

# Section I

## Context

The execution of an action by no means proves that we know, even superficially, what we are doing or how we are doing it.

If we attempt to carry out an action with awareness—that is, to follow it in detail—we soon discover that even the simplest and most common of actions, such as getting up from a chair, is a mystery, and that we have no idea at all how it is done.

—Moshé Feldenkrais<sup>1</sup>

Moshé Feldenkrais was a Ukrainian-born, French-educated physicist who helped the British improve sonar during World War II and later developed an approach to physical therapy that he practiced after moving to Tel Aviv in 1954. Feldenkrais therapy is a form of physical therapy that begins with raising self-awareness in how movement is occurring and then using this awareness and a gentle guiding of new ways of moving to overcome physical problems. Modern understanding of the relationship between the brain and the body acknowledges that the body is capable of much movement, completely independent of conscious thought or even any awareness of what is actually going on. To some degree, there may even be aspects of movement that are hardwired outside of the “thinking” brain.

Before any change can begin, there needs to be an awareness of a current state from which one is changing. A lot of what we see as customer experience, and how business approaches it, seems to be based on a response that is largely going through the motions. It’s something that everyone does, and often you simply improve what you did before or look around and see what others are doing and adopt aspects of it. The nature of the relationship between business and design that this creates also seems to occur without a real awareness of what’s actually going on. Much of our thinking about experience design is based on the belief in the appropriateness (and necessity) of asking, “Why?” Why do we do things the way that we do?

There’s a story we heard about a behavioral study in which five monkeys were put in a room with a banana hanging from the ceiling by a string. The only other thing in the room was a chair, which was high enough that a monkey standing on the chair could reach the banana. There was also a way for the observing team to spray the monkeys with ice-cold water if they tried to stand on the chair to reach the banana.

A short time after the monkeys had been trying to get the banana and after all had been uncomfortably soaked, the monkeys started to get wise. They stopped climbing on the chair. The researchers would then remove one of the monkeys and bring a new one in. Whenever the new member would try to go for the banana, the others would prevent it from getting on the chair. After a period of rotations, all of the monkeys who were in the first round had been replaced, yet the remaining monkeys would prevent any newly introduced monkey from climbing on the chair, even though none had firsthand experience of being sprayed with the cold water.

This story is based on a real research experiment, although the way the experiment was conducted was slightly different and the results weren’t quite as dramatic as the version of the story we heard led us to believe. But when we first heard the story, it was easy to laugh with a sense of recognition and acknowledgment—we have all seen analogies of this kind of behavior in people (including ourselves). We sometimes ask clients why they believe a particular line of thinking is appropriate to follow and how they know that the situation they’re in is the same as the one in which the original thinking was applied. Often, they can’t really answer (in most cases they recognize the fallacy of assuming that it does).

The purpose of this section is to provide some context around the influences that informed our approach to experience design, followed by the basic components of experience design itself. This background will help bring meaning to the frameworks and tools in Section II, which will help ground your efforts as you begin to experiment with integrating brand, experience, value, and changing the way that business and design collaborate within a given situation. By providing a solid understanding of how we arrived at our approach, we aim to make these frameworks and tools both accessible and effective to use.

# 1

## Thinking about Design

Dogs flew spaceships!  
The Aztecs invented the vacation!  
Men and women are the same sex!  
Our forefathers took drugs!  
Your brain is not the boss!  
Yes! That's right!  
Everything you know is wrong!

—The Firesign Theatre, *Everything You Know Is Wrong* (1974)

Samuel Arbesman believes that over the course of a lifetime, much of what one knows will lose relevance. It will either be shown to be incorrect, or it simply won't have any purpose, as the overall context will change so much that many "facts" will essentially become useless. In the fascinating book *The Half-Life of Facts: Why Everything We Know Has an Expiration Date*, he describes a kind of myopia that affects our understanding of knowledge and the world we live in. He calls this condition *shifting baseline syndrome* and describes it as follows<sup>2</sup>:

This condition . . . shifting baseline syndrome . . . refers to how we become used to whatever state of affairs is true when we are born, or when we first look at a situation.

His point is that it's easy to take the ways things are for granted. We assume they have always been this way and will likely remain that way in the future. This can fool us into believing that there is some objective logic or rationale for why things are the way they are and that we can reliably build on that interpretation. A healthy counterview to shifting baseline syndrome is that the world is in constant flux and probably a lot less linear and serial than we think. What exists today is circumstantial, driven by influences we may not see, and therefore should not be assumed as being the right, or only, way to look at things.

What does shifting baseline syndrome have to do with design? One of the hallmarks of the designer mind-set is a natural curiosity about why things are the way they are. Which assumptions should be explored because they might be more limiting than beneficial? What emerging information and practices can be acquired and used to expand our understanding of how the designs of tomorrow will be different from those of today? This should be relevant to business as well because design helps create the value that businesses bring to their customers.

For our purposes, the important point is that things have not always been as they are today, and the current relationship between business and design is stuck in the past. It doesn't necessarily represent the best approach moving forward.

Kjetil Fallan is a faculty member at University of Oslo, in the Department of Philosophy, Classics, History of Art and Ideas. In *Design History: Understanding Theory and Method*, he makes the point that the current state of design may not be an optimized one<sup>3</sup>:

Although the world never was as simple and neatly defined as it might appear in retrospect, there can be little doubt that the massive changes in industrial structures, manufacturing technologies, market organization, consumer behaviors, communication technologies, visualization techniques and so on over the past few decades are of vast importance for the restructuring of design practice.

We agree. Certainly the rate of change of nearly everything over the past few decades has accelerated greatly. The kinds of work and the nature of the problems that designers work on have shifted as a result. We find it useful to look further back than the past few decades to understand what has led up to the situation today and why this recent increase in the frequency of change is so important for what business and design do together in the future.

Over the past few centuries there's been a transition in the objectives of design and who provides it. In fact, an entire field is devoted to design history. We're not

going to review the theories and approaches here. It's a worthwhile subject we recommend perusing sometime, and it's certainly relevant to the practice of design analysis. But we couldn't do it justice and still focus on more relevant issues, such as the future of how business and design work together, in a single volume. That said, a little perspective is useful, especially for those who are less familiar with design.

But before we look back, we should make sure that we all have the same view of what we mean when we say *design*. To have a meaningful discussion of how business and design should be looking at each other's worlds and working together, we need a common understanding of design and the role it plays to realize that what we take for granted about design has not always been the case.

As we consider design and what is changing in the role that design plays in business and everyday life, we will also point out the emerging importance of time. With the increased rate of change in technology today, products have increasingly shorter life spans. Services deliver time-based value, and that value must be evident to people to make them feel like they should continue to pay for it. Likewise, businesses look to translate their brand values into lasting relationships with customers that not only allow a business to exist, but with luck, allow it to grow. In fact, we see the role that time plays in design as being a large component of experience design. The benefit is that a deeper consideration of time across multiple interconnected areas of a business and customer relationship allows for better leverage of systemic qualities that design can provide and the ability to plan for options without the cost of fully committing to them—all with one common objective: keeping the customer engaged by providing value.

## The Duality of Design

Look at this book—the texture and size of the pages, the words on the page, the diagrams, and the cover art (or the e-book reader you are holding and the way that it allows you to flip “pages” and change the size of the type to better suit your eyesight). Every aspect of what you see was designed. Now look around the room you're in (or the vehicle, if you are travelling). Consider how many discrete objects there are and how many people and how much time was involved in creating them. We live in a designed world, yet we rarely think about it.

Some believe that design is responsible merely for why things look the way they do. Every human-made object we encounter in our lives has an appearance, and at some point in the process of creating it, someone made a decision—intentionally or not—that would affect how it would look. Most of us are familiar with (and may actually use) the phrase *form follows function*. Even many things that we think of as being in their “natural” state have been visually altered to look the way they do, and in many cases, this is highly intentional (for instance, when we see meat, sugar, rice, leather, landscapes, and people, we take it for granted that they are always in their natural state, but they aren't; perhaps we should be slightly uncomfortable in the way the form/function model gets applied these days). It's pretty easy for us to form an intuitive sense about what design is, based on the fact that we can see it all around us. Even so, we can forget that *everything* is designed, not just designer furniture and fashion clothing. With so many examples like these, it's easy to think that design as it relates to appearance is what determines the cost of things, especially because the most expensive things seem to have very conspicuous designs. We are delighted when we find a more ordinary object—a tea kettle, an iron, a broom—that strikes us

as “designed” but is very affordable, perhaps not much more expensive than other “nondesigned” variations of the same product. Many businesses have become successful by realizing this and providing affordable design.

This role of arbiter of appearances is an important one for design to play for a very simple reason: We are visual animals. Sight is the predominant way that we relate to the world around us. We may be attracted by a wonderful smell, but we would rarely eat anything without first looking at it. When we hear something, we look to see where the noise is coming from to understand the significance of the noise—should we investigate, ignore, or run like hell?

Although we develop the sense of hearing very early in development, we see well before we can use or understand language. We may first learn of many things through words, written and spoken, but it’s all the more real when we see whatever it is for the first time. For humans, seeing is believing. And our natural cognitive reaction to seeing something is to focus on the object to derive meaning from what we see.

So attributing the reasons that things look the way that they do to design is useful. Certainly one role of design is to make objects have more value within their context of use (this includes functional, financial, cultural, and social contexts). But it’s not the full picture. It suggests that design is a final step; a wrapper, or a container, or the presentation. In this position, design occurs toward the end stages of the process of planning and making objects. This is only half the story. *Design* is not just a noun; *design* is also a verb—a process. It is the thinking and the actions that go into producing the final design. A good way to understand the importance of this noun/verb connection is through procedural description, so here’s a scenario:

Imagine you are housesitting for a friend who has a small woodshop in his basement. He knows you’re the creative sort and has encouraged you to build something. He has left three blocks of wood on the worktable for you. Each block of wood is a 12-inch cube; one is white pine, one is bird’s-eye maple, and one is cedar. Under the worktable, you also find a fully stocked toolbox, a tape measure, and some glue. There’s a complicated-looking table saw in the corner, along with some other machinery that you aren’t quite sure about. After turning the saw on for a second, the noise quickly convinces you that having all of your fingers properly attached to your hand is probably a better idea than fooling around with dangerous machinery.

Your mind begins to wander through things that are made of wood and stops with . . . a box. A box should be pretty easy. You think that maybe a jewelry box would be nice. You’ll give it to your significant other and maybe even buy something nice and sparkling to put inside for extra points. You choose the maple block, which has a beautiful grain. Deciding that you’ll cut it into sections from which you’ll construct the box, you get to work. Your phone buzzes with a text from your significant other, but you justify not responding for now: You are in the middle of a labor of love. After a lot of labor and not much progress or love, you realize that the maple is extremely hard. You persevere. But as you continue, you realize it’s really difficult to keep the cuts even, and you aren’t too happy with the results. You begin to rethink things and are pretty convinced the effort with this block is going to produce something a whole lot less impressive than you imagined. Even so, one hour and a ruined block of wood later, you are undaunted with your original mission of building a box.

Starting again, you grab the cedar block and try cutting it. The saw goes through quickly, and your cuts are much better. Before you know it, you have a bunch of 12 × 12 × ¾-inch boards. The wood is not as pretty as the maple, though. You wonder if a jewelry box is the best thing to make. Maybe a cigar box (for yourself) would be a better choice than a jewelry box (for your other half). Besides, this way you won’t

have to also buy a piece of jewelry. You realize that you need to cut some of the pieces down into smaller sizes so the box doesn't look like a 12-inch cube. After (somewhat randomly) deciding that it will be 12 inches long by 4 inches high by 6 inches deep, you set out to cut the pieces up into sides, a top, and a bottom. Now you begin to put the pieces together to form the basic box.

Do the sides bookend the front and back or vice versa? After brief consideration, you decide that the sides will bookend the front and back. But how will you attach them? Looking around you see some small wooden crates on the floor. Inspecting them, you notice that the sides are held together with what look like small nails. You see some small nails in the toolbox and decide that these will do. As you maneuver the boards in a way that allows you to drive the nail to join the first side to the front, you swing the hammer and gently tap the nail. The wood splits.

No worries; you have extra pieces that you can cut to replace the split one. Rather than make the same mistake again, though, you decide to use the drill and screws, thinking this will prevent splitting. After a while, you realize that you can't drill a hole through the side and into the edge of the front at the same time, so you do it one at a time. As you're screwing the pieces together, you realize the holes are in slightly different places in relation to the board edges. Although you've joined the two pieces together, the edges are not flush. You still have more wood, so you take some measurements and cut some more pieces. This time, the two boards are joined and flush (or at least close enough)!

Your phone buzzes again. Another text from you-know-who, but you're on a mission and ignore this one, too. You continue until you have all four sides of the box joined together. Excited, you now get ready to put the bottom on. This should be easy because you can lay it on top of the sides and then drill through the edges of the sides to ensure a good fit. Unfortunately, you cut the bottom and top to be 12 × 6 inches and now realize that the box is actually 13.5 inches long (the sides each added  $\frac{3}{4}$  inch to the length). None of the wood is long enough (12 inches maximum length), so you decide that the bottom will be "inside" the sides.

As you try to move forward with this plan, you realize that the inner dimensions are not 12 × 6 inches but 12 ×  $4\frac{1}{2}$  inches (the front and back each now take up  $\frac{3}{4}$  inch of the original 6-inch width). You cut  $1\frac{1}{2}$  inches off the bottom, apply the glue to its edges, and then place the box so that the bottom is now inside. Now you see that the last saw cut wasn't exactly straight, leaving a bit of a gap. No problem. Glue will fill that, and as you squeeze glue liberally into the gap, you remember a line you once heard—glue, putty, sandpaper, and paint make a carpenter all that he ain't! Once it dries, you plan to drill through the sides and into the bottom and set the screws. Happy with your progress, you decide to go upstairs and relax while the glue sets.

