missed opportunity to source the true root of a design problem, which squanders design’s potential. That is the key message behind design thinking, or a hands-on design methodology as a means to innovation. However, no amount of design thinking will seamlessly integrate design into complex systems without deep, long-term commitment on our part—and that can’t happen through freelance work or short-term

1. “To ensure the impeccable execution so prized by [Sol] Sender when he created the ‘O’ logo, the campaign began to realize that in-house designers were needed to manage the creation and production of future materials”. Scott Thomas, *Designing Obama*, Post Press, 2010, p. 33. <http://dsn.tc/o2a-05>.

agency projects. We can really only thoroughly understand a problem if we're positioned closer to our end users or embedded in their culture.²

Would Thomas have been able to redefine political campaign design if his work was dictated by a traditional client relationship? Would his work have fit the campaign's shifting context if he was briefed on what to create, rather than assessing for himself what was needed? I doubt his work would have had as much integrity or as long-lasting an effect. 10

Design's innate adaptability

Tim Brown, IDEO's CEO and president, sorts the creative process into three phases: inspiration, ideation, and implementation.³ During the inspiration phase, we gather resources and insights through creative briefs, personas, competitive landscapes, asking questions, and listening to what clients both do and don't say. This process, says Brown, is available to everyone: engineers, businesspeople, and entrepreneurs.⁴ 11

While design processes are available to anyone, regular experience with the creative process makes the designer particularly adaptable to new environments. An eagerness to understand the nature of our design challenges is part of our mandate. We ask tough questions of our clients and their industries. We need to know: Why are things done this way? What problem is it solving? What can we get rid of to make this simpler? Designers are receptive to new input by definition, and that makes us inherently more malleable than other kinds of workers.⁵ 12

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2. Heather Loftiss tackles the pros and cons of in-house design teams versus running one's own agency in her AIGA article, "Jumping In from the Outside", 27 Feb 2012. <http://dsn.tc/o2a-o2>.
 3. Tim Brown, *Change By Design: How Design Thinking Transforms Organizations and Inspires Innovation*, HarperCollins Business, 2009.
 4. Design needs constraint to function well. The more information we have, the more constraint we have, and constraint forces creative solutions to the surface.
 5. Adaptability is built even deeper into the design process, where critique is a foundational skill. Web designers, too, are a breed of their own; quickly-evolving technologies mandate the need to stay current.

This adaptability means designers are not only adept at facing change, but also at initiating it. Andy Epstein, in-house designer evangelist at AIGA New York and author of *The Corporate Creative*, agrees, saying:⁶

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As a group, designers possess a powerful set of talents, beliefs and aptitudes that are often lacking in today's average corporate culture, but that are uniquely suited to effecting change for more responsible, humane, and sustainable business practices.

In short, designers crave change. We want new inspirations, we get tired of the same old challenges, and we're willing to make sacrifices in order to have an inspiring and challenging environment. Scott Thomas is just one example—he was ready to take on the Obama campaign without any experience in politics. This type of enthusiasm isn't unusual for designers.

A better way of working: big wheel, little wheel

Today's global challenges—such as poverty, education, the environment, human rights, and health epidemics—are extremely complex and won't be solved by a single person working in isolation. When many players must work together, the **hub and spoke model**, which requires several independent arms to join up in a central hub to exchange ideas or services, is a common method of organization. This model makes sense at the management level.⁷ For example, airlines route passengers through a handful of centralized airports so they can more easily manage travel schedules and maintain profits. But the model also has gross inefficiencies that can be bad for individuals. Airline schedules, for example, have peak travel times where demand is predictably higher than par, which can create unnecessary congestion and domino delays for travelers.

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Interdisciplinary collaboration sometimes provides similar frustrations, despite a team's best intentions. For example, clients may ask one agency to develop their brand, another to come up with digital strategy, another to

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6. Andy Epstein, "Design for Change: An Inside Job", *AIGA*, 21 Apr 2011. <http://dsn.tc/o2a-04>.

7. The *hub and spoke model* is traditionally used to describe aviation or distribution paths where several routes pass through one central location to maximize efficiency and, sometimes, profit. See also <http://dsn.tc/o2a-03>.

create a website, and yet another to develop the website—but it can be difficult for so many large teams to communicate with each other. One of the best ways to counteract the inefficiencies of the hub and spoke model is to internalize a team of experts, structured as many smaller wheels as opposed to one large wheel.

Many smaller wheels means more opportunities for exchange between players, which includes exposure to new and different ideas, new sources of inspiration, more opportunities to open up and share the creative process, to build trust, to enable individuals, and to respond to immediate needs. In short, people collaborate more easily in smaller groups. But for this to be effective, we designers need to be willing to cooperate with other industries.

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Disrupting insularity

Language shows how exclusive industries can be. Within any discipline is a unique vocabulary that outsiders struggle to understand. Design uses acronyms like IA, PDF, NDA, FPO, COB, and SoW, for example, that carry different meanings depending on their context. The same, of course, exists within other industries. Insular language typically discourages collaboration. It poses a learning curve, for instance, and unless we force ourselves to admit ignorance and ask questions in the moment, it can be a barrier to meaningful collaboration. Quirks like these are ripe for disruption.

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The internet is a tool routinely used to disrupt traditional industries. Airbnb disrupted the travel accommodation industry by allowing individuals to viably compete with hotels.⁸ Publishing companies have revolutionized their revenue models by accepting ebooks and paywalls as major sources of income.⁹ Educational institutions post their courses online for free; musicians

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8. Alex Cocotas, “Airbnb’s Revenue Explodes”, *Business Insider*, 13 Mar 2012. <http://dsn.tc/o2a-01>.

9. Steve Ladurantaye, “Publishers Take Heart from NYT Paywall Success”, *The Globe and Mail*, 20 Mar 2012. <http://dsn.tc/o2a-18>.

put their discographies on Bandcamp¹⁰ and SoundCloud.¹¹ Disruptions share a few key traits:¹²

- the open flow of ideas;
- the sharing of resources;
- the empowerment of the individual;
- and a sudden shift of revenue away from established players.

Startups have led this charge, and they often embrace designers as founding members¹³ —but what if a designer doesn't want to be an entrepreneur, and what if they don't want to work in an agency? Where will they find their place? Fortunately, the opportunities for design are much more extensive than what is currently most visible. Embed a designer into other social settings, and we can make valuable contributions to these disciplines—as well as garner a better understanding of our own creative process. Imagine if we took another look at the way the world farms, pursues justice, teaches kids, or empowers communities. 19

When art stopped being science

While a hundred years ago working with people in unrelated fields would have seemed absurd, five hundred years ago the crossover between art and design and our scientific counterparts was far from novel. Historically, most noteworthy scholars were accomplished in multiple subject areas including art and science.¹⁴ Leonardo da Vinci's anatomical drawings, for example, were equally informed by scientific methods as they were by concepts of balance, proportion, stroke, and chiaroscuro. Ancient scholars Zhang Heng from 20

10. <http://bandcamp.com>.

11. <http://soundcloud.com>.

12. Horace Dediu, "What is Disruption and How Can it be Harnessed?", *Asymco*, 12 Mar 2012. <http://dsn.tc/o2a-13>.

13. Laurie Seagall, "Silicon Valley is Desperate for Designers", *CNN Money*, 6 Apr 2012. <http://dsn.tc/o2a-14>.

14. Rihll argues that most, as opposed to many, early scholars and academics were skilled polymaths. C.J. Tuplin and T.E. Rihll (eds.), *Science and Mathematics in Ancient Greek Culture*, Oxford University Press, 2002.

China¹⁵ and Imhotep from Egypt¹⁶ were polymaths. Being well-rounded was integral to education from very early on throughout the world, well before the European Renaissance. Multi-talented scholars not only pioneered engineering, architecture, medicine, and mathematics, but they also shaped art, music, philosophy and literature.

The term “scientist” didn’t even exist until 150 years ago, having first surfaced in a proposal by William Whewell, an English polymath, in the mid 1800s.¹⁷ In the late 1800s, Great Britain established a governmental body called the Science and Art Department, a consolidation of several institutions concerned with practical disciplines—art, design, and both hard and soft sciences; and at the time, miners and geologists sat comfortably alongside artists and designers under the same council.¹⁸ Design was unquestionably labelled a practical art, and design and science were close allies. 21

Before Whewell’s proposal, students acquired skills that naturally overlapped disciplines in order to receive what was considered a well-rounded education. Whewell’s introduction of the word *scientist* suggests a distinct beginning for the separation of design and art. Recently, the gap between the arts and the sciences has narrowed enough that we may be able to return to our interdisciplinary roots. Given this, we will have a shot at solving some of the world’s tough problems that need creative thinking. 22

Disappearing barriers

Education is dissolving the barriers between industries, making it easier for us to branch out. There is more shared, democratic knowledge today than ever before, and many companies are taking advantage of unrestricted access 23

15. Zhang Heng invented the world’s first seismograph to measure earthquakes and was an accomplished astronomer and poet. Yeong-chung E. Lien, *Zhang Heng, Eastern Han Polymath, His Life and Works* (PhD dissertation), University of Washington, 2011. <http://dsn.tc/o2a-15>.

16. Imhotep is considered to be the first architect of the step pyramids and an early physician. See also “Imhotep”, *Encyclopedia Britannica*. <http://dsn.tc/o2a-17>.

17. William Whewell, *The Philosophy of the Inductive Sciences, Volume 2*, Harrison and Co., 1840, p. 416.

18. Henry Barnard (ed.), “Science and Art Department and the South Kensington Museum”, *The American Journal of Education* 22: 49–50, 1871.

to education and resources. University of the People was founded in 2009 as a 100% tuition-free institute for higher-education,¹⁹ while Khan Academy and MIT's OpenCourseWare provide free, in-depth coursework on a diverse range of subjects. Codecademy²⁰ and Method of Action²¹ provide intuitive, flexible formats for learning to program and design. And more platforms keep launching: Pathwright, released in April 2012 by Duo Interactive, allows anyone to create and sell online courses.²² Never before have we been so well-equipped to accomplish whatever we set our minds to. As another Renaissance polymath, Leon Battista Alberti, once said: "A man can do all things if he will."