After rewarding yourself with a refreshing drink for doing such a good job, you return to find that the glue has set. You also find that the box is now stuck to the worktable. You start prying and pushing the box to free it, and then—*snap!*—one of the sides breaks along the grain, which you now realize is probably running the wrong way. You hadn't really thought about the grain and strength of the wood when you cut the block. At this point, cursing, you throw it all away. A second block of wood is wasted, and the better part of the day is gone. But armed with your new experience, and perhaps a little obsessed, you start anew and grab the white pine block.

Your phone rings, and you see it's your significant other again, calling this time instead of texting and ticked that you didn't reply earlier. You let it go to voice mail because now you've hit your stride.

By now, you know a lot more about what to do and, more important, what not to



do, so it goes much faster and you're ready to put the top on only a few hours later. Of course, finishing this is a little tricky. You hadn't thought about the fact that the hinges need to be recessed or the lid won't lay flat. You go with the only other option and put them outside on the back of the box. Not as nice looking—they stick over the top a little—but it's done! Your new humidor is finished. You make a little humidifier by placing a damp sponge in a plastic container you found in the kitchen, with a few holes poked in its lid and sides, and adding that to your humidor.

Back at home a few days later, you notice black stains have formed in the wood of your handmade box. Mildew! You realize that the mildew-resistant cedar may have been the best choice after all and are annoyed that the cedar box broke. Giving up your fantasy of quitting your day job and opening a little wood shop to make and sell your handmade boxes, you decide to treat yourself and purchase a well-made humidor.

Now you have learned something about production and design. If you were more experienced at using the tools and going through the process, it would have been easier. You have the appreciation for the craft. And, if you had known what you wanted to make before you started, you could have planned the entire process in advance, including the box dimensions, type of wood, joinery techniques—every aspect could have been thought through. You could have computed all the measurements and set the order of assembly, all based on the end goal, the materials available, and your craft skills. You could have even considered different approaches to the size and construction, weighing the trade-offs between them and the relative merits of each finished product before you started.

You realize that you could have and should have designed the box before you produced the final outcome in order to increase the odds of having something useful and desirable. With the knowledge you now have, you know exactly how each aspect of the design (appearance) would have related both to the process of making the box as well as its value to someone once made.

Although this example may seem overly contrived, it does illustrate the duality and interdependence of each side of the concept of design. It also illustrates that underestimating the importance of design as a process can lead to problems. Appreciating this duality is critical to understanding how business can get the most out of design and why the current relationship between the two often doesn't produce the level of value that it could. When business provides an incomplete description of what is needed or design is not familiar enough with the process and the implication on what kinds of questions should be asked, the results may be rather disappointing. It's easy to underestimate how long the right solution will take when important information only becomes available after some level of effort has already been made.

This scenario is also illuminating in another way. It illustrates a subtle but very important nuance. The intention of the effort—the choice of what to make, for whom, and why—shifted during the course of the scenario, but only as a result of mistakes being made. This occurred largely because of the lack of a good design, which would have ensured that the process produced the right outcome. The final product and its overall effect on you and your partner were larger than just a box of dubious quality. The outcome was arguably even less successful than no box at all. The process of making the box and the usefulness of the finished product existed inside other processes and relationships that weren't fully considered.

Matthew B. Crawford writes about the value of craft and how modern production processes remove the connection to making value that people once had. He sees the process of work as important to the quality of the output because of the information

one gains and the resulting knowledge that arises during the process. In his book, *Shop Class as Soulcraft*, he writes<sup>4</sup>:

Knowing what kind of problem you have on hand means knowing what features of the situation can be ignored. Even the boundaries of what counts as “the situation” can be ambiguous; making discriminations of pertinence cannot be achieved by the application of rules, and requires the kind of judgment that comes with experience.

When we start thinking about the role of design in producing value for paying customers, the duality in the concept—process and outcome—starts to apply itself to a range of different areas, many of which are beyond the scope of the specific designed object. The problem is that it’s really difficult to think through all of the different vectors and relationships that can help us understand the importance of each and the interdependencies between them. This is often because we aren’t aware of them until after it’s too late, and their absence is what brings them to our attention.

The essence of this challenge is touched upon by the design historian Hazel Conway as she shows how easy it is to lay out the different avenues that connect design and object<sup>5</sup>:

Another confusion lies in the interpretation of the word “design.” When we talk about the design of a lamp, for example, we may be concerned with the mental processes and the drawings and models that eventually result in that particular lamp; we may be concerned with the production process, the form and material of the lamp and how it is used; we could also be concerned with how the lamp was marketed, advertised, packaged and sold.

If you believe that design is important because it affects customers’ overall perception of value—which it does—then design is a much more complex concept to fully manage. That’s because now every objective requires the right process, outcome, and understanding of the larger context in which it will exist. This is a key point and is foundational to the experience design approach we put forth in this book. Unlike pure innovation, which may be targeted at identifying emerging or unrealized needs, and unlike design thinking, which grounds the design criteria in the real world of the user needs and behaviors, experience design incorporates all disciplines of and approaches to design into an awareness of how to build systems that support customers in receiving value by recognizing that it’s never just about the single object or the current project requirements and parameters.

Modern businesses have many moving parts required for delivering value to customers, and experience design can become a way to see how these efforts relate to one another. It provides a framework for looking at how they reinforce core brand values and how decisions, which need to be made in the process of design, can have a further reaching effect than simply what the product looks and feels like.

But why is it so easy to ignore even the basic duality of design? Why is there a tendency to believe that letting business priorities dictate design objectives produces a better outcome than asking someone with a maker/designer mind-set to solve the problem in a viable way? We believe that the evolution of the relationship between business and design has a lot to do with it.

## Design: The Evolutionary Advantage

The propensity to design is in our human nature and has probably been there for a long, long time. Many theories on human intelligence, the evolution of the brain as the source of and reason for our unique form of consciousness, take the point of view that there is an advantage to being able to model different scenarios in our heads before committing ourselves to actions. In essence, we are probably hardwired for design. But it gets even more interesting.

When you think about design and what's involved in designing, it's natural to think about the role that the hand plays. If it's the craftsman's eye that determines what excellence is in a product, surely it's the craftsman's hands that make it happen. Frank Wilson is a neurologist who treats people who have sustained work-related hand injuries. He has been fascinated with the hand-brain relationship in human evolution and the role this relationship has played in defining the world we live in today. In his book, *The Hand*, he lays out this story, in which he ties the development of the hand and the systems required to control it to our success as bipeds, the ability for toolmaking and technology, and the development of language—essentially making the point that our humanness is as much related to our hands as to our brains.

Wilson clearly believes that the hand-brain connection is an important aspect of our humanity, writing<sup>6</sup>:

I would argue that any theory of human intelligence which ignores the interdependence of hand and brain function, the historic origins of that relationship, or the impact of that history on developmental dynamics in modern humans, is grossly misleading and sterile.

The importance of the hand to design is clear. Earlier, we said that sight is extremely important and perhaps the primary way that we receive our world. Another primary way that we exercise our minds in an attempt to interact with our world is through the use of our hands. It's true that we interact based on our presence, our voice, our hands, and the rest of our bodies, but the multipurpose tool that gives us the most bang for the buck is the hand.

Wilson is not alone in seeing the hand-brain connection. Lewis Wolpert, a professor of Biology Applied to Medicine at University College in London, believes that humans are unique in our ability to make tools based on observation, planning, and iterative refinement. Although other animals may use tools, most only do so by taking existing objects and using them with very little if any modification. And the tools are generally not reused, nor is tool use taught; rather, it is mimicked in most cases.<sup>7</sup>

He sees that there are a few interesting implications arising from this observation. One is that the “technology” of a tool can be shared, passed down across generations, and improved. The other is his hypothesis that the ability to identify and model cause, effect, and implication, which is needed for tool building (and design for everything from a scenario for stealing bananas to developing computers), is also the same mechanism on which belief systems are built. Belief systems will resurface later in the book as we discuss business, design, and the emergence of modern branding.

## The Maker/Designer

It seems fairly plausible that humans have evolved the way we have largely based on internal mechanisms that allow us to think, share, build, and control our world via this bidirectional world-hand-brain connection. As a species, we shape the things that shape our existence.

And throughout much of this time, grappling with the duality of design while balancing the process and end goal was the responsibility of the maker. Much of what was produced by people for themselves and others was based on an intuitive “design” that was influenced primarily by the materials, the most efficient ways of working with these materials, and the requirements of end use (utility and durability). Any additional aesthetic choices reflected broader social and cultural values and possibly the tastes and personality of the maker. The maker’s identity became a useful symbol of value, but often these were not outwardly visible as being separate from attributes related to function and social/cultural values. A maker’s mark might have existed on an unobtrusive spot somewhere on the product.

For things that required time and specialized knowledge to produce, there was an advantage to finding someone who could produce it faster and better than one could do for oneself. Sometimes producing specialized things involved a division of labor, such as different workstations for different stages of production of stone tools and weapons.

We have come a long way since groups of early humans sat together and shared the task of chipping stone into weapons—or maybe we haven’t. Wilson discusses the universal way that this division of labor approach works in his book. He makes this point in a way that brings amusing stereotypes to mind<sup>8</sup>:

Silicon Valley designers and engineers conceptualize, design, test, and perfect electronic machines in a process that is indistinguishable from that seen in Aborigines in stone and tool manufacture . . .

Enabling skilled craftsmen to benefit from knowledge guilds and similar craft-centric organizations functioned as a way of both leveraging the knowledge through the labor of others and protecting proprietary techniques. The labor-for-knowledge value exchange also helped transfer skills from person to person when media channels and educational institutions didn’t exist to fill that role for the masses. (Another probable benefit of this structure was that the most knowledgeable and experienced workers could also push the technology forward, through experimentation, while the less skilled workers produced the bulk of the work that paid the bills.) A scalable maker/designer approach was a predominant way to produce things of value for others.

We admit that this is a very coarse-grained overview that doesn’t consider centuries of social, cultural, political, and economic change, but there are some pragmatic reasons why a smart design-minded species would evolve into this kind of structure for managing design expertise in the creation of value.

First, to have production and design sensibilities reside in the minds of different individuals requires the ability of those individuals to communicate aspects of design. For much of human history, communication technologies have been somewhat limited—not everyone could read or write. If design is to be something that can be shared beyond the process of making, it has to be communicated in some way. You had to know how to read or write. You had to have time and access to materials used

to record the knowledge, and others needed time to assimilate the knowledge and then practice it to a degree that allowed it to be perfected, thereby reaching the level of consistency necessary to ensure the application of the design produced value.

In *Antifragile*, Nassim Nicholas Taleb describes how a lot of the “engineering” details used by the ancients weren’t necessarily formally documented. He explains that because so much resided in undocumented decision making, Roman bridge designers and their families were forced to live under the bridges they constructed; after all, no one would want to live under a bridge unless they were fairly certain it wasn’t going to collapse on top of them.<sup>9</sup>

With the invention and evolution of the printing press, the ability to record and distribute information became more efficient. But it would be a while before printed information would have a large impact on the role that design played and how this would affect the maker/designer.

Second, the processes for making things were still largely manual. This meant the quality was dependent on the individual craftsman. There was no way to formalize the craftsman’s knowledge and skill and embody it in a set of rules and behaviors that would allow it to be produced at large scale with the same level of quality across craftsmen or even from one piece to the next. This would not come into play in meaningful ways until the Industrial Revolution.

Third, and perhaps most important, the size and nature of markets was different. A good portion of the population did not have the means to acquire things beyond what was needed for mere subsistence. Transportation was not highly efficient, so producing more than could be sold locally was not economical if people in other markets made the same thing. There was neither demand nor a financial advantage for having design exist separate from the maker. Without some form of consumerism and the ability to mass-produce, the maker/designer was the optimal configuration. There was not enough need to differentiate, nor was the speed of consumption high enough to justify trying.

## Splitting the Maker/Designer

During the Industrial Revolution, a series of technological advances streamlined the processes of manufacturing and production. Although these shifts happened over the course of a century and over two distinct waves of change, there were impacts to the maker/designer model of effectiveness.

In discussing the differences between craft and mass production, Matthew B. Crawford writes<sup>10</sup>:

The craftsman is proud of what he has made, and cherishes it, while the consumer discards things that are perfectly serviceable in his restless pursuit of the new.

The first change that came about was that more products could be produced with the benefits of economy of scale, arising from more efficient means of generating power, better control over the replication of quality, and more throughput capacity in manufacturing. Manual labor was replaced with machines. It became easier to produce products, and once the knowledge of the maker/designer was instantiated in mechanical processes, the means of production became the main source of value for business (as opposed to the knowledge needed to produce a specific product).

Another shift was that the craft skills that were needed for production of one kind of product were often also fungible to other products. The skills needed for making a wheel for a wagon or other conveyance were similar to those needed for making a bicycle wheel. And Crawford points out that as the automobile began to replace these other forms of transportation, craftsmen who had the best all-around mechanical skills moved from producing one kind of product to producing another. In addition, the design and creation of the new production processes became a focus of many of the skill types who were once focused on designing/making end products themselves.

Two vectors of evolutionary change were now set in motion. The first: Access to capital would allow someone to buy the knowledge and means for production, without requiring very much in the way of experience from a maker/designer background. This meant that competition was now going to be driven by access to capital and to markets, not just knowledge of craft and level of quality. Second, it put any decision about what role design played, and why, into the hands of people who were weighing other considerations, such as profits and growth, as well—and often, these other factors were considered to be of equal or higher priority than design.

There were many areas in which the maker/designer mentality was still considered a high priority and key to how products were made and why people would want them. But even in these areas, there was a split between what was needed to make a product—and make it easy to manufacture—versus what was needed to make a product more valuable or desirable to a consumer. As Kjetil Fallan describes it, this split in maker/designer thinking can be categorized based on who benefits the most from the thinking<sup>11</sup>:

When engineers design cog wheels to go in the power transmission of a drill or disc brakes for a car, it would seem material more at home in the history of technology than in design history. However, when engineers design drills or car bodies their work is of more immediate interest to design history. It may seem that the crux of the matter is the degree to which the object as an entity interacts directly with the users.

Back to our earlier discussion about how we interact with the world—presence, eyes, voice, hands. If the customer can't see it, doesn't need to touch it, and doesn't ask about it, why spend time on design? When it's the guts that most people don't see, don't understand, and rarely worry about, it's considered technology and sits within the primary objectives of business control. When it's things that people see, interact with, and make decisions about, it's design. And when production and design are separated, business can be tempted to buy design whenever and wherever it makes the most sense. Often, this dichotomy seems clear, and business confidently decides to go without external input from design. In our experience, it's almost never as simple as it may first appear. And often, the customer's experience is tied to a deeper connection than the surface appearance.

## Information Accelerates Change

Another interesting and underappreciated shift that began to happen during the 1800s was the role that information began to play and how this ushered in the advent of consumerism. (It also set the stage for how crucial the increasingly rapid rate of

information would be to business and what business would begin to look to design to provide.)

For instance, in discussing the changes in women's fashion during the Victorian era, Hazel Conway notes that what a woman wore was a strong indication of her class and status. As such, working-class women who aspired to hold a higher station would try to dress in a way that suggested they were more than they really were. The upward compression on those at the top meant that they needed to be wearing something new and different to reaffirm their position. As a result, people began to look at fashion trends circulating in print, in order to understand what they should be looking for.

Conway writes, "The proliferation of fashion journals at this time, with the minutest nuance of change being recorded, meant that ideas could rapidly be disseminated."<sup>12</sup>

While information's role in setting tastes and defining what sells certainly didn't start here, clearly the relationship between information and demand gets a healthy boost, as both the means to produce and distribute information in faster and more economical ways became available. In *A Publisher's History of American Magazines*, Peter Hutchinson points out that between 1800 and 1900, the literate population in the United States increased by a factor of 20. In 1800, only 13 magazines were published in the United States, compared with 3,500 in 1900, and more than 8.2 billion copies of magazines and newspapers were printed in 1900 (which, based on the 1900 census, equates to more than 100 for every citizen).<sup>13</sup>

As it becomes easier to produce products for markets with economies of scale and as it becomes easier to inform and affect consumers' understanding of what's available and what choice makes the most sense, those who control the capital to fund both sides of the supply/demand curve are now in a position to determine what gets made, for whom, and why. From this position, it's easy to assume control of how design is being used to identify, create, and deliver value—to the point where design can now be guided in terms of what is needed where and what criteria will be used to evaluate the outcome.

## Codifying Design as Separate from Making

During the latter half of the nineteenth century, more and more products could be made in more economical ways. Much of the core value for a product could be produced with the necessary production knowledge instantiated in an optimized manufacturing process. Design implementation no longer required a maker/designer, at least not for products that could effectively be mass-produced. But not everyone was happy with the kind of aesthetic choices available through these manufactured products.

The concept of the balance between form and function is often attributed to William Morris, who owned a design business that, ironically, provided decorative ornamentation for church interiors. Morris was a founder of the Arts and Crafts movement that started in the 1860s and influenced art and ornamentation through the 1910s. Although the Arts and Crafts movement was largely a reaction to industrialization and its effects on the aesthetic and decorative choices being made in factories, its focus was on restoring a more natural influence to the hands of the craftsman, who was able to meld the nature of the material with art that reflected the mainstream cultural values (including the elevation of the natural world). The movement had an international influence on design, although it was not fully

concerned with form and function in regard to economic value or the functional value of products.

At the same time that form and function became a topic that an end user might consider when purchasing a product, others involved in production and design were interested in how the rules and characteristics of form could be systematized toward true production and use value, thus moving away from the province of fine arts.

The Bauhaus movement in Germany (beginning after World War I and running until the beginning of World War II) took some of the philosophical underpinnings of the Arts and Crafts movement and began to express them in slightly more utilitarian ways. The founders of the movement were interested in bridging many disciplines involved in production and design as well as fine art. One of the goals was tying the process of design and manufacturing to ownership and use. By using design as a way to optimize form and function as well as production, the common man would be able to more broadly enjoy the fruits of design. The choice of form was no longer tied only to decoration and ornamentation but also directly to what made a product better to use and easier to produce.

This movement produced some very influential thinkers and practitioners. It also helped formalize design systems—that is, which formal elements and attributes were important and why and the different ways in which the elements of design could be systematically considered and managed. Modern book design, modern typefaces, modern product design, and modern architecture—many aspects that we take for granted today as being what design is about—came into use during this time. In fact, the Bauhaus style was often referred to as international style, because the aesthetic choices were not tied to specific cultures or historical influences of fine arts. Graphic design, which is primarily concerned with information, meaning, and effective communication in two-dimensional media (think print), was greatly influenced by this movement.

The formalization of design systems as knowledge that could be applied, separated from, and considered even before the actual production of a product began allowed the design professions to be freed from having to make things in order to influence them. Designers could consult or design in abstract, becoming more like the modern designer of today: often having a set of highly perfected skills and looking for a problem to apply them against. It also meant that business could begin to evaluate what aspects of design they believed were most appropriate, because the design and production were now only as integrated as the business and product required them to be. Suddenly, design was much less connected to production.

## The Modern Brand

We mentioned that information was accelerating the rate of change in many ways, especially in regard to how people learned about products and prevailing tastes. Information about design processes and techniques could be captured and communicated. Those who were buying and using products could now see options before deciding to buy. Although advertising had been around for quite a while, there was a host of new, financially viable vehicles to promote new products, including published magazines, newspapers, catalogs, and so on. An emerging connection between business, production, demand, and the rise of consumerism set the stage for an interesting shift in how information drove markets and how business used design.



Brands have been around for a long time. People often used symbols that stood for their products or their lineage, which may have had a relationship to the creation and purveyance of certain products. But modern branding really came into its own in the twentieth century. The ability to economically put a message in front of a consumer; the emergence of products that you could buy, rather than make yourself; and the pursuit of profits based on the economies of scale provided by manufacturing and communication began to suggest that creating a reason why someone should buy your product (as opposed to a competitor's) were good things.

As Crawford describes it<sup>14</sup>:

Consumption, no less than production, needed to be brought under scientific management—the management of desire. Thus, there came to be marketers who called themselves “consumption engineers” in the early decades of the twentieth century.

In describing the rise of modern advertising and branding and the role they play in giving context and meaning to society, James Twitchell makes a connection between the dynamics of religious belief systems and the mechanisms behind brand building. In his book, *Adcult USA*, he talks about early pioneers of advertising in the twentieth century as having been very familiar with the practice of religion. Some had even been clergy or divinity students.<sup>15</sup>

What seemed to click for these early pioneers of positioning and messaging was an understanding of belief systems and how, once established, such a belief system became a very powerful force for affecting people's behavior. The more universal a value provided by a belief system's foundation, the more powerful it could be in motivating a person to do specific kinds of things. And people seemed to respond to being asked to operate on blind faith if the belief was strong enough.

If you remember our discussion of value in the Introduction, we talked about three types: tangible, intangible, and aspirational. The tangible value of almost anything can easily be demonstrated by comparing what it's supposed to do with how capable it is of performing that feat. But intangible and aspirational value are often abstract, represented through ideals to be taken on faith until you're able to realize them for yourself (and implicitly, in your own subjective way).

These ideals represented by brands were tied into social and cultural needs and aspirations. People were interested in profiting from the advantages of technology, living the good life, and being happy and prosperous. Brands could represent their ideals and values into design attributes that could be layered onto products. By “layered” we mean that changes to the appearance and secondary features could be made without significantly affecting the process or cost of production (it could just as easily stop at the packaging and advertisements). Although design wasn't literally translating these into specific components of utility in the product, it could help make the brand differentiation visually “real” and apparent, and advertising was the perfect vehicle for carrying the message.

This was the new area of value that became important for driving consumerism and taking advantage of the ease of production unleashed during the Industrial Revolution. And there was a nice tie-in to other areas of culture that were commonly used in conveying these kinds of intangible and aspirational ideas: the graphic and fine arts. With channels of communication available to businesses and a public that was beginning to look at the media in these channels for cues on how to think, act, and buy, the modern brand began to take shape. Here, design played a role in

developing something for business that was not tied to the process of making products, because what was being designed were ideas, concepts, values, and principles in the abstract. Although they referred to the product, the design of the presentation of this information had little to do with the design of the product.

The choices of how to portray these kinds of ideals had little pragmatic constraint. The designer could work with a system of design components that were highly flexible but capable of being combined in specific ways to create very unique and eventually proprietary design systems or brand identities. The values of the brand were to be represented by the choice of elements and their systemic application by a designer, who needed no real or practical knowledge of the product or how it worked or was produced. The people buying design didn't need to have that knowledge either. Yet this relationship between business and design could be very powerful. For instance, although Coca-Cola was established as a brand before this transition began to happen in full, Coke did leverage this shift. We still experience the power of this every year. The modern version of Santa Claus, the color of red used then (and still today), and to a certain extent, the consumerism inherent in the modern version of this holiday were all inspired by ads commissioned by the company for its brand. As Hazel Conway describes it, we are aware that this is happening, yet we are unaware how deeply this may affect us<sup>16</sup>:

In the streets, in the shops, reading the papers or magazines, or watching television, advertisements designers hope to have a direct effect on us, and this we recognize. Their indirect effects are, however, much more subtle and not nearly so easy to recognize, yet our perception of ourselves, our surroundings and our society are affected by them.

This represents a fundamental shift away from the maker/designer model in which the duality of design was mediated through individual decisions based on how the needs of the two sides (process/final artifact) should best be served. Now business was in the driver's seat and could use a more scientific approach to streamlining production and driving demand, with brand being the emerging point of focus for the consumer. In this situation, design's biggest effect would be felt in how the brand was brought to life and used; the decisions about product were no longer open and flexible, and consumers' attention was often diverted away from the pragmatic tangible value of the product in favor of the intangible and aspirational value of the brand.

## Where There's Brand, There's Consumerism

With the end of World War II, a lot of new technology was making its way from the military industrial complex into consumer products. There was also a lot of manufacturing capacity and a lot of people who were entering the workforce, both to help the supply side and to be paid salaries to drive the demand side. Consumerism finally had all the right pieces to fully take off.

Add to this new and more effective channels of mass media, and you have the perfect situation for business. With new materials and design disciplines such as industrial design, you could now create basic models that used the same manufacturing process and components but evolved through a series of small design changes, each one an improvement on the previous. Design could leverage the

business's brand values to create incremental change in appearances and features for products, which helped business create consumption cycles in which the consumer could gratify the entire range of value (tangible, intangible, and aspirational) on an ongoing basis. In many cases the only thing that really changed was how design was appealing to the intangible and the aspirational. The fact that the process of making things was optimized for cost of production, and not necessarily product durability, certainly helped (and consumers began to suspect that some products even had built-in obsolescence). Because the target of brand belief was deeper than rationality, the whole mechanism could become instilled in society to the point where the advertisements and branded products weren't serving preexisting needs as much as defining what was important and desirable. It's quite a feat for a business to not only have the means for producing supply but also have access to the means for producing demand. When you can connect the two, the nature of the market changes. Customers become consumers on a treadmill, with increasing opportunities to acquire more value of all kinds.

We feel compelled to highlight a couple of interesting points that arise out of this state of affairs—points that differ from what existed in previous centuries. For starters, technological change affected how business and design worked together, enabling a separation between design and production. Second, the role that design played in creating or enhancing value when business chose to use design. And third, the question of what to make, for whom, and why could now be decided without consulting design—until after the fact—by convincing people that they should buy something because of its subjective value.

This state of the relationship between business and design was relatively well optimized for its time, but it wasn't the only road to take, nor was it the best. We arrived there largely because no one really had to think about it along the way. As Samuel Arbesman would say, "We are not well equipped for slow change."<sup>17</sup>

## Acceleration through Technology

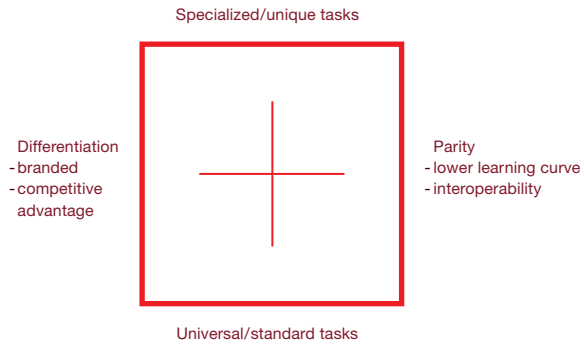
The latter half of the twentieth and beginning of the current century saw a new wrinkle in the collaboration of business and design. The development of computing and network technologies, along with the general growth of the economy, created new areas within the service economy. In addition, services previously provided by people could now become productized as software. The Internet created a new channel for connecting media and services to consumers. Many services shifted to IP-based networks. All of this led to new areas of design, specifically, the emergence of interface and interaction design.

The three new kinds of business concerns in which design became involved were digital media (websites, content), digital services (applications, e-commerce, media services), and digital marketing (ads, e-mail, microsites). Suddenly, the business and the customer could actually interact directly in real time through the final designs of any digital product or service. This shift also altered the relationship of the process and outcome of design, because the role that time plays became much more important to consider. Figure 1.1 shows just some of the variables that need to be considered before design can even begin to create a service experience that would work for customers.