Despite the abundance of opportunity, designers tend to be relegated (and 24
relegate themselves) to a few niche fields. About.com (perhaps not the pre-eminent indicator of design trends, but still a top Google result) sorts graphic design graduates into five possible career tracks: advertising, web design, book design, illustration, and branding.²³ These are skills, not careers, yet they are the most familiar paths; marketing and advertising agencies lure graduates with higher salaries and the promise of working with world-renowned brands. But some professionals are starting to ask another question: Is it important work? Cameron Koczon searches for our purpose in his rousing article "An Important Time for Design":²⁴

19. Khan Academy, <http://www.khanacademy.org>; Massachusetts Institute of Technology, <http://ocw.mit.edu>, and University of the People, <http://www.uopeople.org> represent a changing attitude in academia toward free education. Further programs and resources are profiled in Wendy Boswell's article, "Technophilia: Get a Free College Education Online", *Lifehacker*, 25 Sep 2006. <http://dsn.tc/o2a-16>.

20. <http://www.codecademy.com>.

21. <http://method.ac>.

22. <http://www.pathwright.com>.

23. Eric Miller, "Graphic Design Career Paths", About.com. <http://dsn.tc/o2a-12>.

24. Cameron Koczon, "An Important Time for Design", *A List Apart*, 17 Jan 2012. <http://dsn.tc/o2a-11>.

[The startup world is] ready to believe that design is going to change the world—all we have to do is show that it can. If we succeed, we change the way design is perceived and valued forever. If we fail, design will lose its luster and misguided ideas about what design is may prevail.

As the barriers between fields break down, we should keep trying to answer what design is. Mark MacKay, an interaction designer and co-creator of Method of Action, insightfully describes the differences between art, design, and engineering:²⁵

People often make of design some sort [of] commercial spawn of art. It is not. Design is a discipline in itself, related to engineering, that uses some of art's syntax. It is different from engineering in the sense that engineering looks after the efficiency and robustness the product [sic], and design looks at the interaction between the product and a human being.

Both MacKay and Koczon attempt to define design as it currently exists, but they also exude an idealism about what design is capable of across industries. Although MacKay points out some differences between design and other fields, he also hints that even disparate industries have more in common than might appear at first glance: a shared purpose of building for people.

Designers who seek to cross disciplines have an awful lot of wind in their sails. The big barriers—access, exposure, and inflexible ideologies—seem to have already broken down.

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Other industries' good ideas

People often borrow concepts from sister disciplines to advance their own. In the late seventies, architect Christopher Alexander came up with the idea of **design patterns**,²⁶ or reusable solutions to a common problem. For example, a hospital waiting room and a bus stop are both places in which people wait, so they might share similar environmental needs.

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25. Mark MacKay, “You’re Already a Pretty Good Designer”, *Method of Action*, 27 Jul 2011. <http://dsn.tc/o2a-07>.

26. Christopher Alexander’s book, *A Pattern Language: Towns, Buildings, Construction*, was written with Sara Ishikawa, Murray Silverstein, Max Jacobson, Ingrid Fiksdahl-King, and Shlomo Angel in 1977, and remains a seminal book on architecture and urban design.

In 1995, Erich Gamma, Richard Helm, Ralph Johnson, and John Vlissides applied design patterns to software, making difficult programming solutions replicable and streamlined.²⁷ More recently in 2010, Ethan Marcotte borrowed from architecture when he proposed responsive web design, in which designers and developers account for an ever-expanding variety of screen sizes, resolutions, and interaction models. He was inspired by “responsive architecture,” where environments physically “bend, flex, and expand as crowds approach them”.²⁸ Without an interest in other disciplines—and without access to their knowledge—programming and web design would look very different today.

A case study: design in healthcare

While these suggestions may sound theoretical, they come from firsthand experience. Healthcare is one of the biggest industries in need of a shake-up, so it is with that in mind that I accepted a job last fall as the first visual designer at Toronto General Hospital’s Centre for Global eHealth Innovation.

It is somewhat of a paradox to me that an industry with so much financial backing and so many smart, passionate people can have such low design standards. On first blush, it may be because healthcare practitioners are too busy focusing on much bigger problems. Medical errors contribute to a staggering number of deaths each year,²⁹ and chronic disease management, preventative medicine, and patient-doctor communication are massive problems for which there are no silver bullets.

Our Centre has an enormous scope of innovative projects. We evaluate medical devices, examine processes, and assess environments; we design and implement solutions to the problems we find. The team consists of clinical engineers, programmers, nutritionists, hardware engineers, managers, human factors analysts, an industrial designer, and user interface designers. We

27. Erich Gamma, et al., *Design Patterns: Elements of Reusable Object-Oriented Software*, Addison-Wesley, 1994.

28. Ethan Marcotte, “Responsive Web Design”, *A List Apart*, 25 May 2010. <http://dsn.tc/o2a-10>.

29. Rachel Giese reports in “The Errors of Their Ways” published in *The Walrus* Apr 2012 issue that the number of deaths from medical mistakes this year in Canada alone will reach around 24,000. Earlier reports (P. Aspden, et al., *Preventing Medication Errors*, Quality Chasm Series, National Academies Press, 2007) suggest 1.5 million patients are harmed each year in the States because of medication errors, costing hospitals an extra \$3.5 billion.

work closely with our clients and partners, including both internal and external vendors, but my work usually brings me closest to my colleagues in human factors.

With roots in cognitive psychology, human factors analysts take into account the environmental, cognitive, physical, and organizational considerations for how humans interact with objects, services, or technologies.³⁰ Donald Norman helped popularize the discipline in *The Design of Everyday Things*,³¹ but the field first gained prominence during World Wars I and II to improve pilots' aviation safety. In later years, human factors expanded to high-risk systems like nuclear facilities, where the consequences of error can be catastrophic. When we pinpoint critical safety issues in our devices, we pay attention to what kinds of interactions lead to the most effective change in behavior, as well as to the broader challenge of incorporating good human-centered design into real-world environments.

Over the past few months, I've noticed the vivid contrast between sterile, whitewashed clinical practice and a chaotic, messy designer's environment—although each is desirable in its own way. A new colleague of mine recently described his experience teaching human factors engineering at a local design school: “Everything is so messy and unstructured. The students aren't used to grades. Anything goes,” he told me. I noted how wonderful that environment sounded, but his discomfort was obvious. This neatly sums up the split: he prefers deadlines, structure, and hierarchy, because those elements have been strong factors throughout his career.

Creative people are often ad-hoc, spontaneous, and frequently digital-native, but hospitals are structured, well-documented, and often paper-driven. While designers strive to engage and inspire, a healthcare provider strives for their patient's return to normalcy, and while I tend toward creative risk-taking, the consequences can be life-threatening in healthcare. Unconventional interfaces, for example, that prove difficult for nurses to use in high-stress,

30. Kim Vicente, *The Human Factor: Revolutionizing the Way We Live with Technology*, Vintage Canada, 2004, pp. 1–4.

31. Donald Norman, *The Design of Everyday Things*, Basic Books, 1988.

time-sensitive situations can prevent the necessary delivery of care for patients.

Since joining healthcare, I've had to design in new ways, often finding I share an unexpected commonality with human factors. Both human factors and design employ a similar process for evaluation, for example: what human factors calls a heuristic evaluation,³² we call a critique. Both design critiques and heuristic evaluations work best when they are specific, focused, constructive, and tied to objectives; and both draw on intuition during assessment. Both disciplines are also concerned primarily with the user. 34

But the broad similarities end there. Human factors analysis employs more precise terminology than design: for example, what might be “this isn't quite right” in a design critique would unequivocally be labeled an error in a heuristic evaluation. Designers assess an overall emotional experience, while human factors analysts look for unambiguous, measurable success. Designers also seem to practice greater tolerance for trial and error—and subsequently more failures—when solving a problem. Ultimately, however, we share the same prerogative to make systems better, easier, and safer. 35

Exposure to new methodologies is challenging the way I work. If colleagues ask the purpose of a mood board, I must examine and validate why a mood board will be useful to the team. This doesn't make me inefficient, though: rather, it forces me to be realistic about design's strengths and weaknesses that I currently take for granted. On the same hand, seeing the ways my colleagues ask participants non-leading questions during usability studies has forced me to examine my own partiality toward certain design feedback. I now strive toward a more unbiased, user-oriented perspective. 36

My own experience serves as a case study for the kinds of challenges other embedded designers might face. While your daily tasks, preferred work environments, and processes may differ, the opportunity to extend design to other industries is vast and exciting. 37

32. Jakob Nielsen's “Ten Usability Heuristics” (2005) outlines guiding principles for achieving successful user interface design. <http://dsn.tc/o2a-o8>.

The challenges facing embedded designers

Embedding design into other disciplines isn't easy. Good creative environments are difficult to translate to other industries, and designers typically don't want to relinquish their office's perks and culture. Material benefits, however, only serve as motivation for so long. If we address some of the potential discomforts of the embedded designer, we can pull designers into unfamiliar territories, break down the preconceptions of new collaborators, and face the shortcomings of our current design practices.

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PHYSICAL SPACE

The environment in which we work can have a big influence on first impressions of new industries. Moving from open floor plans to cubicle rows, for example, is a dramatic shift. Office spaces, however, are usually non-negotiable, so how can we encourage better integration into new spaces without too much alteration or expense? One easy way is to make full use of common areas, like a shared lunch space or breakout room, to allow face time between colleagues. These spaces should provide some impetus for use, like common tools or resources, coffee machines or refrigerators. Pockets of shared physical spaces that encourage interaction will allow different types of workers to coexist.

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CREATIVE MONOPOLY

Although design often monopolizes the word "creative" (the "creative department", for instance), there is a staggering amount of creativity in other disciplines, such as in programming and the social sciences. It demotivates others when we monopolize the word "creative". It is important that colleagues be treated as a unified team, with creativity encouraged among everyone.

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PERCEIVED VALUE

At the beginning of 2012, Mike Monteiro shared some resolutions for us in *.net Magazine*, suggesting we branch out from creating glossy veneers or selling things, to social problems like the economy, education, and sustainable food sources:³³

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We have more processing power, affordable tools, and combined intelligence right this very minute than at any point in the history of design. We are using it to build shit. It's time to aim higher. Let's find problems to solve that actually improve people's lives.

As Monteiro suggests, design has become a scene that celebrates itself. By working in fields whose primary enterprise is in sales and marketing, designers reinforce the notion that design has a narrow scope. We need a wake-up call to establish our legitimacy among other industries, and we can begin to dislodge outdated perceptions of design by moving into new contexts.

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"If you weren't a designer, what would you have done?"

In a series of interviews in *Bracket*'s first volume, some design industry role models were asked what they might be if not designers. Frank Chimero said he'd be an astronaut; Jessica Hische said she'd work in forensics; Geoff McFetridge said he would have been a professional downhill skier. Other answers ran the gamut: marine biologist, anthropologist, sociologist, writer, ping-pong player, vicar.³⁴ As designers, the truth is that we have the ability to explore all of these areas while we maintain our day jobs.