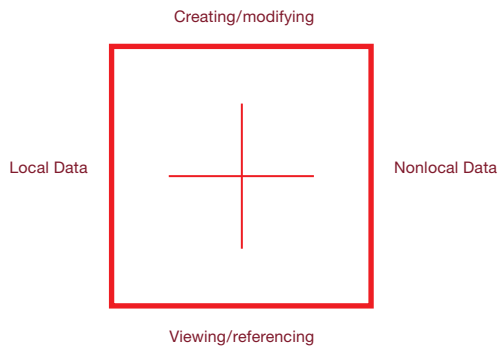
Unlike a physical product, a digital product (or service) had a lot of the content and controls presented visually through a screen. Because the screen contents were

Figure 1.1  
Five Basic Areas Digital Design  
Takes into Account

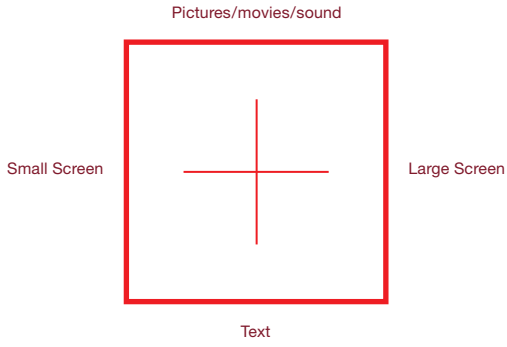
**A**



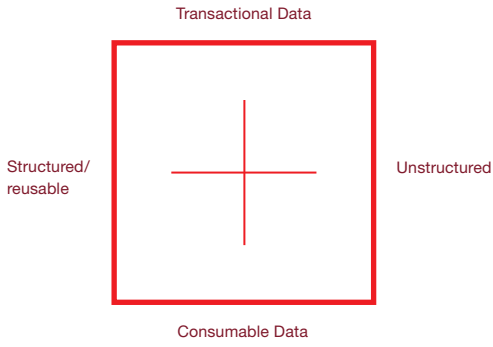
**B**



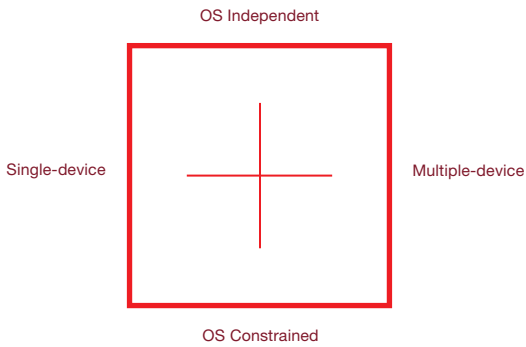
**C**



**D**



**E**



generated by the hardware inside, what was on the screen could change over time. In addition, many of these products had a lot of features and capabilities that were provided by the internal components (not how the product was physically used), which meant that users had to invest time in learning what was there and how to use it. When these products and services also provided a bidirectional flow of data from the product to someone else and back again, the nature of the value provided could change over time. Finally, because of the technical architecture of digital products and services, not only could products have their value proposition “updated” over time, but the options for different kinds of solutions could change as new technologies changed what was possible. When a current standard of efficiency for a product becomes outmoded, it’s very difficult to build a case for staying with it.

When computing systems first began to utilize graphical user interfaces, one of the emerging concerns was that there needed to be some kind of mediation between the system and the user that acknowledged the human way of experiencing the world. User-centered design was the approach suggested, and a lot of design for the digital medium was evaluated for usability as a primary criteria. With the combination of this user-centricity and the relative novelty of the problem space (and scarcity of experienced practitioners), the business side began to allow—and in some cases rely on—design to provide the maker/designer benefits.

With several decades of experience under their belt, many businesses began to invest in taking some of the management and development of the digital channels and services in-house, at least at the data and core service level. New tools allowed for certain areas of design to be executed by anyone willing to learn how to use them. And the proliferation of options and examples for how these tools could be used allowed for novelties that were of more interest than strict adherence to the user-centric conventions of predictable usability. Businesses wanted design to create experiences that were much more dynamic and that differentiated their story by taking advantage of the medium in innovative ways. Often, a business would ask design to improve the user interface or create an innovative experience. In some cases, design staff for digital media were embedded in business’s functional units, when benefits of a real maker/designer approach were needed. But despite all these variations in where design staff sat, it was still business that largely determined what, when, and why, often from very tactical perspectives. Design became a stage gate. In many cases, the relationship between a business and an external design partner was managed much the same way that an internal design staff was managed. In many cases, the choice to go outside was driven by capacity and access to particular levels of expertise, but it didn’t necessarily change who made what decisions. In many ways this had to be because the outside partner was working with the internal teams to some degree.

There was also a new breed of business that needed design: the Internet start-up. These were marked by several characteristics. The first was the belief that change was inevitable and would sweep people up (as customers) without much need to convince them to “buy.” This often meant that the value the business was providing was obscure, in some cases apparent only to the founders and their investors. A second characteristic that was largely present only during the first wave of these new entities was deep pockets. Start-ups had raised significant amounts of capital. (The “later waves” had almost the exact opposite situation: clear value proposition but little capital.) A third characteristic was that they needed an entire company (brand, product/service, marketing, customer relationships) built ASAP, because they were going to take the existing business world head-on, right out of the gate.

When the Internet start-up had capital, it could commission the best design practitioners. Whether the start-up made the decisions about the role design would play or left those decisions to the designer depended largely on the applied experience of the executive team. When the start-up had little capital, it usually tried to cherry-pick where and how design would be applied to the problem (often to the warnings and consternation of the designers). And when the nature of the technology or business model was so new, in many cases all the design effort was focused on convincing investors—as opposed to end customers—that this was something noteworthy to engage with or that not engaging would mean missing out on fantastic future value.

The shifts in the economy and the change brought about by network computing fueled financial interest in new business models. Design was thriving. During the second half of the last century and continuing onward, there would be a proliferation and diversification of design services. With each new branch in the channels used to reach the market and with each new technology, there was a richer flow of information between business and customer. Design responded with specialization of services, and business looked to maximize investments by finding the best-in-class to fill specific needs at lowest costs. In many cases there were value-added services that addressed business needs that were not tied to the design process and didn't require a finished design. These services made the implementation of the design easier by taking off-the-shelf approaches and making minor, superficial changes to make the output seem more “bespoke,” or they assisted in the management of the process for which design was commissioned.

Although business has benefited from the changes brought about by technology, technology is changing the nature of business and the relationship between business and customer. Brands are no longer based on a one-way broadcast and reaffirmation of belief systems, and to a great degree, they are defined as much by the customer as by the business. Technology is rapidly changing the entire product/service life cycle, and as Chris Anderson points out in *Makers*, desktop production combined with the Internet's ability to collapse the idea-to-market telescope might just usher in a new industrial revolution that swings control back to the maker/designer.<sup>18</sup>

## Implications

What we're trying to illustrate throughout this chapter is that there is a substantial difference between a maker/designer and a business that has taken on the making and designing of a product or service. This split becomes more structurally ingrained when design is also used to build beliefs and demand for value that is not experientially validated through the products or services it represents. And finally, as the touch points that operate between a business and its customers proliferate, design begins to specialize and to provide new value-added design services aimed at making the customer's life easier.

This creates one challenge that is of particular interest to us because it effectively ensures that the current relationship between business and design continues on the present course, a course that we believe should be reexamined. This is what we describe as a method of self-justifying a position of authority. Essentially it operates as follows: When a problem is poorly framed and presented for design to solve in a way that limits design's ability to solve the problem correctly, an ineffective solution reaffirms that design is not in a position to guarantee results and that it's perhaps a

subjective endeavor best managed by business. If an effective solution is delivered, it's simply proof that the business has chosen the right designer because business is a better arbiter of what design can do.

Buyers of design services want to see that those they hire can help them be successful. Because most design service providers live and die by the success of the work they do for their clients, it puts the designer at risk of doing a lot of work that may not get leveraged in the future. When your portfolio is filled with projects for companies that went out of business, it's hard to get hired, even if you were just following the clients' orders.

Although we're pointing out the inefficiencies in the way that business and design are now working together, we should be honest and acknowledge that we, and the design industry in general, have benefited a lot from these developments. There are many buyers of design services, and their needs continue to increase and change. We would not be in business today if the circumstances hadn't played out as they have. But what we continue to see is that although this may have benefited us, the same dynamic seems to be working against business. Design should be able to help business identify, create, and deliver more value to their customers. We also believe that this view of the world is useful for businesses, for practitioners delivering design services, and for maker/designers, whether they are part of a start-up or simply an entrepreneur with a 3D printer and a network connection to the market.





# 2

## Thinking about Business

“When my information changes,  
I alter my conclusions.  
What do you do, sir?”

—John Maynard Keynes<sup>1</sup>

Variations of this quote have been attributed to different people over the years—Keynes, Winston Churchill, Paul Samuelson—but regardless of who said it, it does illustrate two worthwhile points. The first is literal: No cows should be sacred, and it's good to challenge your own position. Be open to the idea that what you're seeing may be slow change and not stasis. The second is contextual: Despite advances in access to information (such as provided by Google), we can't always be sure we have the facts right. We can't even be 100 percent sure of who said what, as is the case with this oft-cited quote.

We would like to think that Keynes was intuitively familiar with the underlying concept of shifting baseline syndrome, because in *The General Theory of Employment, Interest and Money* (1936), he wrote, "The difficulty lies, not in the new ideas, but in escaping from the old ones, which ramify, for those brought up as most of us have been, into every corner of our minds."<sup>2</sup> We would also like to think that we can convince a good portion of readers to come to the conclusion that things have changed and business is probably not using design as effectively as it could.

We have suggested that design is a natural aptitude, an effective way for humans to approach the world, and that this has probably helped us survive as a species. And, throughout much of our history, what we now think of as design could have been efficiently delivered by the maker/designer. We have moved from centuries of a maker/designer model to one where business now sits between making and design. In this position, it is business that effectively decides how making and design are brought together and what criteria should be used to define and evaluate their output.

Although we believe that business and design have both benefited from this relatively recent transition away from integrated maker/designer, it's probably not the right relationship moving forward. What we are proposing in regard to experience design requires business and design to consider that the relationship between the two, as we know it now, is not the best it could be and that adopting new ways of framing problems and working together could produce a better future.

Let's face it: The current situation creates inefficiencies. This has a lot to do with how businesses manage themselves (developing advantage by maximizing efficiency and reducing costs) and by extension how they manage the split between maker and designer. The very circumstances that allow business to exist in this state—the ability to use consumerism to extract profits from the process of bringing production and design together in certain managed ways—also creates a situation in which mistakes in meeting consumers' expectations can be costly. The ways that business engages design are often driven more by efficiencies of business management or a given company's culture, as opposed to what creates the most value for the customer over time. And the pressures on business brought about by technology narrow the window of opportunity for getting it right. This is compounded by the increasing challenge that technology poses for business in that many of the circumstances now affecting them are outside of their control.

In this chapter we look at the relationship of business and value, how this plays into business's current approach to design, and what factors help drive change for business. We believe that reexamining the relationship between business and design is the best approach for dealing with the pressures now being faced by business and that experience design is a good foundation for reassessing how the two can play off each other's strengths.

The view we are putting forth is fairly pragmatic and based largely on observation and common sense. Although we think it's interesting to ponder how the overall thesis of this book would change how businesses approach strategy, our real

objective is to start conversations that make it more productive for business and design to work together. As Arthur Schopenhauer wrote in the opening of *The Art of Always Being Right*<sup>3</sup>:

We should in every debate have no other aim than the discovery of truth; we should not in the least care whether the truth proved to be in favour of the opinion we had begun expressing, or the opinion of our adversary.

## Customer Value and the Goal of Business

We started the Introduction to this book by asking how a business stays in business and suggested that the answer is by creating value (and selling it for less than it originally costs to create). Our answer posed three levels of value: tangible, intangible, and aspirational. What's missing is a description of how that value is identified, created, and delivered to customers.

It's also worth noting that the perception of value is different for business buyers (in business-to-business [B2B] environments) and general consumers (in business-to-consumer [B2C] environments). This difference is especially important at a tactical level (tactics that work well in one case might not be as effective in another). We believe that the general overview we have taken, the current state, and our proposal of experience design is universal for both B2B and B2C companies and, in fact, would provide a much better framework for designing value in the more complex but increasingly common business-to-business-to-consumer (B2B2C) model, where a business sells both to other businesses and consumers.

There have been many attempts to define value in terms of products versus services. We propose a set of definitions below that we will use as we discuss experience design.

**Consumer:** Someone who has and demonstrates the capacity to buy products and services from businesses. A consumer becomes a customer of a business when he or she considers buying products or services from that business.

**Customer:** A buyer (and potential buyer) of a specific product or service provided by a specific business. A customer's behavior may reflect his or her role as customer in a given situation, and the larger trends in consumer behavior.

**Product:** Something that is paid for once, becoming the property of the buyer, and that delivers some form of value or utility without mediation by anyone other than the end user. The cost of a product can be amortized over the useful life of the product. In some cases this value extends well beyond the breakeven point, but this is never guaranteed. When it does, it's generally good for business.

Products can become service channels when they are able to provide information or access to a service. In some cases this channel is used by other businesses that may or may not have a financial relationship with the

business that makes and sells the product. In some cases, the predominant value of the product is as a service delivery channel.

**Service:** A service is something that must be paid for on an ongoing basis (never becoming the property of the buyer). It delivers some form of value or utility to a user but requires the direct support or mediation of another (either the seller, a partner to the seller, or someone commissioned by the buyer of the service). The cost of a service can never be amortized because you are essentially always paying for the right or access to use it, whether you actually use it or not.

Because of the relationship between value and intermediaries in a service, the economics of securing all the necessary components in advance of use would be prohibitive for any single buyer. Or, as in many cases, a component of the value or utility is based on another service, which means that the total service can never fully become the property of a single customer.

Services can be bundled together with other services, often from different businesses (providers). Services can use products as channels for reaching and engaging customers. Many services would be of no value to a given customer if the products through which they are delivered were not already owned by that customer. In some cases services subsidize the cost of these products for the consumer. Because it is common for the product to be made and sold by someone other than the service provider, services may have different characteristics (and value propositions) depending on which products they are delivered through.