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Pigeonholing designers into limited applications is simply no longer practical. Design skills will find broad use, and embedding design into new arenas will create clear benefits. Trying new things stretches the bounds of designers' creativity. By incorporating the processes and methodologies of other industries, we can help further our own industry in turn. Embedded designers can

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33. Mike Monteiro, "10 New Year's Resolutions for Designers", *.net Magazine*, 3 Jan 2012. <http://dsn.tc/o2a-09>.

34. *Bracket* 01 (Anonymous, Sep 2010), <http://dsn.tc/o2a-06>. More answers included a treasure hunter, race car driver, sign painter in Mexico, chef, visual artist, musician, tree surgeon, and vampire—proving we suffer no lack of imagination!

come from anywhere and do anything, meaning interests we have outside of work can actually define our careers if we let them. We also have a more serious role to play: we can help fix the world's problems.

To do this, we may have to ask ourselves some difficult questions, especially in reassessing the value of our current work. But from the very beginning, designers are instilled with a love for creative problem solving; we're taught to understand human behavior, avoid cliché, strive for improvement, and we have honed our ability to effectively communicate. We are equipped to deal with any tough problems.

Design holds the ability to disrupt entire industries. Designers will be able to contribute to the sort of change we'd like to see in the world. Such decisions won't be easy; there will be many challenges, but nothing beyond our capabilities.

Do Your Homework

Research towards cultural development.

by **Sharlene King**

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FEW THINGS ANGER ME MORE than professional inadequacy. In art school, our education heavily relied on critiques. I was vicious in critiques. I drew tears from ill-prepared students who couldn't articulate their work. It was infuriating to have my education affected by students who couldn't bother with our industry's vocabulary; from the day you set foot in a classroom, you bear responsibility for understanding your industry. My peers all chose design, and they should have known and defended their craft. 1

Being self-righteous wasn't productive, though. My own flaws and weaknesses were obvious to everyone but myself—living by my ego crushed my self-awareness, and I wasn't practicing what I preached. 2

Homework is *research and practice with the goal of improvement*. Homework isn't client work; it happens outside of your daily practice. Without it, you'll be working in a vacuum, sheltered from any real measurement or development. When you do your homework, you reap the benefits of competitive knowledge, skills, and the undercurrents of your industry. 3

Homework in context

Even if we do homework, we may not be doing homework *right*. Homework demonstrates how well we've absorbed a lesson, but usually we simply mimic the lesson to the teacher's liking. Steven Pinker says that intelligence comes from processing accrued information;¹ simply having that information doesn't help you put the pieces together in the long run—and tests may inhibit creativity. Academically, measurement works best when an objective 4

1. Steven Pinker, *How the Mind Works*, W.W. Norton, 2009, pp. 64–79.

conclusion can be determined, but that makes it hard to accurately measure success in creative fields.²

When you haven't done homework in so long, it's easy to presume you've understood something immediately. Likewise, it's easy to believe you know the true nature of your own aesthetic responses. Your shaky preconceptions aren't revealed until you're asked to articulate how and why you reacted the way you did. But practice forms expertise—and it's hard for us to measure how good we are. Elliott Jaques made a similar point in his *Creativity and Work*:³

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Systematic observation of these issues calls for a special attitude, an attitude of detached involvement, to be achieved only with intense mental toil. By mental toil I mean that creative act in which our conscious beliefs, principles, and concepts are held not as perfect and immutable, as hard-and-fast currency, but as flexible counters, always uncertain and incomplete, and always under scrutiny for modification in light of the reality of experience – concepts, ideas, principles, models, constantly subjected to the modifying influence of common perception.

Jaques argues that we need the objectivity of systematic discipline to create reliable and consistent concepts. Without systematic discipline, your work is just speculative imagination. He further argues that this discipline creates shared perceptions—a collective consciousness—when it's practiced broadly.⁴ According to Robert Florida, collective consciousness defines the creative class; your accomplishments hold weight against a community of like-minded people. Without establishing a discipline around our work, it's much harder for us to participate in our own field,⁵ so we need a way to know that we're improving.

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2. Teresa M. Amabile corroborates this in *The Social Psychology of Creativity*, Springer-Verlag, 1983, pp. 142–149 by demonstrating that repeated, rigorous evaluation may not lead to the kind of flexibility in thinking that is needed for a creative mind-set.
 3. Elliott Jaques, *Creativity and Work*, 9th edition, George H. Pollock, 1990, pp. 10–11.
 4. *Ibid.*, pp. 9–13.
 5. Robert Florida, *The Rise of the Creative Class*, Basic Books, 2002, pp. 67–82, 88–96.

In order to develop your own homework, you need to analyze your own needs and reassess those needs over time. Without knowing where you want to go, you'll only make trivial improvements. Homework without iteration won't help you, either.⁶

Your work needs strong critique in order to improve, and that comes through **constructive criticism**. According to M. Neil Browne, good critical questions may include:⁷

- Are you asking the right questions?
- What makes the answer correct?
- How has your emotional involvement affected your discovery?
- Who cares? Will the uncovered information be valuable to anyone else?
- Do the answers provoke more questions?
- What evidence informs your opinion?
- Do you understand the reasons for the conclusion?
- How are you measuring your success?

We all need solid criticisms. You'll probably be wrong at first—but through criticism and repetition, you'll get closer to being right. Homework involves creation, reaction, conversation, and systematic evaluation—all without client intervention.⁸

What homework means for us

While systematic discipline determines the quality of your homework, it is practiced through repeatedly exercising your skills. Culturally branching out is an exercise in *research*; designing Swiss-influenced punk rock gig posters is an exercise in *practice*.

6. Mike Monteiro and Katie Gillum, *Let's Make Mistakes* #14, "Not Your Friend". <http://dsn.tc/o2b-o2>.

7. M. Neil Browne, *Asking the Right Questions: A Guide to Critical Thinking*, 2nd edition, Prentice-Hall, 1981–1986, pp. 1–8. Browne discusses the merits of systematic evaluation and specifically names examples of good critical questions. Being critical isn't about the destruction of an idea, he posits, but elaborating the path of a thought.

8. *Ibid.*

Swissted is a personal side project of Mike Joyce that redesigns punk rock posters in a strict Swiss style, using simple geometric elements and lowercase Akzidenz-Grotesk to express minimalist concepts.⁹ As of this writing, over two hundred posters have been made. 11

You could argue that Joyce is anti-design, with his generous use of neutral elements on subjects with broad appeal. As a personal project, though, it doesn't have to answer to client concerns or business needs. Swissted is a great example of homework: it's a personal side project combining and exploring two passionate interests. As Joyce progresses, his Swissted posters have become more polished and marketable, even though that may not have been the intended goal. Swissted makes Joyce a better designer, more capable of articulating a specific part of his visual language. 12

Design has many different disciplines, but they all share “the planning and patterning of any act towards a desired, foreseeable end”.¹⁰ Success happens when we close the gap between our intentions and the resulting design. Exercise through homework gets us closer to that end goal, no matter our creative passions. 13

Measurement

In traditional education, a teacher uses grades to communicate how well you understood the curriculum. Outside of an educational setting, grading has a few analogies: professional accomplishments, likes on Dribbble, or maybe a flurry of links to something you've created. 14

As Jaques describes, systematic observation helps us logically group concepts so we can communicate better with each other.¹¹ Towards that end, measurement is about *consistency* in how we communicate: after all, a system of measurement is only reliable if it's consistent. 15

How can we create objective metrics in a discipline that is so dependent on subjective observation? By relying on each other. That's why the design community is so important. Our work constantly requires cultural assessment 16

9. <http://www.swissted.com>.

10. Guy Julier, *The Culture of Design*, 2nd Edition, Sage Publications, 2008, p. 40, quoting Victor Papanek in his book *Design for the Real World*, Academy Chicago, 1972.

11. Elliott Jaques, *Creativity and Work*, pp. 9–13.

and critique for aesthetic and business objectives, and collaboration is the best way to make that happen.¹²

For instance, the portfolio reviews of groups like AIGA, the HOW Conference, and National Portfolio Day Association offer a rudimentary review process—they're short and superficial. Each process is connected to the professional or educational industries—AIGA and HOW's reviewers tend to be in a position to hire you, while NPDA assesses how well you'd perform in a school—but general portfolio reviews rarely connect you with people you end up pursuing professionally.

These days, though, most designers take to Twitter, Forrst, and Dribbble. For example, I have developed many professional relationships with colleagues on Twitter, and I email them work for critique and discussion. Their answers help provide context to my work, but they don't have a personal stake in any of my projects. They are, however, professional compasses that inspire me.

Here in Chicago, 2 Night Stand is a hack weekend¹³ organized by design firm Bright Bright Great.¹⁴ Teams end up mentoring each other, whether or not they share the same experiences, disciplines, or talent. Hack weekends prioritize who you work with and how you collectively reach a goal, instead of how you earn a paycheck—which forces a dependency on the process.

12. Robert Florida, *The Rise of the Creative Class*, pp. 35, 79, 293–297. Florida expands the discussion to address how the pursuit of diversity is actually self-serving for creatives; when our ideas and talents oppose normative culture, they are typically rejected in a conservative environment; likewise, a liberal workplace is less likely to punish the unconventional. He correlates a diverse environment to the tolerance of creativity. For example, in his research, cities with high family-friendly scores also ranked high with gay people.

13. 2 Night Stand, <http://www.2nightstand.com>. Prospective designers send in portfolios, and participants are drawn from the applicants. The organizers attempt to represent a variety of disciplines and styles, and organize everyone into a few small groups, who spend a few days on creative deliverables for a single imaginary client.

14. Bright Bright Great, <http://brightbrightgreat.com>. (*Full disclosure: Bright Bright Great sponsored this issue without knowing they would be cited, and Sharlene had no knowledge of their sponsorship while writing her essay. —ed.*)

Practice and mistakes

Mistakes are one of the best ways to improve your practice, and some of them have led to great inventions.¹⁵ Homework gives us the freedom to make mistakes; with less pressure on our output, we can be okay with screwing up. The real world often accounts for this, too: if you're editing on Wikipedia, for example, there is a sandbox available so you don't destroy a live article. Interactive agencies and large websites separate their staging sites from production, too.

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In David Bayles and Ted Orland's *Art & Fear*, an entire chapter is devoted to discussing the profound lack of control we have over our creative processes.¹⁶ Creative success is built on those who quit before us. We are successful not by talent or intelligence, but by our perseverance. We continue to create because we have learned how to continue—and continuing means we know how not to quit. Practice is an act of endurance; endurance requires you to keep going.

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Practice has to exist in safe environments, free from responsibility and pressure. As designers, we have to grow our reputation, build our skills, and pay our rent. But while design may depend on bridging the gap between intention and result, we possess a remarkably small amount of control over the whole process. We can control our intentions, but we can't control our audience's or client's responses.¹⁷ Homework frees us from that scrutiny, and that makes us more comfortable with failure.

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Ramifications

It's impossible to pinpoint precise cultural shifts: the factors are esoteric and numerous enough to overwhelm most people. Most of us willfully ignore most culture, popular or no, because we may not be interested in the majority of artistic work. It takes effort to actively absorb culture, especially work we don't immediately like; it's much easier to stay comfortable with the things

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15. Many inventions were accidental. Coca-Cola was originally a headache cure; in the pursuit of refrigeration, Roy Plunkett invented Teflon; saccharin was discovered by a scientist who didn't wash his hands after working, and noticed that his food tasted sweeter.

16. David Bayles and Ted Orland, *Art & Fear*, Capra Press, 2000.

17. *Ibid.*, pp. 9–21.

we *do* like. *Art & Fear* describes our collective **conceptual inertia** as so stubborn that we only recognized a round earth when all flat-earth believers died.¹⁸ But research can provide us with valuable cultural insights. We can learn where design practice came from, and that teaches us new ways to work with design going forward.

Likewise, if you plan on communicating in a relevant way, you can't only listen to the delayed echo of mass culture. Designers are the gatekeepers for communicating culture—whether a gig poster, a coupon for Mac & Cheese, or a new smartphone app. When you wait for cultural change to happen, you cease to be a participant in your own field.

As technology improves, we can give more of our time and attention to enjoying culture. That extra attention is referred to as a **cognitive surplus**,¹⁹ which was coined by Clay Shirky in reference to cultural inventions that occupy a populace's time—like London's gin obsession during the Industrial Revolution, as well as the proliferation of reading after the invention of the printing press.

For our purposes, the Industrial Revolution isn't much different from the technological revolution we're facing now. Both involve the convergence of millions of people, and both of them bring about a significant shift in our standards of living. Both revolutions needed a way to bring levity: London had gin, we have short jokes on Twitter.²⁰

In the years before the industrial revolution, mass printing was viewed as a cultural abomination by many intellectuals who didn't want to see reading brought to the masses.²¹ Just as today's intellectuals chide television, video games, and other digital forms of entertainment, earlier intellectuals viewed the proliferation of reading with the same condescending disdain of popularized culture. Edgar Allen Poe declared in 1845:²²

18. *Ibid.*, p. 57.

19. Clay Shirky, *Cognitive Surplus*, Penguin, 2010, pp. 1–12.

20. *Ibid.*

21. *Ibid.*, pp. 46–48.

22. Edgar Allan Poe, *Marginalia*, 1840–1849, as quoted in Gorton Carruth and Eugene Ehrlich, *The Harper Book of American Quotations*, Harper & Row, 1988, p. 35.

The enormous multiplication of books in every branch of knowledge is one of the greatest evils of this age; since it presents one of the most serious obstacles to the acquisition of correct information by throwing in the reader's way piles of lumber in which he must painfully grope for the scraps of useful lumber.

Today, pop culture undermines our ability to measure objective quality. 28 The democratization of measurement leads to inconsistency and corruption; we, too, have to “painfully grope for the scraps of useful lumber.” But the core problem changed: the medium doesn't matter as much as our potentially limited viewpoints.

In *The Information Diet*, Clay Johnson says diversity of knowledge supports the integrity of our opinions. 29 Only seeking knowledge that confirms our opinion is the informational equivalent of junk food. But junk food is fine to eat sparingly: after all, we'll always bond with like-minded people, and it's certainly more enjoyable to do so. Dependence on that kind of information has a way of corrupting our thinking. Once you lean towards a given bias, you move further from the complex synthesis of personal contribution to a greater society.

Shirky draws many parallels between different cultural shifts, positing that our ability to synthesize and address many social contexts defines our creative abilities. Put another way: it isn't how many wheels we can invent, but how many purposes and uses we create for them. 30 We must be critical and analytical if we are to maintain consistent quality in our work. Being critical isn't about the destruction of a given idea, but elaborating on the train of thought behind that idea. 25

23. Clay Johnson, *The Information Diet*, O'Reilly, 2012, pp. 113–115.

24. Clay Shirky, *Cognitive Surplus*, pp. 184–213. Shirky cites more examples throughout *Cognitive Surplus*.

25. M. Neil Browne, *Asking the Right Questions: A Guide to Critical Thinking*, pp. 1–8.

Being analytical is something learned, honed, and then applied. Focus on the habits you need to develop to analyze your own practice.²⁶ This can apply to any field. For instance, if you like music, you can reach out to a community of equally passionate people, be analytical about the music you enjoy, and try to appreciate as many different styles as possible. By doing these three things, you can develop a healthier appetite for what you already love.²⁷

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Homework's effect on design communities

THE INFLUENCERS AND THE INFLUENCED

In 1953, William M. Ivins, Jr. wrote *Prints and Visual Communication* to shed light on the artistic and cultural impact that printmaking left on society. He wrote that visual communication and design wasn't limited to printmaking:²⁸

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While the number of printed pictures and designs that have been made as works of art is very large, the number made to convey visual information is many times greater. Thus the story of prints is not, as many people seem to think, that of a minor art form but that of a most powerful method of communication between men...

For Ivins, printing had cultural impact as a repeated statement. People get informed, and culture progresses, through repeatable communication.²⁹ In this way, our work is only as valuable as how it's received. The influential share their ideas; the influenced repeat those ideas. The sharing is more important than the inception.

26. Jessica Hische, "Inspiration vs. Imitation", <http://dsn.tc/o2b-01>. While I'm encouraging critical skills for your overall improvement, Hische says it is also a preventative measure that can help professionally.

27. William Duggan, *Strategic Intuition*, Columbia University Press, 2007, pp. 39–54. Duggan specifically cites the work of psychologist Gary Klein, who developed empirical studies on how experts are able to quickly react in high-pressure situations: for example, the firefighter who senses a backdraft behind a closed door, or a nurse who recognizes when someone is about to go into shock. Intelligent memory allows us to react quickly and instinctively, based on our accrued experiences.

28. William M. Ivins, Jr., *Prints and Visual Communication*, MIT Press, 1953, p. 158.

29. *Ibid.*, pp. 1–20.

THE PROFESSIONAL UNDERCURRENT

We're competitive by nature. We aspire to a higher position within society, and we want to be more capable than our peers. Elliott Jaques studied the social structure of factories and found that their success relied on a successful definition of hierarchy. It wasn't that workers were happily content in their roles; rather, they were given a specific path for improvement. Conversely, if workers weren't given goals and structure, communication and internal relationships quickly broke down. Without a point of reference for self-identity, people have no direction for self-growth.³⁰

Since the design industry evaluates work in a qualitative way, it often relies on social comparisons. We establish our own perspective by comparing ourselves to one another—giving us recognition, a title, or personal validation. The desire for social dominance is known as our **status imperative**, which has historically provoked conflicts from trivial sibling rivalries to global class wars.³¹

Cultural leaders have always had a tenuous relationship with popular culture: they may *represent* popular culture, but often shirk involvement with those who *consume* popular culture.³² Because popular culture requires little effort to access, it becomes stigmatized by representing the underclass. Peter Saville once coldly summarized this when he said “cultural codes are being used to legitimise banality”.³³ It takes a lot of work to keep tabs on how culture works, but it's required if you're going to effect any cultural change. Saville's specific grievance is that designers move into art practice without the

30. Elliot Jaques, *The Changing Culture of a Factory*, Tavistock Publications, 1951, pp. 300–305. Jaques defined role confusion: without a clearly defined hierarchy, workers adopted more responsibilities than they were capable of fulfilling, believing themselves to be higher on the ladder than they really were.

31. David L. Weiner, *Reality Check*, Prometheus Books, 2005, pp. 195–233. For example, a husband might make a demeaning comment to his stay-at-home wife; as a result, the husband takes possession of a positional dominance, and the wife loses power accordingly, forming a rift of inequality between them.

32. For instance, the aforementioned example of Edgar Allen Poe's disdain for popularized reading.

33. Peter Saville, *Grafik* #159, “Confessions of an Art Defector”, p. 69.

education of critical analysis: “Artists realize they only have themselves to give, whereas design covers that up all the time.”³⁴

Similarly, it’s common for cultural leaders to disdain the uninitiated.³⁶ Many famous designers build their own popularity through studying esoteric branches of culture. As cultural leaders amass recognition and attention for their own good work, they distance themselves from those with less cultural reception. It’s one of the darker sides of the creative class: we claim a meritocracy, but the quiet elite is protective of their success, and many junior-level designers have more questions than answers.³⁵ I believe success comes through homework: the projects we do separate from our day-to-day work, that help us *live* design rather than simply *work in* design, allow passionate designers to break through.

A way forward

Design only makes sense in context. Learn to differentiate work culturally and qualitatively. Enjoy everything you love, but be analytical about why you love it.³⁶ It’s okay to like something for its own sake, but you can’t use personal taste to justify your work.

You have to practice in order to turn out good work, but you also have to cultivate your knowledge of the difference between good work and bad work.³⁸ Develop new habits. Make lots of mistakes. Relish those mistakes. Analyze those mistakes and make something better. Don’t obsess about any of your successes; you’ll stop learning and repeat yourself.

We are each individually responsible for advancing design, so get out of your office and participate. Nobody will carry you along if you aren’t already willing to keep up. Homework indulges our inclinations, strengthens our skills,³⁷ and provides access to an inspirational community.

34. *Ibid.*, p. 70.

35. Robert Florida, *The Rise of the Creative Class*, pp. 78–79. Florida discusses meritocracy largely in a positive light—mentioning, for instance, its ability to upend a caste system.