**Solution:** A combination of products and/or services that can be combined and modified to provide specific, multistage value. Some solutions can be created or modified by customers, whereas others require professional services of some kind.

Once someone has bought a product, the gap between the product value and his or her needs becomes the buyer's responsibility. When someone buys a service, the gap between the service value and his or her needs is still the buyer's responsibility, but one way the buyer can deal with this is by discontinuing the service. With a solution, the gap between value and need is dynamic and can be affected by changing or changes to the components.

These ways of looking at value generally map to the core touch points that any business uses to provide value for its customers. These exist within a larger set of touch points that are used to communicate and transact with customers. Interestingly, how you look at these touch points of value—what's important and why—depends on what your background and current role is (business decision maker versus maker versus designer). Although we may all agree in principle that these definitions are useful, what a businessperson thinks is important might be very different from what a maker or designer deems most important. And this is natural, so it's to be expected.

Howard Gardner is someone who believes that there is not one single model of human intelligence that operates in each of us. In addition to being a prolific writer, Gardner who also happens to be a developmental psychologist and the John H. and Elisabeth A. Hobbs Professor of Cognition and Education at the Harvard Graduate

School of Education. Many of his books are about his (and others') emerging theories connecting psychology, biology, and neuroscience with the purpose of understanding human intelligence. A main theme in his work is that there are multiple intelligences at work in the human mind that give rise to the variety of capabilities we see and commonly think of as intelligence.<sup>4</sup> He also proposes that this is a good thing, because it helps provide a level of robustness for intelligence across the species.

For those of us who often find ourselves at the table with business and design, this idea of multiple intelligences is probably nothing new. We have all heard business-minded people refer to some aspect of the problem they are trying to solve to be outside of their capabilities and that they are looking to "you creative types who know how to solve these things." Conversely, we have often heard designers say that it's not their job to figure out the business model or "determine what KPIs [key performance indicators] are relevant and what their measurement would mean." It's quite easy to inadvertently become biased and think that another possesses a level of capability that is greater than ours, especially when it's reinforced within a more formal set of role and relationship definitions and expectations. The downside to this kind of thinking is closing our minds to the parts of a problem that we aren't as comfortable solving.

Under the maker/designer model, an efficient approach to creating value for many centuries, the decisions about what value was in a given situation were probably envisioned from one point of view. There weren't a lot of options (knowledge, technology, money) for the maker/designer in the creation of value. Given that, it's likely that the spectrum of value demanded by the customer (and the need to explore this and provide a highly differentiated offering) was also relatively low. Essentially, there was a more single-minded view of how production and design were combined to create something of value.

It's no stretch of the imagination to see that if the mind-set determining what and how to create value for customers is now based more on managing processes and optimizing costs and efficiencies, then a different kind of prioritization of objectives arises that may subordinate those of either the maker or the designer. This will also affect how people within a business develop strategies for identifying and accomplishing goals. Considering this, what would be an appropriate model for having a single-minded approach to how business and design join forces to create value?

Michael Porter, once the guru of business strategy (perhaps now a more controversial figure, as some of his assumptions have recently been challenged<sup>5</sup>), viewed competition as the key element of looking at business strategy. His views on competition and what's important from a competitive perspective will make sense to most people, because they align with an intuitive sense of a business's goals as being the creation and delivery of value.

In *HBR's 10 Must Reads on Strategy*, Porter provided an answer to the question "What is strategy?" He writes<sup>6</sup>:

To outperform rivals: [business] must deliver greater value to customers or create comparable value at a lower cost, or do both. Overall advantage or disadvantage results from all a company's activity, not only a few. The myriad activities that go into creating, producing, selling, and delivering a product or service are the basic units of competitive advantage. . . .

Strategy requires you to make trade-offs in competing—to choose what not to do. Strategy involves creating “fit” among a company’s activities.

Critics of Porter are also largely critics of this view and point out that competition as strategy essentially assumes a zero-sum game, one in which there has to be a loser and a winner. These counterviews would suggest that an ecosystem model is more accurate—that one doesn’t necessarily need a rival to go out of business to see some kind of advantage. Often, the focus is moved away from competing with rivals and instead looks at creating value for the customer.

It’s interesting to reread Porter’s description of strategy but replace *competing* and *competitive advantage* with *creating value for your customers*. Certainly Porter understands the basic role of value, as he is essentially saying that’s where it all starts. We suggest that this replacement is crucial to the future of the business and design relationship and is a core component of our approach to experience design. It’s also worth pointing out that Porter believes it is important to look at all activities and how they fit together. Keeping value for your customer and ensuring coherency across all activities are the foundations of the approach to experience design that we propose in this book.

One term that has become synonymous with competition in many business minds, or at least in the minds of much of the business press over the past decade, is *innovation*. We will discuss innovation in the next chapter, but it’s useful to briefly raise a point here, as it ties into how businesses tend to approach customer value (and we are assuming that most businesses have chosen innovation as their way of competing, similar to Porter’s original definition of *strategy*).

Ron Adner has made a major contribution to understanding innovation in a book called *The Wide Lens*. The basic thesis is that innovation doesn’t happen in a vacuum and that for any innovation to work, there is a network of players and considerations that must be looked at and managed. One of the key points, though, is that tied to the innovation mind-set is the assumption that business is in a position to accurately define what value is. In many cases the definitions are not correct. Adner’s point is an important one’:

We all know that a natural tension exists between those selling a product and their target buyers. At its root is a misunderstanding over the notion of value—the balance between costs and benefits. Although both innovators and consumers use the terms “cost” and “benefit” to describe the way they think about value, they think about those terms in very different ways.

Adner says that missing this difference in perspective is a “recipe for disaster” and clarifies how this difference in views comes about, arguing that it largely revolves around whether or not the value is truly a benefit.

Adner goes on to say<sup>8</sup>:

Innovators think about these benefits in terms of what their product actually provides—the absolute benefit delivered to the customer. But customers think about benefits in terms of added value—the relative benefit delivered by the product compared to the available alternatives.

Considering what alternatives exist for the customer should include the option of

not buying anything or making do with what they currently have (Porter does consider this in his 5 Forces model of competition). Adner continues to point out how the difference in benefit is compounded by the different perceptions of cost<sup>9</sup>:

Innovators tend to think of the price they charge for their innovation as the determinant of customer cost, customers conceive of cost in terms of that price plus all the other changes they need to undertake in order to use the innovation (beyond the initial outlay, the cost of retraining, equipment upgrades, etc.). While innovators tend to focus on delivering an offer whose absolute benefits exceed the purchase price, adoption happens only if the customer sees a clear surplus. That is, the relative benefits must exceed the total cost.

If we change this view slightly and consider that rather than innovations (new offers) we are looking at existing offers targeted at new customers or at superficial improvements (for example, the New and Improved! messaging on the packaging) targeted at existing customers, we would suggest that Adner's description is still accurate. In fact, this describes how a lot of us look at making decisions regarding what to buy and from whom, not just how we look at innovations.

So how does business do a better job of identifying the true benefit to the customer? How should decisions be made about which trade-offs in cost versus value need to be made?

In the book *Different: Escaping the Competitive Herd*, Harvard Business School professor of marketing Youngme Moon talks about how companies try to differentiate themselves to build stronger demand and more valuable relationships with customers. What she points out is that many of the efforts employed by businesses are short lived, have a high cost, and don't really sway consumers' minds. It's a brinkmanship model in which any move by one competitor is eventually adopted by the other regardless of costs and longer-term benefits. Consumers are happy to take advantage of the additional value, but because it's not exclusive, it doesn't drive loyalty. Moon's point is that this route of competing for customers, largely by mimicking the competition, is not sustainable and that it may be more effective to determine what a business does best and what customers value the most, and in turn focus on making that value exchange as strong as possible.<sup>10</sup>

We like to think that all businesses, especially our clients, realize the importance of creating value for customers. But we do see that in many cases, this becomes a lesser priority when leaders are looking at issues, initiatives, and future plans. Why is it that this important point often fades or is present but in an extremely abstract way that is difficult to put into action?

## The Challenges of Identifying, Creating, and Delivering Value

In addition to managing operations in a cost-effective way, business also needs to ensure that customers are receiving value in ways that they *agree* are valuable. Competition will always exist, and figuring out how to do all of this in a way that differentiates you from rivals while building loyalty with customers is the goal.

One of the key takeaways is understanding value and making sure that the business and customer sides of the equation balance. This is one area where design can play an important role, if only to structure the problem in such a way that helps customers



realize the value in a way that is apparent and realistic. Of course, value, like beauty, is in the eyes of the beholder. One way to make sure that you deliver the right balance of value is to think like the “beholder.”

In the early days of the Internet phenomenon, one challenge was helping provide context for what a user was looking at, what it meant, and what he or she could do, or was supposed to do, at any given point. During this phase of the Web’s development, the hyperlink, or text-link (blue type with the line underneath), as a way to navigate through information was a new concept for many users. The idea that someone had to understand the purpose and implications of these links led to the coining of the term *cognitive overhead*: the effort of understanding the purpose and implication of all that blue text.

There is a story about a high-powered executive; a partner in one of the big five consulting companies who never used his computer. He had his administrative assistant do everything, including reading his e-mail, writing e-mail on his behalf, and so on; essentially, this partner knew what the computer did but didn’t find it valuable enough to bother to learn to use it. According to the story, another partner informed the first one that all of the SEC filings that companies were legally required to provide were available online in a database called EDGAR. The Luddite partner then became very adept at using the computer because access to this information was extremely valuable to his job.<sup>11</sup>

What works about this story is that it perfectly illustrates how value works. People will use a product or service, despite difficulty, if they perceive it provides enough value. We call this concept the cognitive overhead rule and often use it in pitches and in projects, writing it as the ratio:

$$\text{Perceived value} / \text{cognitive overhead}$$

We say that if the result is less than 1 (overhead greater than value), there would be a problem and the product or service won’t be successful. Conversely, a result greater than 1 would be much better. We also point out that there are two ways to approach the problem. One is to reduce the cognitive overhead through design; the other is to make sure the value is very high by making sure you solved a customer’s real need (again, through design). Often, we say looking to do both was the best bet.

We propose updating this model and applying it to the totality of things a business does on behalf of the customer and would write it as follows:

$$\frac{\text{Perceived value of what has been provided by business}}{\text{efforts a customer has to make on his or her own behalf to receive full value}}$$

What might be obvious to many readers is that this ratio is likely to change over time. That change is going to determine the context in which the value/effort ratio is being played out. There’s a difference between the first time a customer uses a product or service and the hundredth time. There is a difference between what a customer expects based on advertising and marketing versus what that person actually experiences. There is a difference between how someone might expect to be treated the first time he or she does business with you versus after having paid you lots of money. And there is a difference in what satisfies a customer’s needs when that person is relaxed and has time to spare versus when that person is under pressure and has other things that require his or her attention.

We think that experience design means factoring time into every decision and

understanding what the relevant vectors of time are for any given stage or touch point of the customer experience. With this view in mind, we would make one final change to this model and write it as:

$$\text{Perceived Value} = \frac{\left( \text{What has been done or provided by a business} \right) - \left[ \left( \text{Customer needs} \right) \times \left( \text{Customer expectations} \right) \right]}{\text{Customer context}}$$

Of course, these are not real equations; you can't plug data or metrics into them and produce a quantitative answer. But they are useful when looking at any given project or customer touch point. We will go into more detail about how this approach works in the next few chapters. The important point for now is to begin to think about what's going on over time with the customer, the customer's experience around a product or service, and the overall relationship with the business. The goal of business's use of design (both process and outcome) is to ensure as much seamless experience of value as possible for the customer in order to keep the customer engaged.

The challenge for both business and design is to prevent the value from becoming overly fragmented or faceted to the point where the customer is no longer engaged, or worse, sees no value in further engagement.

## The Origins of Faceted Value

As we mentioned before, anyone who has sat at the same table alongside business and design has probably experienced people who seem more business-minded and others who are more design-minded. We believe that they collaborate most efficiently when each mind-set understands—and values—the importance of what the other brings to the table. This means that the maker/designer represents the thinking about what the customer would really find valuable and how to enhance its value, and the business-minded person thinks about how to manage the creation and delivery of value to the market in the most efficient manner possible to allow the business and design to make a living together.

In such a scenario, the two sides would have to work with each other to discuss which trade-offs create the most viable model of meeting each other's goals. They would then be able to make iterative adjustments to their model as they actually begin to implement it.

In discussing the difference between how humans have evolved toolmaking capabilities and how this differs from nonhumans, Frank Wilson introduces the terms *polypod* and *polyolith* to describe two different kinds of things that can be made by animals<sup>12</sup>:

Two terms make the distinction clear. The first term, "lith" refers to any subunit of a tool (or any other manufactured object), called a "polyolith," whose components are mechanically joined. The second term, "pod," refers to the subunits of a multiple-unit object or structure, called a "polypod," which depends on gravity for its stability.

Both humans and nonhuman primates can make polypods. . . . A polyolith, by contrast, is an object consisting of any number of joined units, or sub assemblies, that can be freely rotated without disturbing the structural or functional integrity of the object.

We like this as an analogy for creating value through design. It's relatively easy to create points of value, specific instances in which all the requirements and options can clearly be analyzed. But creating more complex forms of value isn't simply aggregating specific components and hoping that they work well together. This is a polypod approach to complex value. On first blush, it looks good, but with a little stress, it falls apart into separate and less useful unintegrated components. It would seem that making sure that components of value are more integrated and more "polyolithic" would be good for both business and customer (and for a solution to be valuable, it needs to maintain integration even while components change). There are many challenges with this way of going about things, at least with regard to how design can help.