36. M. Neil Browne, *Asking the Right Questions: A Guide to Critical Thinking*.

37. Steven Johnson, *Where Good Ideas Come From*, Riverhead, 2010.

Finding Meaning In the Technium Cave

Blazing trails to benefit society.

by **Francisco Inchauste**

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The cleverer we get, the more ‘civilised’ we become, the more we seem to hunger for that old sense of mystery that must have brimmed up in us when we looked outside our extraordinary world and understood none of it.¹

A FEW DAYS BEFORE CHRISTMAS 1994, three explorers were searching for caves in the Ardèche, a region in Southern France. They found an updraft of cool air near the edge of a cliff, cleared some rubble, and found a passage—barely large enough for a person to climb through. The smallest member of the group was able to squeeze through first, and they all soon fit through a larger opening.^{2,3}

Although the cave was beautiful, nothing stood out at first. But as the three friends reached a deeper part, one of them called out: “They have been here!”⁴ With those words, the explorers had become the first humans in 20,000 years to gaze upon “the Sistine Chapel of the Upper Paleolithic”, marking one of the most notable archaeological discoveries in history.⁵

Lost in translation

Made with crushed hematite and Scotch pine, the Paleolithic paintings in Chauvet-Pont-d’Arc Cave are twice older than any other known. They were preserved when the main entrance of the cave was sealed in by a landslide. Very few people are allowed to see them, due to the pathogens that could be

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1. Quote is from Waldemar Januszczak, *The Guardian*, 3 Dec 1998. Found in Alan Fletcher, *The Art of Looking Sideways*, Phaidon Press, 2001, p. 15.
 2. Werner Herzog, *Cave of Forgotten Dreams*, 25 Mar 2011. <http://dsn.tc/o2c-10>.
 3. Judith Thurman, “First Impressions”, *The New Yorker*, 23 Jun 2008. <http://dsn.tc/o2c-09>.
 4. *Ibid*.
 5. Matthew Campbell, “Paleolithic ‘Sistine Chapel’ Finally Set to See the Light, via Proxy”, *The Australian*, 20 Jun 2011. <http://dsn.tc/o2c-05>.

brought into this extremely fragile environment.⁶ But inside is a fascinating snapshot of prehistoric life, with traces of tools, meals, and footprints left in the soft clay ground.⁷

Cavemen are popularly depicted as slow-witted and unimaginative, but these drawings provide an early glimpse of human creativity. The cave paintings include horses, lions, rhinos, and geometric shapes (arguably an early writing system), but one thing is typically absent: a full human form.⁸ For our ancestors, these caves posed a significant danger, so why would they risk a journey to leave these markings?

And what did they mean? Without any cultural context or a language to translate, we will likely never know. Whatever the motivation, though, this yearning to create is part of who we were, and part of who we are. It's what makes us human. The cave art was potentially a way to control something in an world that seemed so uncontrollable. We find similar feelings (although much less risky) with the internet and the future of our creations in it. Once we let something into the wild, it becomes something new. Frank Chimero says, "[The initial creator's] work will be used to say and do things they don't intend. Ideas, in truth, go further when others carry them, and this usually means they will go in directions the original author did not intend or imagine."⁹

Living, more or less

32,000 years later, we express ourselves in numerous ways. While our creative intentions are probably quite distant from the intentions of our ancestors, we still strive to create meaningful pieces of ourselves. Instead of writing in caves, we communicate through what Kevin Kelly calls *the*

6. Waldemar Januszczak, "Werner Herzog Unveils the Deep and Meaningful", *The Australian*, 30 Mar 2011, <http://dsn.tc/o2c-o6>.

7. Werner Herzog, *Cave of Forgotten Dreams*.

8. The only human-esque drawing found in the cave was a human-animal hybrid. These figures are sometimes called "sorcerers" and represent the human taking form of an "avatar" or "animal spirit". See also Dr. Jean Clottes, "Paleolithic Cave Art in France", Bradshaw Foundation, <http://dsn.tc/o2c-o8>.

9. Comment by Frank Chimero in article by Danuel Howells, "Svbtile vs Obtuse (and on copying)", 23 Mar 2012. <http://dsn.tc/o2c-o7>.

technium: a cultural and technological system with thousands of years of precedent. The technium is an ecosystem with a behavior of its own, larger than the sum of modern art, social institutions, and intellectual concepts.¹⁰

Take your smartphone, for example. You couldn't create that on your own, even if your smartest friends were able to help. Thousands of separate technologies had to be invented before we could mass-produce smartphones. Without the technium, that phone would not be possible to create, maintain, or use—and now we are dependent on and defined by it.¹¹

In examining what's being created today, we find a disconnect between us and the things we desire. We want things to be authentic, but they usually fall short. Software's design provides only metaphor, with hints of paper texture and inked draft lines to feel more tactile. Instead of meeting someone for coffee, we "like" their status about drinking their first cup in the morning. Taken to extremes, one's digital life can pull apart their real life, as seen in Alice Gregory's numbing essay "Sad As Hell":¹²

You really want to know what it is about 20-somethings? It's this: we live longer now. But we also live less. It sounds hyperbolic, it sounds morbid, it sounds dramatic, but in choosing the internet I am choosing not to be a certain sort of alive. Days seem over before they even begin, and I have nothing to show for myself other than the anxious feeling that I now know just enough to engage in conversations I don't care about.

Meanwhile, you might think that Jaron Lanier, a technology visionary who coined the term "virtual reality," would be excited by the technium, but he doesn't see all of it as a good thing:¹³

I'm concerned that we're all fitting more and more into more database representations of ourselves. I'm concerned that we're letting algorithms recommend friends, music, and movies to us, in a way that is separating us from each other.

10. Kevin Kelly, *What Technology Wants*, Viking Adult, 2010. <http://dsn.tc/o2c-04>.

11. *Ibid.*

12. Alice Gregory, "Sad as Hell", *n+1*, 9 Nov 2010. <http://dsn.tc/o2c-02>.

13. Jaron Lanier, "You Are Not a Gadget", TEDx San Francisco, 2010. <http://dsn.tc/o2c-03>.

As any new medium develops, it initially harbors enthusiasts and skeptics. 10 With the internet, we praised the abundance of digital tools, but lamented our dwindling attention. Our options to communicate, share, and consume ideas rival that of science fiction, but our detractors see us as narcissistic, praising of mediocrity. 14

Marshall McLuhan ignored the content of the mediums, focusing instead 11 on how new mediums changed the way we think and act. 15 But not even McLuhan could have predicted the effects of the internet. We have an insatiable appetite for information. We compulsively check for updates. 16 As Nicholas Carr says, “The Net’s interactivity gives us powerful new tools for finding information, expressing ourselves, and conversing with others. It also turns us into lab rats constantly pressing levers to get tiny pellets of social or intellectual nourishment.” 17

As the technium expands, it changes our frame. For example, our concept 12 of time used to be more relaxed; we measured it based on cues from nature; when the sun rose and set. After the mechanical clock was invented, though, we split up our days, micromanaged our tasks, and soon became “busy” clock watchers, obsessed with the increments of time. What began as non-invasive came to run our lives. As the clock became small enough to fit in our pockets or on our wrists, it became more personal—a sort of “Big Brother” always reminding us of the exact volume of time we had spent or had left to spend. 18

14. Nicholas Carr, *The Shallows: What the Internet Is Doing to Our Brains*, W. W. Norton, 2010, pp. 2–3. <http://dsn.tc/o2c-01>.

15. *Ibid.*

16. Various studies show us that the Internet is actually changing how we think. When we read online, certain parts of our mind are activated—excited, even. This kind of thought is much different from when we are reading a book or newspaper. We don’t know exactly how this will affect our brains or cognition in the long term, but we do know it is doing something. See also Nicholas Carr, *The Shallows: What the Internet Is Doing to Our Brains*. Or, if you prefer online, his excellent essay in *The Atlantic*, “Is Google Making Us Stupid?”, available at <http://dsn.tc/o2c-20>.

17. Nicholas Carr, *The Shallows: What the Internet Is Doing to Our Brains*, p. 117.

18. *Ibid.*, pp. 41–44.

Now we compare our thinking to the way computers work. We explain our memories in terms of how a machine accesses and writes information. Even the language we use to explain our thinking includes terms like “hard-wired”, reflecting the physical constructs of a computer.¹⁹ It’s almost impossible to leave the technium we’ve created. It is gravity, an invisible force holding us in place. When something in the technium changes, we change with it. 13

The failure of intended innovation

We like to believe we can control the way innovation plays out—and that it can happen in a linear, repeatable way. We try to find patterns in overnight successes. But business book fodder isn’t how innovation really happens. 14

Before Silicon Valley became the role model for our work, most of our productive output tried to change things in smaller ways. Many influential inventions came from intentions for something much simpler, and grew into something essential. For example, in 1880, the United States had an influx of so many immigrants that it took eight years to complete the census—and the next one would fare even worse. The census hired a young engineer, Herman Hollerith, to find a way to automate the process of gathering data. Inspired by the automatic loom, Hollerith devised a way to punch cards in specific positions to represent the data of each citizen: sex, age, date of birth, etc. With these punch card-reading machines in place for 1890’s census, it was completed at twice the speed. Shortly after, Hollerith’s punch cards were employed in the world’s first computers. He had stumbled upon the basic binary language that all future computers would eventually run on.²⁰ 15

Ideas are incremental; we build off of what came before. True innovation, then, refers more to an idea’s impact, not the idea itself. Nobody can control the effect that an idea has on the world; influence can only be determined in 16

19. *Ibid.*, p. 23.

20. See James Burke, *Connections*, Macmillan London, 1976, pp. 112–113. James Burke also created a documentary television series for the BBC in 1978 called “Connections,” which explored the unexpected ways that our modern world and its technology came to be, through tracing the path back through to the point of origin. The entire series is available on YouTube at <http://dsn.tc/o2c-17>.

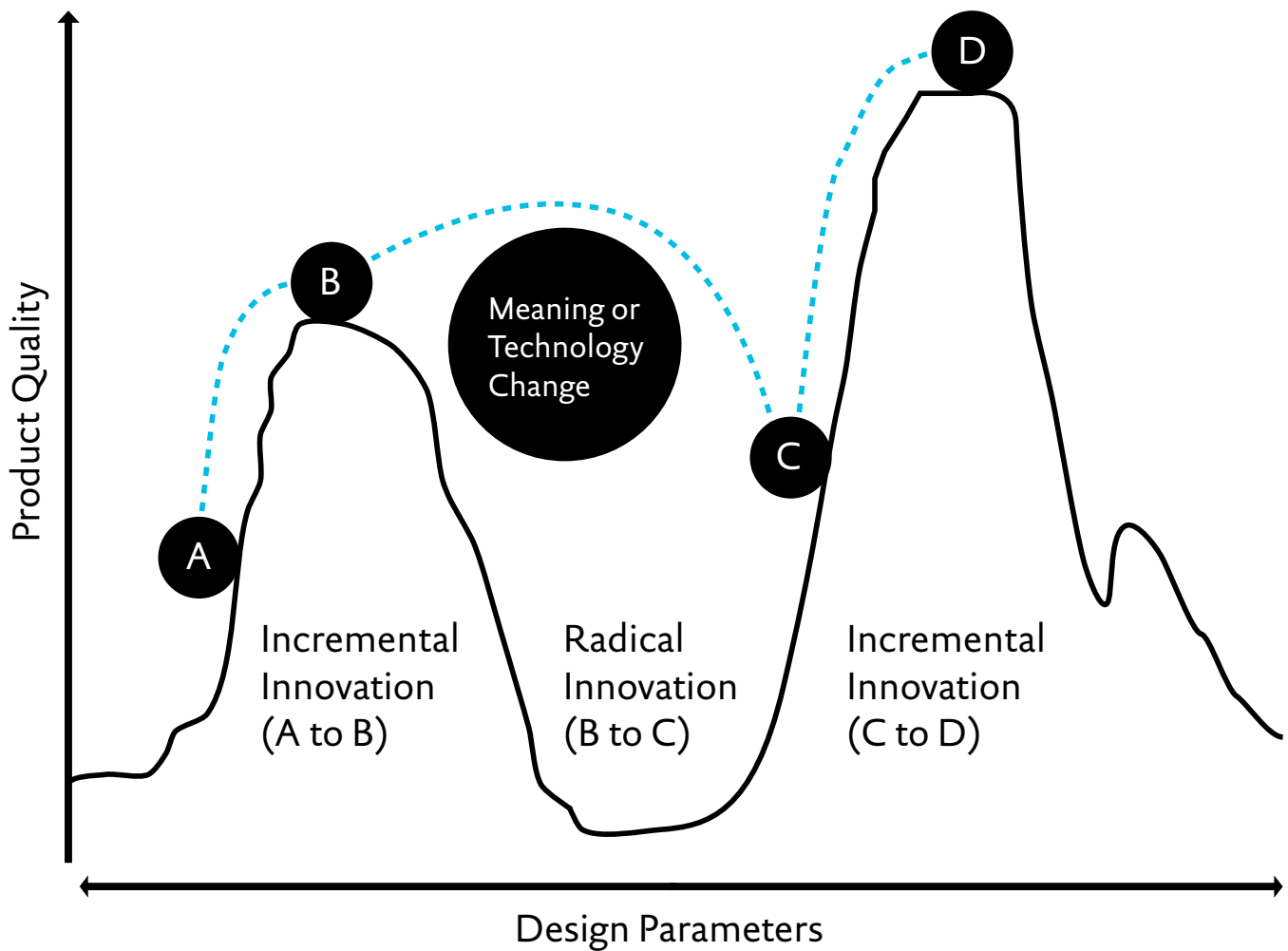
hindsight. Scott Berkun points out that seemingly small changes could be disruptive:²¹

There's a myth at work here: the assumption that big results only come from radical changes. There's good evidence for a counter-argument. The problems that plague organizations, or hold them back from greatness, are often small things that happen to be consistently overlooked. The lack of progress or greatness isn't because there's a grand idea missing. Instead the cause is a simple idea prevented by bureaucracy, killed out of ignorance, or buried under incompetence. If those simpler, smaller, ideas were set free, the effect would be as potent as any grand theory.

In a paper coauthored by Don Norman and Robert Verganti, they break down the differences in two types of innovation: Incremental and Radical. Incremental being a small series of improvements to a current solution, and radical being something that has not been done before (Think: iPhone versus every cell phone before it). They argue that these are reached by two separate methods. They use the hill-climbing paradigm to explain the difference between the two types of innovations:

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21. Scott Berkun, "Does Size Matter for Ideas?", *Harvard Business Review*, 5 Oct 2010. <http://dsn.tc/o2c-18>.



A given product might start off at “A.” Through Human-Centered Design and Design Research (HCD & DR), the product undergoes a series of incremental innovations, eventually bringing it to its maximum quality for this part of the design space, point “B.” To move to a different hill, one with a higher potential, requires radical innovation, and this comes about through either technology or meaning change, leading to point “C” on a larger hill. Note that the initial outcome is often inferior to that previously reached (“B”), and so HCD and DR are required to make the necessary incremental innovations to reach maximum potential. To make matters more complex, when the product is at point “C,” there is no way of knowing if indeed there is a superior level (“D”) or if this is an inferior spot in the design space.²²

22. Donald A. Norman and Roberto Verganti, “Incremental and Radical Innovation: Design Research Versus Technology and Meaning Change”, 18 Mar 2012. <http://dsn.tc/o2c-19>.

In his own investigations, Norman found that every example of radical innovation was not reached through design research. This includes technology that came before the advent of design research—inventions like electric lighting and the automobile—all the way through to ones that came after it—social networks like Twitter or Facebook. These ideas came about because the inventors were simply interested in trying them out. 18

Verganti also found that not only was technology a driver of radical change, but it could also arrive through a change in meaning. His research is rooted in several definitions of design, including this one from John Heskett: 23 19

Design [is] the deliberate and reasoned shaping and making of our environment in ways that satisfy our needs and give meaning to our lives.

When we think about innovation, we're really describing *radical* innovation—which is comparatively quite rare. Big ideas often start small, and the world is influenced slowly. For example, Apple didn't invent the multi-touch interface; it had been around for over 20 years before the introduction of the iPhone. But they introduced the technology in a meaningful way, causing the *perception* of radical innovation. 24

But we still glamorize the creative process, sell it as calculated and repeatable, and hope for grandiose products that will change the world. Reality is more modest. As shown in the research by Verganti and Norman, successful design gave meaning to people by definition. 20

Startup stagnation

We are in an era of planned obsolescence. Factories work feverishly to produce the latest hardware, with a human cost that we've inadvertently built in. 25 And if you aren't involved in a startup of some sort, then what are 21

23. *Ibid.*

24. *Ibid.*

25. In a series of articles called *The iEconomy*, *The New York Times* examined the globalization of the high-tech industry and the challenges in producing the “iThings” that we so love by focusing on workers' mental and physical health problems. For more, see Charles Duhigg and David Barboza, “In China, Human Costs are Built into an iPad”, *The New York Times*, 25 Jan 2012. <http://dsn.tc/02c-15>.

you doing with your life? The rewards seem within easy reach. Some are even investing in *nothing*—funding teams without a product in mind yet—in the slim chance it will actually become *something*.²⁶ It's the lottery for the technologically savvy—but if played right, whole industries can be redefined, and genuine value can be created for everyone.

Right now, many disruptive companies are just beginning their life. We look to startups because when corporations grow to a certain point, it's hard for them to adapt to customers' needs. With the *Innovator's Dilemma* we find many established companies that reach the top of their game and then suddenly fall flat on their face; finding out the hard way that there is indeed a difference in drive for profit and growth versus creating value or meaning. They are unable to catch up with other companies that have embraced a market or technology that they never saw as profitable, and by proxy, a threat.²⁷

However, many startups pursue disruption and profit, only to find the same fate as their failed peers. Dave Kashen describes the process:²⁸

In the startup world, thousands of entrepreneurs focus their ingenuity on finding ways to make millions of dollars. They look for market inefficiencies and focus on questions like: "Will consumers pay for this?" without asking "Will this make people's lives meaningfully better?" It's not that we shouldn't try to make money, it's just that money should be merely one of many factors we strive for, and it's played far too central a role for far too long.

Amy Hoy looks at the cost of burnout for those involved:²⁹

Every fucking time you see somebody using glory to hagiographize young men & women who are doing something clearly stupid, you must ask:

26. Jeff Bercovici, "Silicon Valley's Hottest New Start-Up Idea: Nothing", *Forbes*, 26 Apr 2012. <http://dsn.tc/o2c-16>.

27. *The Innovator's Dilemma* is a book that "deeply influenced" Steve Jobs. He is one of the only CEOs to have led a company to successfully beat this conundrum. See also James Allworth, "Steve Jobs Solved the Innovator's Dilemma", *Harvard Business Review*, 24 Oct 2011. <http://dsn.tc/o2c-14>.

28. Dave Kashen, "The Values-Driven Startup", *GigaOM*, 17 Dec 2011. <http://dsn.tc/o2c-12>.

29. Amy Hoy, "Fuck Glory—Startups Are One Long Con", *Unicorn Free*, 29 Nov 2011. <http://dsn.tc/o2c-13>.

What is this raft of shit, and why are they trying to get me to paddle it?

And make no mistake, bartering away your “one and only youth” working 100-hour weeks on a web site for the promise of a big fat carrot on the end of a stick 80 million lines long, dangled by a fat statesm–venture capitalist, who will make 3x or 10x or 100x more than you, in the vanishingly unlikely scenario that you “succeed”... is clearly stupid.

With the explosion of aspirational “startup porn”³⁰ like Pinterest and a continuous flow of new iThings, we have bought into the illusion—“artificially created demand”³¹—that consuming products and rampant innovation is propelling us toward a better life. And creating digital wares is appealing because it seems like creating new jobs would be good for our economy—but digital landfills are problematic, too, with issues arising around archiving and longevity.³²

Even if there are young companies with meaningful intentions, not all investors are biting. They’re looking for ideas that fit existing trends, and they push for a quick exit via acquisition or further funding. Entrepreneur and investor Chris Dixon explains:³³

The problem I encounter is that many of these “meaningful” startups have trouble raising money from VCs. An entrepreneur working on groundbreaking robot technology recently joked to me that he’d have an easier time raising money if his robots were virtual and existed only on Facebook.

The truth is, we may well be in the largest slowdown of technological growth in human history. Economist Tyler Cowen calls this the “great stagnation”. Take our modern-day kitchen, for example. The 19th-century kitchen was built around a live fireplace, but then we rapidly benefited from

30. Cennydd Bowles, “The Things of the Future”, *Update* 2011, 5 Sept 2011. <http://dsn.tc/o2c-11>.

31. *Ibid.*

32. For more on information longevity and our civilization’s need to save everything, see Jeremy Keith’s talk “All Our Yesterdays”: <http://dsn.tc/o2c-26>.

33. Chris Dixon, “‘Meaningful’ startups”, cdixon.org, 18 Apr 2012. <http://dsn.tc/o2c-30>.

electricity, water, and gas stoves. Then the past fifty years brought no major technological changes.³⁴

Silicon Valley investor and web browser inventor Marc Andreessen famously said, “Software is eating the world.”³⁵ He thinks our economy is being revolutionized by computing; our most favored jobs are shifting from the industrial age to the information age:³⁶

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This is the great sweep of economic history. When the vast majority of the workforce was in agriculture, it was impossible to imagine what all those people would do if they didn’t have agricultural jobs. Then a hundred years later the vast majority of the workforce was in industrial jobs, and we were similarly blind: It was impossible to imagine what workers would do without those jobs.