This brings us to the question of how business is using design to create value for customers. From our experience, the role of "arbiter of value" now sits with business (that is, the decision of what is made, how it's made, for whom, and how design is leveraged). When decisions made by this authority are primarily concerned with efficiency, cost, and competition or when they are constrained in terms of input of information and scope of effect (within a limited portion of the business), the results can be problematic. Although the business may see all the decisions as being the best, given objectives and limitations, the outside world may have a different view. Gaps and inconsistencies in thinking and planning are mostly apparent to customers; their experience is much bumpier and less satisfying than it could be. In some cases, there may not even be a business owner to whom one can take an issue because it arose from two different areas of the company that aren't collaborating well enough, each believing that they have done their job adequately.

Without intending to, business risks creating a fragmented view of the overall problem they are setting out to solve: creating value for the customer. Much of the inefficiency here is a result of the way in which the business is organized and how this determines where decision making is made and who is delivering which parts of the overall value of design.

Businesses tend to approach the creation of value by using design (process and outcome) in two ways. The first is the making/process side of design as it relates to core development processes for the value of the products and services. This is often performed by employees within internal business units. The reasons for having these skills in-house are to have direct access to the knowledge of the makers and to develop and protect the intellectual property that constitutes parts of their core competence and competitive strategy. In this role, the processes and decisions are largely managed with a focus on functional utility and financial efficiency.

The second way business uses design is in the packaging and management of demand generation and support of product or service use, with a focus on driving transactions (attractiveness and initial desirability). In larger enterprises this is often managed by the marketing function.

Many smaller businesses can't afford to have makers or designers on staff, or the scale or required expertise for a project exceeds in-house design capabilities. In these cases, businesses turn to external design agencies both for product/service and nonproduct/nonservice design needs. Many larger firms have entire procurement

departments to manage the process of working with partners. In either case, there is often a different kind of partner used for production-related design as opposed to marketing/selling-related design.

Providing design services is our business; we are very thankful that our clients decide to use our services. That being said, we do need to point out several challenges when businesses decide to call all the shots when engaging outside designers. The first is that outside agencies have evolved to largely be a set of skills looking for a problem. From this context, it's business that decides when design should be brought to the table and for what reason. Although good designers will have an appetite for opening a problem up and trying to understand all of the upstream and downstream relationships that need to be considered, it's usually business deciding what objectives design should accomplish. This is often because the problem is considered to be well understood by business, so the budget, time frame, and scope are often determined before engaging design resources.

If the decision to use an external design source comes from within a department, this can lead to an isolation of the project down to a very specific and bounded ask. Any request for services made by a buyer in this case requires a response that will convince that buyer that the design agency can solve that specific kind of problem in the way it has been posed, in a highly cost-efficient manner (without sacrificing quality), even if such an approach is not in the best interest of the customer or the business as a whole.

Often, the decision-making criteria for whom to work with begins by looking at the category of outputs a design firm has previously worked on, choosing the best and budget-aligned options by evaluating how closely the previous outputs match what the business is looking to do, and then discussing what processes were involved and why.

From the external partner perspective, there is little opportunity to point out flaws or risks. The logic of these kinds of assignments can seem dubious, as the problem definition and constraints may preclude meeting the objectives in a way that creates real value for the business (or its customers). This leads to the regrettable attitude by the external team that they are “putting lipstick on a pig”—that what they are doing doesn't matter and can't really add value. Whether or not this is true is less important than the fact that a team that doesn't believe they can make an impact is less likely to try and therefore less likely to succeed. The opposite can also happen, leading to both sides being extremely happy with the outcome, not realizing that there were bigger implications that were missed. Although everyone walks away satisfied, the outcome fails to move the needle because it didn't integrate effectively into the overall delivery of value to the customer.

Another problem can arise when divisions within the company prevent the correct development of problem focus. In such cases, key inputs are not factored in and important stakeholders are not included (by intent or oversight). It's not uncommon to see functional units battle regarding design decisions. We've been in many situations where marketing believed that certain approaches and objectives for design made sense, but the product team disagreed. In several cases, because product was more tied to revenue (with marketing being a cost center), the product point of view won, as marketing was afraid that executive management would side with revenue over any other consideration.

We have also seen the opposite, where marketing was supporting business development and features were determined to be needed not because the customers demanded them but because marketing or business development had promised

other partners (such as strategic partners, channel partners, distributors, etc.) that they'd be included. We have seen marketing hire design for a specific purpose and then a product group—liking the outcome—hire its own agency to produce the same thing. In this case, because the knowledge and expertise of the two firms providing design services were very different, the final “products” were very different. This left the product team unable to deliver the value to customers in the way that they had hoped.

Design's ability to solve the kinds of problems that left unaddressed can undermine value for customers is limited if a business makes all the decisions about how and when to apply design skills. At the same time, it's not efficient to have design teams involved in every aspect of business decision making. Experience design can help to alleviate this situation by providing a more design-centric framework for business planners to work from, and helping business integrate specific areas of design strategy and expertise during planning processes. As the need to react to change increases, this kind of efficiency is going to be more and more important.

# 3

## Thinking about Change

Ancient peoples believed that time was cyclic in character . . . We, on the other hand, habitually think of time as something that stretches in a straight line into the past and future . . .

The linear concept of time has had profound effects on Western thought. Without it, it would be difficult to conceive of the idea of progress.

—Robert Morris, as quoted by Stephen Jay Gould in *Time's Arrow, Time's Cycle*<sup>1</sup>

## The Implication of Time

Over the course of its lifetime, a business will have varying design needs. Too often, design is focused within a narrow sliver of time, compared with the life of the business, and the relationship a customer may have with the business. As a result, design is often deemed necessary only at certain stages, and once these have been completed, it is as if what has been created will suffice forever and never needs to be revisited.

The “foundation” for many businesses is their brand. Brand means many things to many people, but for most modern businesses, it provides several basic requirements: what the company is called and what its identity (logo or trademark) looks like, its mission and vision, and often its values and positioning. Because these are things that don’t need to change frequently (except when a major change has occurred, such as a substantial shift in the offering, a major gaffe in performance or behavior, or the hiring of a new chief marketing officer [CMO]), this is an area that rarely gets attention from design. There are pragmatic reasons for not changing the brand frequently, such as brand equity, awareness, and costs of implementation. There are other aspects of the brand that can be explored on an ongoing basis that don’t require these kinds of investments or risks.

The next area where design plays a role is in the products or services of a company. As we’ve mentioned, many of the needs here relate to the make/process side of design and may be brought in-house. In cases in which the scale of the effort or the nature of the expertise requires it, outside partners may be brought in. But in either case, the investments made for products and services are expected to provide returns over time. So products and services remain relatively stable once they are designed and go through ordered and planned design evolution (often with small and incremental changes). Part of this also relates to how much value the customer gets from a product or service and how much of this value is based on the product remaining the same versus changing. As such, products and services often get the most attention from design when they are first being developed. One of the objectives of experience design is to try to identify what kind of future variations might make sense and be valuable to customers so that product can plan for them. It’s a lot easier to implement something later that you had planned on than to implement something you hadn’t.

Finally, design is used in the communications and interactions with customers. Because much of this falls into marketing, advertising, sales, or customer support, these design efforts are thought of as expenses. These areas are often the ones that change the most frequently.

The outcome of this process of employing design is that design may be engaged the most for work in areas where the business engages with the customer but provides the least value. What design is asked to create is really the window dressings and not the core value that’s identified, created, and delivered to the customer. Business should not expect this type of design to create value for the customer, or more specifically, for design to be able to make up for a lack of value in the core definition of the product or service. At best, design can make certain aspects of the product or service easier to use, make information more accessible, or accentuate the presentation of messaging to stimulate response, but none of this is creating real value for the businesses’ customers. And at worst, it is papering over significant gaps in value. In the coming chapters we will show how experience design can help to change this by looking at how experiences that engage customers in the right way

can do double duty of helping prime the sales funnel while also setting up customer value (in some cases even before the customer decides to buy).

Another by-product of this approach to managing design over time is that the design that goes into things such as the brand or formative product/service design may be very disconnected from the design with which the customers engage. Not only was it created at a different point in time but often it was created by different people with different skills and expertise for different facets of the problem. In many cases there is no thread that integrates the design throughout. Take this simple test: Get a copy of your company's brand guidelines. Now look up how the design of the brand should affect the design of the product. If you're lucky, it will tell you which form of the logo should be used and what colors the product should be. But that's only if you're lucky. Even then, it's highly unlikely that the guidelines would cover any aspect of what kind of value the product should deliver or how it should deliver it.

Two additional aspects of time that affect how business and design collaborate should also be considered. The first aspect worth looking at is where business is focused when employing design. Often, there is the propensity for business to think upstream. In laying out where design sits, where it is used by business, and the frequency with which design attention is applied, we are using an implicit assumption on the part of how business thinks. This is an assumption we have seen our more informed clients raise as an issue within their own approach to customers. Simply put, it's a tendency to focus on the presales side of the customer relationship.

When attempts to produce innovation are made through research and development and you invest in converting these ideas into products and services, it's natural to want to increase the odds of success by creating as much demand as possible and making the transaction as efficient as possible. After that you can see the revenue that will determine if you are going to be successful or not. But once the cycle has been completed, the next cycle already has to have started, working to continually produce the returns and level of growth that stakeholders are expecting. Customer support and relationship management are becoming increasingly important, but currently these are more process-driven and design's role is minimized. Much of the efforts here are taken to prime the pump for the next cycle.

Ideally, a customer will spend more time using your product or service than he or she will spend in the sales funnel. It seems somewhat shortsighted for business to not focus as much on post-sales engagement and value. If it's easier to sell to existing customers than new customers, why are customers largely left on their own navigating through all the facets of value, including trying to make your product or service work for them? Why do most businesses contact existing customers only to try to sell more and not engage them around how they are getting existing value? Why doesn't a business plan for proactive engagement when a customer discontinues use of a product or service the business has been providing?

The second important aspect of time is its impact on customer value given the nature of technology and the products and services it enables. In the first chapter, we talked about the new area of design that computing and network technologies required: interaction design. One of the fundamental aspects of this area of design is what happens over time—how a product or service needs to function (and respond) as a customer engages with it. Many of the issues that design considers when looking at products and services this way are related to different areas of the business (information technology [IT], accounts and finance, other products and services, etc.).

As we pointed out when discussing how business uses design, often the scope of



a problem is constrained or stakeholders are not represented. Many of the design issues that arise have no associated final decision maker. The decision of one stakeholder can be at odds with the goals of another, or choices in one area can have a negative impact for a completely different product or service. The result is that many decisions may not be made or they get made with an incorrect understanding of their impact. Not only can these be costly to correct, but they can also remain unseen or unacknowledged until discovered by a customer. The nature of what is being designed may tax businesses' ability to understand how to evaluate design criteria. In many situations, interaction design is dealing with representing a task (in processes and flows) that has no preexisting analogy or counterpart in the physical or cognitive world of the customer. The key criteria that design should be accounting for are ones that help drive engagement. In other words, does the process provide enough value to customers to make them want to continue to use it?

Technology also opens up interactive (bidirectional) channels between a business and a customer. In some cases there is considerable latency, but in others the nature of the channel is inherently more responsive, so people expect some reaction (or proactivity). From a business perspective, this means several things: Find the ways in which a customer's engagement can be used to create value for the business and explore how different forms and means of engagement can be used to build higher lifetime value from each customer.

One of the key questions facing businesses today is: Who is responsible for understanding the interdependencies across all of the areas in which design is applied, and how are they evaluating the real impact—on the customer and the business—of all of the design decisions being made? We believe that business should be taking a more holistic look at customer value across the customer experience. But the challenge of managing an ongoing experience that engages people around value is getting more difficult. This is one of the prime drivers for the model of experience design we propose in the next few chapters. What we think is missing is a unified framework for creating value for customers based on a given business, brand, and offering.

We also believe that not shifting their thinking will lead to businesses finding out the hard way that the ways of doing things in the past needs to change, largely because businesses aren't in control of the larger world in which their value exists.

## Technology and the Evolution of Value

Imagine arriving at an airport and stepping off a plane in the late evening. You aren't arriving home but rather preparing to continue your travels by car. Having secured a reservation when you originally made your travel plans, you follow the signs to the rental car counter. The cordoning ribbons guide you to a spot where you will wait for the next available customer service associate. You notice that there are four people ahead of you and two customer service agents already working with customers. No worries; you have time. But time goes by and more people join the line behind you. The customer service associates are still engaged with the customers they had when you first got in line. Each customer seems to have some kind of situation or question that requires an additional conversation and review of options.

Time passes, and you begin to wonder how long you have been waiting. About 15 minutes have elapsed. Other agents appear, walk up to computers, seem to do something, and then walk off and disappear behind closed doors. Finally, both of the

agents free up, and there are now only two people standing between you, your car, and forward progress. Things seem to move a little faster now, and the two people in front of you are being served. But when one is finished and you think it's your turn, the customer service agent gets up and disappears behind the closed doors in back. Those behind you in line are expressing their exasperation. Finally, after waiting for close to 25 minutes, more associates appear, and quickly you are on your way. Of course, there is still one more surprise. The type of car you had reserved and were promised by the agent is not available on the lot. By this time, it's very late in the evening, and with no other options, you have to take what they give you.

Throughout all of this, you are analyzing the situation, looking at everything that the car rental company could be doing differently, and comparing it in your mind to a very different experience—on-demand car rental (such as Zipcar). You realize that the Zipcar experience puts the responsibility on you to arrange everything—but that's the advantage: You are in complete control, and as such you can make the process as efficient as you would like. You also vow to never rent again from the rental company you have just used, and consider how you will potentially look to something like Zipcar for future needs.

What is interesting about this example is that the difference between the customer experience and the level of satisfaction perceived are dramatically different for what is essentially a similar service. What is the difference, and why would a company choose one kind of experience over the other? One of the major reasons is the role of technology.

The customer service model used by the rental car company is one that has been around for years and is based on the need for human to be an intermediary in delivering a service. The on-demand car rental model has benefited from a shift in technology that makes it very easy to have most of the functions of the intermediary made possible by automated systems. The options available to the end customer can be presented directly to the customer, wherever and whenever is most convenient.

Many rental car companies have begun to take advantage of this shift, but mostly for their preferred customers. What this story represents is a move toward what's possible, what's efficient, and what will eventually be a more appealing and satisfying experience for consumers. All of this is made possible by a large-scale shift in technologies, as opposed to an option that was available to all when the customer experience models were being developed.

The point is that as technology advances, many things will need to change. Although many of our clients have been most affected by changes in information and communication technologies, technology change is happening everywhere in every industry and every sector. Because consumers cross industry segments, the changes and expectations of one industry can affect those in other industries who have not yet seen the need or advantage to question the status quo.

Simply put, changes in technology affect value—its identification, creation, delivery, and even perceptions and expectations. This can be a good thing. For instance, digital technology has reduced the cost of production in many instances to the point that after a certain quantity, a product essentially has no cost of production. Because one can now serve customers through many more channels, new services can be developed at a much faster pace, with significantly fewer challenges for reaching consumers.

The shorter-term benefits of technology may also have broader long-term implications that are less beneficial, though. For instance, services that can be delivered by or that rely on information and communication technology have the

ability to evolve faster than purely physical products. Most of these services need some artifacts as part of the creation and delivery of value. This creates what we call the product/solution curve. The product/solution curve is based on the progression of value delivered by a product to meet a given use case or need.

As the capabilities of the product features increase, there is a point at which additional utility and value are achieved by adding a service capability to the product. As this is added and a product now becomes a service channel, other services can potentially be combined. If there are other service-enabled products that are compatible and complementary, they can all be used, creating an ecosystem of value. With enough value, this ecosystem becomes a solution that in many cases can make the original use case or need that spawned the product obsolete. There is no longer a market case for the stand-alone product, and in some cases this even affects the economics of entire industries.

A recent example of this is the iPod. Originally created to solve the problem of transporting and listening to MP3 files that were created when a consumer converted a CD to computer-accessible files, the iPod and its related services and products have eliminated the need to buy CDs (and have shifted consumer behavior away from buying CDs as products to consuming music as a service). Similar shifts have affected other industries and products, with photography being another recent example (shifts from analog to digital to dynamic focal points to self-destructing digital photos and the disappearance of products and companies that have been around for decades).

One of the opportunities that this opens up is a concept we call “the value gap” and an associated concept: “value siphoning”. In the value gap concept, customers can’t adopt new value as technologies change because they’re constrained by their own financial situation and can’t or won’t invest in the new options. They need to get as much value out of their existing equipment, and in many cases, the provider has already moved on to pushing new options. This leaves customers in a precarious situation. In some cases they may have new needs as a result of their adoption of a new product or service. In some cases the business providing the product or service, having moved on to new offerings, is unable to take advantage of the opportunity and provide the right level of value. Or worse, the original provider didn’t anticipate the emerging need and isn’t focused on it, but a competitor or new entrant is. This new opportunist is able to “siphon” the enabling value and deliver an additional level, often creating a stronger relationship with the customer than the original business had.

We pointed out earlier that business has often taken a compete-based-on-optimizing-and-efficiency approach to the world. Perhaps this was the intuitive response to dealing with a significant margin between what it cost to produce something and what the market would bear, something that came about during the Industrial Revolution and then was later reinforced through applications of “scientific” approaches to optimization and the management of processes. In such a world, a differentiated product provided a bit of competitive advantage, especially if you could create a demand for that difference in the mind of the consumer. If what your product could provide did really go to “11” (as opposed to 10), you could outsell competitors because they would need to (1) realize why the alternative you provided is desirable, (2) become convinced that they need to adapt/adopt or come up with a better model, (3) develop and deploy it, and (4) have a market reception that’s actually sustainable.

If we are now considering the role of services, solutions, and technology in value,

this approach would provide little sustainable advantage. The length of product/service cycles is shortening. To outcompete in this world, one has to come up with a differentiation in value that moves the market and provides an advantage for long enough to pay for the changes involved in creating and delivering it. But as Youngme Moon points out in *Different*,<sup>2</sup> this may not be working anymore. The only real difference between alternatives may be the experience people have. And matching an experience step for step is not rocket science (although managing it across all possible steps and nonlinear variations can be challenging).

So, from our point of view, we believe that things are changing in how businesses successfully identify, create, and deliver value. Some of this is coming about as a result of what business does and how it has been successful in the past. Some of it is because business now has assumed responsibilities it may not be well versed in managing without looking at the world in new ways. And a lot of it is being brought about by changes happening beyond the walls and controls of business, in the general context and environment in which businesses and consumers exist.

For the sake of brevity, we have portrayed a linear and serial transition from the dominance of a maker/designer model to one in which business decides how to manage the duality of design, and we did the same in describing the transition from design being the integration of process and outcome to the growth of formal systems of design that can be used to create value in parallel with, and through incremental additions to, the process of making done by others. We have been fairly linear in our description of how technology shifts value from products to services, but we know that the world is anything but linear, or serial—it's nonlinear and parallel.

When we think of nonlinear, parallel change over time, the example that most readily comes to mind is evolution in the natural world. What makes this model most appealing is that it operates without any assumptions of where things are going, nor does it require a single path of intent for adaptation. It mirrors what we see in the context of products, services, and solutions in a critical way: The environment determines which traits will be the most successful. We believe that the recent changes in technology and markets are beyond any single business's control. What works is largely contingent on being successful for that environment at that time.

Products evolve as a result of changes in context of use, technology for production and delivery of value, and the underlying economics of industries. Services can adapt more readily to change, but they still need to be capable of change. The result is a world in which relentless innovation has become a reality for business—not a choice or a part of the culture but an undeniable reality. If you aren't figuring out new ways to deliver value to your customers, you can rest assured that someone else is. And the economics that make it possible for your business to exist may be changing, perhaps even threatened, by technologies that are just beginning to be explored in a research and development (R&D) department in a different industry.

## The Innovation Mirage

The Internet and the promise of a “new economy” that it would usher in were the most talked about topics of the 1990s. Throughout the first decade of this century, the word *innovation* has become the talisman for business. The business press has done all it can to exhaust the topic. Many books have been written about it, and we, ourselves, have even engaged in lively debates at events, with clients, and on projects about whether design is the same as innovation. (It's not.) Everyone is looking for it,

and many consultants and agencies from various fields of design are being hired to deliver it.

The more we treat innovation as the next big thing we need to search for, the more we miss the obvious areas where we can innovate. And the likelihood of identifying the next big idea through a focused effort is not reassuringly high. As Scott Berkun puts it in *The Myths of Innovation*<sup>3</sup>:

Our confidence in innovation approximates a faith; when in doubt, innovate, despite the growing wave of unanswered questions about innovations past.

The number of successful product innovations is low. Ron Adner calls successful innovation the exception and cites the evidence<sup>4</sup>:

According to surveys by the Product Development and Management Association (PDMA), approximately one out of four new product development efforts ever reach the stage of commercial launch. And even within this highly screened group, 45 percent fail to meet their profit objectives.

Business cannot mandate innovation, nor can it reliably bank on it to simply materialize from within. Michael Mainelli and Ian Harris point out this challenge in their book *The Price of Fish: A New Approach to Wicked Economics and Better Decisions*. In a vein similar to Ron Adner in *The Wide Lens*, Mainelli and Harris suggest that businesses, industry regulators, and governments get themselves in hot water by framing problems too narrowly and then are overly hopeful that innovation will appear to solve the problems, not understanding that innovation itself is a highly unpredictable process.

With regard to innovation there are two sects. In the top-down sect, policy and planning lead to innovation. In the bottom-up sect of wild markets and innovation, you have no idea where the next big idea will come from. Sadly, large numbers of stories show that large companies are not that good at “hard” measurable innovation of the top-down variety. But bottom-up innovation means that corporate headquarters has no idea where the next big idea will emerge.<sup>5</sup>

We propose that, instead of hoping for a miracle of innovation, business rethink innovation. If it is, in fact, now relentless, then it should be part of the process, not a set of special efforts and investments that leaders hope provide an answer. As Adner says, “hope is not a strategy.”<sup>6</sup>

We suggest that innovation actually be considered from within the context of the evolution analogy we proposed earlier. We aren’t alone in seeing this connection. Mainelli and Harris use the comparison in their book as well. They write<sup>7</sup>:

There are numerous comparisons to be made between commerce and evolution . . .

. . . The idea of evolving business strategies is appealing both as a means of generating novel ideas and as a means of optimization . . .

. . . While serious biological debate continues on the subject of punctuated or gradual mutation, we can posit that the equivalent random element for business is innovation.

And, of course, we like the model because we believe that you can't win the fight or gain control when change is happening all around you. Change occurs whether you do anything or nothing. No thing itself is immune to a changing environment and the larger dynamics of evolution. The best approach is to adapt intelligently whenever possible. Taking this view provides an interesting way to look at different kinds of innovation and how they represent different vectors of ongoing evolutionary change for business.

Within an analogy of evolution (and applying Clayton Christensen's innovation categories<sup>8</sup>), sustaining innovation would be similar to a set of traits emerging as an advantage to dominating opportunities. These traits, when favored above others, help continue the path of dominance. Down-market innovation would be analogous to changes in the environment that make it necessary to change habits, such as searching for different kinds of prey or moving into more friendly eco-niches. Here the traits that favored advantage are now overkill or simply add no advantage, and it's more effective to look for other opportunities, even if they don't require all of the power of the previously dominant traits. Disruptive innovation is the random genetic mutation enabling traits that happen to be favored by the current environment but that might not be successful in a different environment. These are the traits that could also prove to be the keys to survival if the environmental change is happening fast enough.

In this view, innovation is a series of ongoing processes. Like evolution, it never stops. The goal is to keep the business alive and thriving by creating value for customers across all of a business's activities, despite changes in the environment beyond its control.

Of course, the key difference between this model and natural evolution (as well as the silver bullet model) is that design does play a role! And when used intelligently, not only can it help focus invention and ideas in ways that make innovation matter (value for customers), it can also help identify and create bidirectional influences for innovation across the entire sphere of activities a business undertakes to deliver value to customers, across every touch point. We think that such a model of innovation as evolution complements our proposal for experience.

Christensen proposes that not all business can innovate successfully and that certain kinds of cultures and structures make it difficult, if not impossible, for all kinds of innovation. We can't contest this point. We do believe, however, that if innovation is relentless and driven by external change, not innovating certainly means increasing the risk of not surviving. And innovating shouldn't mean looking for silver bullets or waiting for structural change. Instead, it's about looking at opportunities for increasing value for customers across the board, not just in products and services.

If you accept that innovation is simply the means by which business, products, services, and customer experiences evolve, it follows that the important thing is having a framework to understand which areas are good candidates for adding more value and which ideas might be interesting in this light, even if they aren't the next big thing.

We had a client who reportedly asked her staff, "Why didn't we invent Pinterest?" The answer may just be that you could have, but it wouldn't have seemed big enough and therefore important enough at the time. In evolution, the random mutation is not

produced through intent to ensure future survival for the species because the dominant line is threatened; it is random and luckily happens to do better with the shift in the environment. Or as Albert Einstein put it, “Innovation is not the product of logical thought, although the result is tied to logical structure.”<sup>9</sup>

In light of this model, the idea that innovation and design should be separate and occur at different stages doesn’t make sense to us. There are multiple vectors of innovation that need to be ongoing, and design (process and outcome) should be part of all the processes. Otherwise, ideas that could translate to customer value could be ignored because they don’t match the problem or opportunity in the way that business is framing things (competition, efficiency, cost, revenue, etc.).

For those skeptical that design can produce innovation, we aren’t making that claim. We are, however, saying that design, when used and delivered properly, with the benefit of a holistic framework for engaging customers around value, can take good ideas quite far—and can quickly show the limitations of ideas that seemed good in theory as well. After all, if the Army considers design “a methodology for applying critical and creative thinking to understand, visualize and describe complex, ill-structured problems and develop approaches to them,”<sup>10</sup> then we believe that business should feel comfortable using design to help turn ideas into value, too.

## Add It Up: We Need Experience Design

The rate of change of information today is unprecedented. The rate of change of technology drives this and other changes for business. Products and services can literally become extinct: The economics shift dramatically and business models are no longer viable, or the value that was provided gets superseded; the context of use they once served may no longer exist.

The processes of managing a business, especially the creation of value and the role that design plays, are getting more and more complex, producing fragmented customer experiences. The results can simply be mediocre output, or they may convince customers that they have less reason to stay with a brand or business if they feel that the business doesn’t value their patronage. And businesses seem to almost operate as if they expect that “once a customer, always a customer,” without much effort beyond letting people know when they should be buying again.

Innovation can no longer be treated as a search for the single big game changer. Innovation isn’t playing the lottery and looking for a huge one-time payoff. Innovation now needs to be an ongoing process. In *The Innovator’s DNA*, Jeff Dyer, Hal Gregersen, and Clayton Christensen quote Jeff Bezos on the realities of innovating<sup>11</sup>:

“You need to do as many experiments per unit of time as possible,” says Bezos. “Innovation is part and parcel with going down blind alleys. You can’t have one without the other. But every once in a while, you go down an alley and it opens up into this huge broad avenue . . . it makes all the blind alleys worthwhile.”

If business needs to continually innovate with a focus on keeping customers engaged and providing value across the entire range of the customer life cycle (both before and after the purchase), then there needs to be a portfolio of engagement—lots of smaller bets targeted at current needs, laying the foundation for future value and exploring new opportunities based on external changes.

As Peter Sims describes it in *Little Bets*, the approach that many have taken is to look at lots of options, test them, and see which produce the best results<sup>12</sup>:

At the core of this experimental approach they [innovators, creatives, entrepreneurs] use little bets to discover, test and develop ideas that are achievable and affordable. Little bets are their vehicle for discovery, whereby action produces insights that can be analyzed. . . . in order to frame, and reframe problems and ideas . . . then adapt and act using little bets.