Even if Andreessen’s prediction is right, our current technological trajectory is still far from perfect. From Cowen’s perspective, personal computing hasn’t broadly improved society’s standard of living. He says we’ve “plucked all the low-hanging fruit”. Today, innovation takes more effort. Some of the most successful technology companies haven’t done much for job growth: “Take the ubiquitous iPod. It’s created less than 14,000 jobs in the U.S., Internet giant Google, 20,000 employees, Twitter, a mere 300.”³⁷ In fact, the net creation rate of jobs has been on the decline since the 1970’s.³⁸

We’re now faced with *consumption-biased technological change*:³⁹ “technology that benefits mainly the highly skilled workers, but hurts the less-skilled, average person.”⁴⁰ For those in information jobs, it’s an exciting time. Growth and jobs are plentiful. For those outside, though, their quality of life

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34. Paul Solman, “The Great Stagnation: Why Hasn’t Recent Technology Created More Jobs?”, PBS, 18 May 2011. <http://dsn.tc/o2c-25>.

35. Marc Andreessen, “Why Software Is Eating The World”, *The Wall Street Journal*, 20 Aug 2011. <http://dsn.tc/o2c-28>.

36. Chris Anderson, “Software Will Eat the World”, *Wired*, 24 Apr 2012. <http://dsn.tc/o2c-27>.

37. Paul Solman, “The Great Stagnation: Why Hasn’t Recent Technology Created More Jobs?”

38. Umair Haque, “GDP Needs Help: Let’s Build a Second Measure of Economic Strength”, *The Atlantic*, 3 Jan 2012. <http://dsn.tc/o2c-29>.

39. Bryan Caplan, “Consumption-Biased Technological Change”, *Library of Economics and Liberty*, 19 May 2011. <http://dsn.tc/o2c-24>.

40. Paul Solman, “The Great Stagnation: Why Hasn’t Recent Technology Created More Jobs?”

isn't near as great, and it hasn't improved much over the past few decades. The median income has stagnated, we're mainly adding "McJobs" to the economy, and close to half of US is in a *very* fragile financial state—which is a "visible symptom of Great Depression-era level inequality". We're also seeing a "dumbification" of society, where media misinforms and more people seem to be aware of what's happening on reality TV, than in reality.⁴¹

Yet, exciting new products are released every day that promise to improve our lives. Are they fulfilling that promise? Are *we*? We make outlandish claims—like one brand of chewing gum will help you get a kiss from a beautiful woman—in order to differentiate. Umhair Haque says this is an industrial age model of product creation: "We have to move from differentiation, to actually making a difference—to people, communities, and societies. Mattering in human terms. I think the key words, when it comes to making a difference, are: human potential."⁴² In short, if software is truly eating the world, then it needs to be more meaningful.

Road to Eudaimonia

If a macroeconomist were to best describe the state of our economy, it would look a bit like this: "output equals consumption, plus government expenditure, plus investment, plus net exports". This is also known as the Gross Domestic Product (GDP), the "national income statement" for the United States. The GDP defines basic human exchange through measuring our industrial output.⁴³

GDP is a measurement that affects all of our lives. As an aspirational society, we seek bigger, faster, and cheaper material things to create meaning for ourselves. We signify our own prosperity, and that creates envy in our peers. McDonald's offers a perfect example of this: it wasn't enough to have so many options on their menu, all of which are available on demand—so, they gave

41. Umair Haque, "Seven Problems a Recovery Won't Fix", *Harvard Business Review*, 8 Jun 2011. <http://dsn.tc/o2c-21>.

42. Umair Haque, "Why Meaningful Brands Will Matter", Havas Media Labs. <http://dsn.tc/o2c-23>.

43. These quotations are from Umar Haque, "GDP Needs Help: Let's Build a Second Measure of Economic Strength".

us the “Super Size” meal.⁴⁴ These meals gave us more food than we needed, and the remainder was frequently discarded. Our lust for gratuitous satiation brought us fuel-thirsty SUVs, junk bonds, and a too-perfect green lawn—and we can’t afford most of it.

We measure our busyness with things like percentages and Gantt charts in an attempt to provide the short-term feeling of profitability, rather than actually making a long-term impact:⁴⁵ 31

“[...] what if the firm was driven, not by the goal of short-term profitability, but by the goal of continuous innovation in service of finding new ways of delighting customers? The new bottom line of this kind of organization becomes whether the customer is delighted (e.g. as measured by the Net Promoter Score). Conventional financial measures such as maximizing shareholder value are subordinated to the new bottom line. Profit is a result, not a goal.”

Thinking about all of this led me to consider **Eudaimonia**, a key concept in Aristotelian ethics that loosely translates to *human flourishing*.⁴⁶ According to Aristotle, it is a means of “living well” that goes against our usual preconceptions. Normally, we’re led to easy answers: wealth, a nice home, great friends, a healthy family, and so on. But happiness doesn’t necessarily reside in material possessions; it comes from something more meaningful: “The good of a human being must have something to do with being human; and what sets humanity off from other species, giving us the potential to live a better life, is our capacity to guide ourselves by using reason. If we use reason well, we live well as human beings; or, to be more precise, using reason well over the course of a full life is what happiness consists in.”⁴⁷ 32

44. McDonald’s Super Size was originally called *Dino-Size* when it was introduced as a movie promotion for Jurassic Park in 1993. They decided to continue the sizes after the original promotion and changed the name to *Super Size*. This ran until 2004 when they began to phase it out—around the time the documentary *Super Size Me* premiered.

45. Steve Denning, “Clayton Christensen and the Innovators’ Smackdown”, *Forbes*, 5 Apr 2012. <http://dsn.tc/o2c-22>.

46. John M. Cooper, *Reason and Human Good in Aristotle*, Hackett, 1975. <http://dsn.tc/o2c-38>.

47. Richard Kraut, “Aristotle’s Ethics”, *The Stanford Encyclopedia of Philosophy*, Spring 2012 Edition. <http://dsn.tc/o2c-42>.

In short, it's not about more things: it's about *fewer, better things*. Umair Haque corroborates this: "Its purpose is not merely passive, slack-jawed 'consuming' but living: doing, achieving, fulfilling, becoming, inspiring, transcending, creating, accomplishing—all the stuff that matters the most."⁴⁸ We can apply Eudaimonia to the things we make: a Eudaimonic product helps others flourish, no matter what they do. Alan Fletcher makes a similar point:⁴⁹

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Soon we will end up unable to distinguish between the synthetic and the real stuff. Come to think of it, the other day I had a soya bacon sandwich and couldn't tell the difference. However, life is not a technological ladder, it's more of a cultural wheel. So, what we've gained in some respects we have lost in others.

Although there isn't yet a good method to measure how Eudaimonic a product is, we should consider some qualitative heuristics to help us judge what makes a product meaningful:

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- It has a **purpose**. A product with purpose means more than its functionality. The purpose of a product is built into its soul, guiding what it can become. Some products are used for their full purpose from day one. Others start out as something else: sometimes looking more like a toy, until their true purpose is discovered by the user. For example, Twitter began as a novel status update service, and—largely due to user intervention—has now become a transformative force in communication.⁵⁰
- It enhances **belief**. If you've ever been on an impersonal, robotic customer service call, you've most likely encountered the opposite of this. Companies like shoe retailer Zappos believe in what they are doing—and they treat their customers in kind. We should believe that the customer will truly be better off with what we make—but not many of us can say this confidently.

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48. Umair Haque, "Is a Well-Lived Life Worth Anything?", *Harvard Business Review*, 12 May 2011. <http://dsn.tc/o2c-40>.

49. Alan Fletcher, *The Art of Looking Sideways*, Phaidon Press, 2001, p. 14.

50. Chris Dixon, "The Next Big Thing Will Start Out Looking Like a Toy", cdixon.org, 3 Jan 2010. <http://dsn.tc/o2c-39>.

- It's built in **moderation**. The goal of many startups is to be the world's next big thing. What about being the next big thing to a small group? What about crafting something that innovates in a specific niche? Consider the web industry—and the growing number of intimate conferences like Brooklyn Beta, created partly in response to the massive, catch-all SXSW. It's easier to connect with something that's made for a small group, rather than something that tries to be everything for everyone. 37
- It follows **human goals**. Not all things are meant to be mass-produced without regard to the human or environmental costs. We can all see the damage we cause when we disregard sustainability, so we need to reevaluate what we stand to gain from anything we put into the world. 38
- It is **virtuous**. In Greek, the word *virtu* means *excellence*. Some human virtues include prudence, courage, and justice. In terms of a product, though, virtue informs how it is created and used. For example, Joel Britton defines the qualities of an effective knife: “a good knife cuts well; the virtues by which it reaches this end might include durability, solid construction, a good edge, and so on.” Good products strive to be the best they can be, rather than to simply benefit the maker with quick profits.⁵¹ 39

Now that we have some loose guidelines for this kind of product, how do we go about making one? Are there any products that are meaningful, according to our definition of a Eudaimonic product? 40

Building meaningful things

The business world constantly discusses how to manufacture success—figuring out what factors can provide the same results as another successful business. Some people take this to extremes, leading to “process cults”.⁵² In the startup world, one such process cult is the “lean startup” movement, outlined in *The Lean Startup* by Eric Ries. 41

51. Joel Britton, “Eudaimonia and the Cardinal Virtues”, *Eudaimoniac: Living the Good Life*, 27 Jan 2009. <http://dsn.tc/o2c-37>.

52. Alex Payne, “On Business Madness”, al3x.net, 12 Feb 2012. <http://dsn.tc/o2c-41>.

One of the book's key terms is a **Minimum Viable Product (MVP)**, or the smallest product that can succeed in a market. According to Ries,⁵³ "MVP is designed not to just answer product design or technical questions. Its goal is to test fundamental business hypotheses." Others describe MVP as a "reinvention of user-centered design practice" that's more in line with marketing than design.⁵⁴ John Kolko thinks an MVP treats users as "collateral damage" on the way to creating the real product:⁵⁵

42

And for all the conversation about 'get out of the building' in order to talk to users and validate your ideas, the tone of the [MVP] process seems to force us back to the smarminess of marketing, but under the guise of science. It's co-opted language that seeks to prove that people will pay for things, and while these may be important for all sorts of various reasons, they don't mesh with design.

It's relatively easy to determine whether products succeed within an MVP framework.⁵⁶ But if we turned our focus to creating more meaningful things, we could create a **Minimum Meaningful Product (MMP)** instead.

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To start, we need to **choose better problems**. As Mike Monteiro says, we are using amazing tools and technology "to build shit". Our aim has to be higher: "Let's find problems to solve that actually improve people's lives... there has got to be something more beneficial to society than the next Facebook clone."⁵⁷

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Many problems simply haven't been tackled yet. The problem is **schlep blindness**, which Paul Graham describes: "Schlep was originally a Yiddish word but has passed into general use in the US. It means a tedious, unpleasant task." Startups should solve more complicated problems in underserved

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53. Eric Ries, *The Lean Startup*, Crown Business, 2011, p. 94.

54. Quote by Janice Frasier in article by Jon Kolko, "Collateral Damage: The Ethics of Lean UX", *Austin Center for Design*, 20 Apr 2012. <http://dsn.tc/o2c-32>.

55. *Ibid*.

56. Eric Ries, *The Lean Startup*, p. 85.

57. Mike Monteiro, "10 New Year's Resolutions for Designers", *.net Magazine*, 3 Jan 2012. <http://dsn.tc/o2c-33>.

industries.⁵⁸ These generally involve a higher proportion of difficult problems to solve—and most people avoid them, because the solutions involve too much work. Simple is trying to revolutionize banking. In their words, “We started Simple because retail banks have forgotten who their customers are.”⁵⁹ Banking infrastructure isn’t easy to build: security issues, ATM networks, and international transfers all sound nightmarish to many of us. But Simple is on its way to make it happen.

Other issues have global scope, known to some as **wicked problems**.⁶⁰ 46
dwindling energy supply, education, or healthcare. They seem insurmountable, and they definitely aren’t as fun as making the next Pinterest or Twitter—but they need to be solved, too. For example, Tesla Motors is not your average Silicon Valley startup. One of the goals of its CEO, Elon Musk, is to “move us off of fucking oil as fast as possible”. If starting a new automobile company is “probably the hardest thing in the world”, building an affordable electric car is even crazier. Tesla is creating one of the first mass-produced electric vehicles (EVs), where most competitors are adaptations of vehicles built with gas-burning technology.⁶¹

Schlep blindness also breeds an ignorance of your own customers. For example, most companies want to automate their documentation and support. 47
If you hate yelling numbers at your phone in public, what makes you think your own customers will like it? Minimum Viable Products don’t account for the customer experience; a Minimum Meaningful Product has to put the customer at its core.

58. Paul Graham, “Schlep Blindness”, paulgraham.com. <http://dsn.tc/o2c-36>.

59. See the “Vision” section of <https://www.simple.com>.

60. See also Jon Kolko, *Wicked Problems: Problems Worth Solving*, which talks about the ways design can help major global problems, and the struggles we might face when we try to tackle them. Available online for free at <https://www.wickedproblems.com>.

61. Jon Gertner, “Why Tesla Motors Is Betting on the Model S”, *Fast Company*, 19 Mar 2012. <http://dsn.tc/o2c-31>.

We've become great at making beautiful and usable products, but we've forgotten to forge a lasting, intimate connection with our customers. If people don't think you care about them, they leave—and customers generally value this over price and quality.⁶² 48

How many startups have personally contacted you after signing up? 49
Intercom would like to see that happen more often. They are building a customer relationship management (CRM) tool that helps primarily “software as a service” (SaaS) companies to build stronger, more meaningful relationships with their customers. They believe that talking to your customers is the bare minimum in building meaningful relationships. Intercom COO Des Traynor explains:

Website owners are disconnected from their customers, save for a conference party or survey each year. If you asked them to introduce you to 10 of their customers, most would struggle, grimace and then get a developer to break out the SQL. Imagine trying to run a bar, convenience store, hair salon—heck, any service—with that level of apathy towards the folks who pay your wages.⁶³

Meaningful designs must be relevant to your customers. When we build for ourselves, we're following **designer myopia**.⁶⁴ 50
So many of today's products serve a scene that celebrates itself, yet designers comprise less than “one-half of one percent” of the world.⁶⁵ These kinds of products might be inspirational for those of us who pay attention to such details, but meaningful products aren't necessarily a matter of better design.

Where will your product end up? Creating a **sustainable product** is important to a meaningful vision. Sustainable products should have modular architecture, reusable components, and long-term durability. For example, Puma designed a new shoebox called “The Clever Little Bag”, a cardboard 51

62. Des Traynor, “Taking a Customer from Like to Love: The UX of Long-Term Relationships”, *Smashing Magazine*, Aug 2011. <http://dsn.tc/o2c-34>.

63. *Ibid*.

64. Rian van der Merwe, “Designer Myopia: How To Stop Designing for Ourselves”, *Smashing Magazine*, 14 Feb 2012. <http://dsn.tc/o2c-35>.

65. Jon Bell, “HIVE 2011: Make it Relevant”, Hive Conference, 2011. <http://dsn.tc/o2c-50>.

and cloth bag⁶⁶ that is much more sustainable than your typical shoebox. Not only did the new design save paper and energy, but they discovered customers loved the bag and kept using it.

It's difficult to build something that focuses on delight, not profit. It's also 52
hard to measure emotion and trust once something has been released. If you look at companies that listen to their customers and focus on a desirable experience, you'll find customers who evangelize the company and its products. The Net Promoter Score (NPS) is considered the "most practical single measure of customer delight"⁶⁷ —and Apple, presently the world's largest company by market capitalization, has some of the highest scores of any business sector.⁶⁸ Their focus on customer service has served them well, with Apple Stores averaging roughly six times the national average per square foot.⁶⁹

Meaningful design is a lofty goal, but our current product environment is 53
not sustainable. We can't rely on capturing user data and advertising anymore. People will pay for something to ensure that it lasts,⁷⁰ and product developers want to be directly paid by their customers.

Millennials have different expectations than other generations. They are 54
known as the "most civic-minded generation since World War II" and the "most socially conscious consumers to date". They demand more of the places they work, the items they consume, and the companies they buy from. For example, 83% say they will trust a company more if it is "socially [or] environmentally responsible". Meanwhile, social media has given them a strong

66. "Clever Little Bag", Puma.com. <http://dsn.tc/o2c-49>.

67. Companies needed a better way to determine customer satisfaction and also provide accountability for it. Fred Reichheld and Bain & Company found that one question worked well for "mature, competitive industries": *What is the likelihood that you would recommend Company X to a friend or colleague?* This question was accurate in predicting behaviors like "repurchases, referrals and other actions that contribute to a company's growth". So, out of that research the *Net Promoter Score* was born. See also <http://dsn.tc/o2c-47>.

68. Steve Denning, "Another Myth Bites the Dust: How Apple Listens To Its Customers", *Forbes*, 26 Aug 2011. <http://dsn.tc/o2c-46>.

69. "Where a typical electronics store averages \$1,200 per square foot in sales, mature Apple stores exceed \$6,000 per square foot." *Ibid*.

70. "Don't be a free user", *Pinboard Blog*, 6 Dec 2001. <http://dsn.tc/o2c-48>.

voice—and they aren't afraid to use it. Products in our future will have to be different to survive.⁷¹

The future explorers

What we create today will become the baseline for future generations. In the future, explorers will find our technium cave, filled with the artifacts of our present. What will they find in there? What will our creations tell them about what was meaningful to us? I can only hope it's not what I see today. I know it can change, and I hope you see it too.

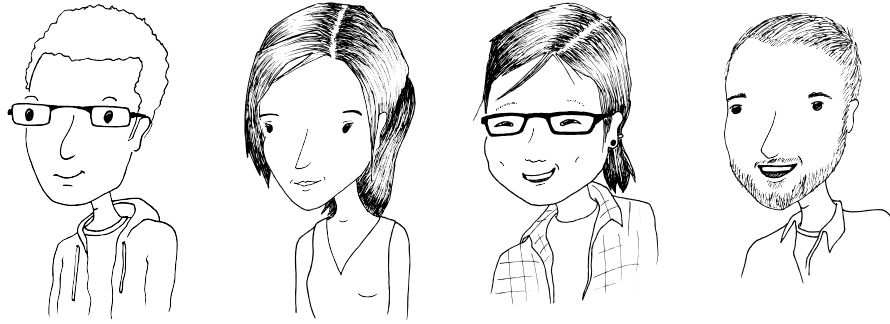
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When you grow up, you tend to get told that the world is the way it is, and your life is just to live your life inside the world. Try not to bash into the walls too much. Try to have a nice family life. Have fun, save a little money. That's a very limited life. Life can be much broader, once you discover one simple fact, and that is everything around that you call life was made up by people who were no smarter than you. And you can change it. You can influence it. You can build your own things that other people can use. Once you learn that, you'll never be the same again.⁷²

71. *The 2006 Cone Millennial Cause Study*, Cone, Inc. and AMP Insights. <http://dsn.tc/o2c-45>.

72. Steve Jobs, in the PBS documentary *Steve Jobs: One Last Thing*, whose site is at <http://dsn.tc/o2c-44>. The clips shown were from a previously un-aired interview done in 1995 by Santa Clara Valley Historical Association, while he was still at NeXT, and shortly after he was diagnosed with cancer. An excerpt can be seen at <http://dsn.tc/o2c-43>.

About the authors



Nick Disabato helps other people make *Distance*. He once made *Cadence & Slang*, a very small book about interaction design; and he also founded The Publication Standards Project, an advocacy organization for a saner and more humane digital publishing landscape. An interaction designer by trade, he cares about the way that we talk with each other, and he wants to make our conversations more constructive and meaningful. He can usually be found on his bike somewhere in Chicago.

Cassie McDaniel is a designer at University Health Network in Toronto. She blogs regularly about the murky intersection of healthcare and design in what is probably a lame attempt to get other designers to join the healthcare cause. You can also find her speaking at various events, on Twitter sharing favorite discoveries, or making some kind of to-do list. You will rarely find her doing nothing (if you do, call for help). She has previously been published in *Freelance Switch*, *Smashing Magazine*, and *A List Apart*.

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Francisco Inchauste is a designer and writer who tries to create meaningful digital things—which he's found is a lot harder than it sounds. He's an interaction designer, working at Universal Mind, and currently the UX Design editor for Smashing Magazine. He likes to tweet a lot ([@iamFinch](#)) and sometimes finds time to blog at [GetFinch.com](#).

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