This might suggest adopting Nassim Nicholas Taleb's advice and building in optionality. He suggests the concept of a system that benefits from volatility, not just robust, but the opposite of fragile—antifragile. According to Taleb, we do a really poor job understanding risk and tend to assume that our risk models are right when they probably aren't. His suggestion involves building in the right options for situations not fully in our control or where information is not yet conclusive. Doing this means not getting sucked into making bets with small upsides but large risks but rather making bets that have small risks with potentially higher upsides, even if the odds are long.<sup>13</sup> We like the idea of design helping to create antifragile products, services, and experiences for business.

We expect to see more and more businesses begin to move this way, and many are already taking many of these approaches. We believe that this can be more effective and potentially an easier transition to make if there is some heuristic or framework that allows businesses to begin change and keep the outcomes integrated.

To do this, businesses will need to become more proficient in evaluating how and where they place efforts to quickly see which ideas have the potential to add value for customers and which ones won't. With an attitude of more bets and fewer sure things, there is also an opportunity to hedge these bets by having efforts be mutually reinforcing, strengthening the customers' perception of value that they get across their entire relationship with the business.

We believe that our experience design model can help businesses make a smarter transition and gain assistance from design in more effective ways. We see it as a framework that allows businesses to leverage their brands throughout the entire customer experience, make sure that products and services deliver value, ensure that customer experiences don't become fragmented, and lead to higher engagement and higher lifetime value per customer.





# 4

## Thinking about Experience Design

The learned man is not the man who provides the correct responses, rather he is the man who poses the right questions.

—Claude Lévi-Strauss<sup>1</sup>

In *The Price of Fish*, Michael Mainelli and Ian Harris caution us against seeking precision in our understanding of problems and outcomes. They state that acknowledging possible outcomes is okay, and they see it not as a lack of precision but instead as a “sign of maturity.” We are fond of the quote from John von Neumann with which they drive the point home<sup>2</sup>:

There’s no point in being precise when you don’t even know what you are talking about.

Precision has long been a core value in business and design. Certainty is a desired context for many business decisions, and often we implicitly assume that problems are clearly understood and that the outcome can be predicted to a greater or lesser degree. The application of formal systems of design often thrives on iterative cycles in which all the kinks and rough edges can get worked out.

But what if this is no longer possible? What if time to market makes quality both a benefit and a risk? What if things are changing too rapidly to establish which aspects of quality will actually make a difference in the marketplace? What happens when business puts known costs of efficiency ahead of the unknown cost of a dissatisfied customer? Is there a way to predict which trade-offs in the quality of an experience are important? How do you move forward into the unknown with at least some degree of confidence?

We want to help business and design start having conversations in which these kinds of issues can be intelligently tackled, even if neither side is an expert (there are very few experts or reliable information sources on the future, and betting on past models during periods of disruption doesn’t seem to be highly rewarding). Ironically, many of the approaches that have worked in the past may not have been based on data that were more reliable or sound than of the data we have for the future. It just may be that the rate of change was slower, so our errors were not as apparent at that time.

We propose a simple scenario to illustrate how easy it is to ignore the role that information plays. If you are asked to stand in the middle of your living room at high noon and get outside within 3 seconds, it will likely prove to be a very simple task. If you try to do the exact same thing at 2 AM with no lights on, in the house or outside, it will prove much more difficult. That’s because you have insufficient data to meet the speed of change that you are putting yourself into. Forget precision; you don’t even know which way you are facing.

In the first case, you have as much data as you need, and the rate of data feedback based on your actions is instantaneous (essentially because the only thing moving is you). You probably aren’t even thinking about the information available and how you use it. In the second case, not only do you not know exactly where you are or where you’re headed, but an “update” of data might prove highly problematic—coming in the form of a banged shin as you run into a coffee table, or worse, a bruised nose as you face-plant into a wall. If business and design have been collaborating in the past in a way similar to the lit room scenario, the future is likely to be much closer to the dark room version, with the twist that once outside the front door, we may find that we’re not even in Kansas anymore.

How do we know if a proposed product or service will actually be valuable to a customer? At what point is it possible for us to be sure? How do we know how much of the value that a customer experiences is a result of having a need met or a result of the way the product or service meets the need? Looking to position design as the

ingredient that makes things more valuable assumes that the basic premise is already valuable. If the execution is not seen as valuable (or effective), then clearly it's the design that's at fault—not the basic premise. If design's ability to deliver value can be constrained when information is restricted or seen as not relevant by the business commissioning the design, imagine the outcome when the business is in the dark as well.

If we are concerned with business success and how business uses design in the most efficient way possible, then we suggest that the foundation element to focus on is the creation of value that customers will care about and will continue to engage with over time.

We believe that experience design is a strategic framework that allows a business to collaborate more effectively with design with the goal of creating value and engaging customers, even as the larger environmental context changes. We think that it provides the right structure for helping differentiate your company from competitors as well as approaching innovation and reacting to external change in a more informed and antifragile manner.

As we said in the Introduction, we are putting this forth with the hope of starting a larger conversation about this approach. Although we will follow with more tactical frameworks and tools for beginning to put the thinking in action, we aren't putting forth a precise model or recipe for success. If we could do that, this would be a much more expensive book.

## Considering Experience

Think of the experiences you've had in your life that have had the most impact on who you are today—what kind of person you are, your values, how you view success, and how you believe others should be treated. If you are like many people, you will have several significant experiences that you can point to: a person—perhaps a relative, a teacher, a mentor—who helped you to understand an aspect of the world; events—things you saw, took part in, and heard about; and situations—circumstances involving you and other people, events, resources, opportunities, constraints—that forced you to make and accept certain decisions and see what happened as a result. As you think about these significant experiences, you may notice some interesting things happening. Your memory may run a bit free, as you recall what actually happened and begin to remember details and tangents from different periods of your life. You may feel waves of emotion pass through you as the memories trigger certain ideas and feelings.

What you are doing is focusing on a basic process, an action that is a fundamental part of the human existence: the use of information that you have received through various means to form an opinion about what the world outside of you is about and how things there are likely to work. Each experience is the set of information you have noticed and stored, along with your emotional and rational responses that arose from the process of receiving the information and making sense of it at the moment of occurrence, modified through the reinforcement or weakening of these perceptions based on other experiences that have accumulated over time.

The emerging understanding of human consciousness currently points to some similarities between the human mind and a computer. Some might even go so far as to draw a complete connection, saying that our minds are essentially computers that look at the probabilities of outcomes based on the information received. In this way,

our mind is continuously building a statistical model of how the external world is likely to behave and our likely reaction to it. From how we acquire language as infants and how it shapes our thinking to the scientific method that has been a driving force behind the expansion of technology that now continues to redefine what is possible, this model of the brain as experience builder and possibility statistician is compelling. Perhaps the most interesting aspect is that much of this occurs in ways that are largely outside of our conscious focus. We aren't always aware that we are learning, but what we learn affects our thinking.

Now think about the experiences you have when buying and using products and services. Many of the components of these experiences happen without much thought. It's only when things depart from the expected that we take note. One of our favorite examples here is what we call the "Oh . . . shit!" moment. This can happen when buying something that you are not overly familiar with but that you will use to enable some other activity or interest that is very important to you. The name arises from what you say when you get home, open the package, and realize that you either (1) got the wrong thing, (2) got the right thing but it's incompatible with what you hoped to use it with, or (3) still need an additional component to actually use what you just got.

Or consider the last time that you spoke with tech support or customer service about an issue you were having with a product or a service. Have you ever ended up not only learning that your problem was not a problem but also discovering more value in the product or service than you were expecting? The common experience is that there is a problem and, often, one without a quick solution.

Last, consider a product or service you have been using for the past few years. What is the difference between your feelings as you use it now versus your feelings during the first few encounters after you made the purchase? These last three examples have an implicit component that we didn't mention, but it's part of the process involved in buying a product or service. At some point in time, you built an expectation in your mind, based on some level of information provided to you and your understanding of what your needs were and how you intended to fulfill them. As the examples illustrate, in many situations, there can be a big gap between what you expected and what actually occurred. If you're straightforward with yourself, it's likely that you'll accept some degree of responsibility for this gap (especially if your enthusiasm to acquire something got the better of your common sense to make sure you knew what you were getting into). But there are probably cases you remember in which you did your homework and still wound up with a gap, and the result was an unfavorable view of the business you dealt with, even if the company was not intentionally trying to deceive you or misrepresent its offer. Think about how likely you would be to engage with the business again.

The point of these examples is that you are either operating without much awareness of the business behind the product or service because things are going well, or you are extremely aware of the business because things are not going well at all. Experiences that lead to higher engagement are generally good for business. Experiences that don't lead to higher levels of engagement are generally bad for business. One of the main problems is that this quality of experience (or lack thereof) is often a result of very primary decisions made about products, services, and communications during their planning and development. Often, design is asked to alleviate issues or create an acceptable presentation, but its impact is very shallow, sometimes only skin-deep. Sometimes this is because no one understands the implications of the decisions being made. Other times it's because some aspects of

the experience are considered inconsequential and not worth the cost to address. When trying to implement business objectives in a timely and cost-efficient way, it's easy to forget how people actually behave and make assumptions about what people will do or how they will think, because given the information that we are looking at, our assumptions are logical and feel safe. This lack of consideration for how people will react can be a problem for business.

If you were to do an audit of current published work about people, their behavior, and their cognitive processes, you might decide to reframe your perspective quite a bit and think more about how people might react. What we have seen suggests that:

- People are a lot less rational than they think they are.
- Perception is often strongly affected by the situation or context, or how something is presented.
- People can focus very intently but at the expense of really seeing what is outside of our focus, often ignoring things that are obvious and important to consider. Whether we're looking for something we've misplaced or we're preoccupied about something else, we may miss things that are in plain sight; they simply don't register.
- People are prone to being guided by their inner belief systems without consciously understanding that it's happening.
- We tend to look for confirmation of things we already agree with and tend to ignore things that don't match our beliefs.
- People have difficulty understanding trade-offs involving benefits and long periods of time, often taking less now rather than more later. It's harder for us to resist the temptation to get the quick reward.
- Human memory is not an accurate recording of the events in which we took part or observed. We may believe that we saw or did something, it may feel real, but it also may have never happened or at least may have happened in a very different way.
- There's a difference between how we feel when we experience things and how we remember them. We tend to evaluate based on what happened during the latter parts of an experience and remember the most intense levels of the experience—we can have a reasonably good time, but if it ended abruptly or badly, that's all we take away.
- People like others to accept blame. When people have suffered what they consider to be an injustice or unfair treatment by a business, they're willing to forgive the business if the business accepts blame rapidly, even if the business can't fix the problem right away.

In the book *Thinking, Fast and Slow*, author Daniel Kahneman, a Nobel Prize winner in Economic Sciences, describes the differences between how we perceive the world, how we act based on our perceptions, and what actually tends to happen.<sup>3</sup>

One of the points we take away from this is that if people don't act in a rational way, then making decisions that favor economy of effort based on the expectation that people will be rational is not going to work out very well. It also suggests that people won't necessarily understand trade-offs that they enter into, even if it seems pretty clear to one side of an interaction that a trade-off is being made. No one expects an economy brand to provide a luxury service, but it's not uncommon to see people complaining about the level of service they get from an economy brand. Is this the fault of the buyer or the seller? We suggest that it's both. Not anticipating this kind of irrationality is what sets the situation up in the first place.

But why should obvious misinterpretations come back to haunt us? Once the logic of the situation is revealed, can't we expect people to behave with a bit more rationality and accept their role in the problem? Not necessarily, especially since we're often unaware of what is really triggering our emotions and driving our responses.

Dr. David Rock is in the business of coaching executives and is also the founder and chief executive officer of the NeuroLeadership Group, a global consulting and training firm. He combined his experiences in coaching managers with his research in neuroscience in a book called *Your Brain at Work*. It describes what's actually going on as we experience work, both managing and being managed. One of the foundational premises of the book is that what's going on in the brain at a chemical level affects how we experience and react to the world. Although this is very enlightening for managers, it's also useful for understanding experiences, especially how customers experience interactions with products and services and the businesses that provide them.

To summarize, Dr. Rock describes the brain as consisting of systems, some operating at a conscious level and some at a subconscious level. Sensory input triggers activity in the systems, and this can produce chemicals, which either make us feel good or make us feel stressed. He describes five systems that are important in everyday human experiences using the acronym SCARF as a mnemonic: status, certainty, autonomy, relatedness, and fairness. What we consciously experience is affected by how these systems are being activated and what the resulting chemical response is based on the input.<sup>4</sup>

He points out that two of these systems have very strong influences on us, almost as powerful as the systems that drive us toward food and sex. These two systems are status and fairness. Humans tend to not take slights to status or perceptions of inequity lying down. In fact, Dr. Rock describes individuals whose lives have been drastically affected by issues that negatively impact their sense of status or fairness. The converse is true as well, and we can feel very good when these are triggered to produce positive impacts.

Think about the old maxims "The customer is king" and "The customer is always right," and they take on an entirely different meaning. We also now understand better why small slights that shouldn't logically be an issue can be, and why thinking about how experiences engage customers becomes extremely relevant all the time. It also would follow as relatively obvious that a thin layer of good design isn't going to turn a poor attempt to deliver value into a good experience.

In the real world, people tend to get beyond surface appearances pretty quickly—it's only a matter of time. When we interact directly with products and services, we begin to understand how inaccurate our initial impressions may have been. We often find that what things look like is not directly connected to the way things work—or don't work. In many cases, we also find that there are things that happen that we

didn't anticipate, or even that the relationship between how different parts work seems nonobvious, perhaps even random. If the approach to designing products, services, and experiences isn't done correctly, the perception of value can erode quite rapidly. And if expectations were already set too high, even an adequate experience can seem less than adequate.

When people use a product or a service, they are interacting with all the positives and negatives, even if the latter are mere oversights. But they may quickly lead to negative interpretations of the experience and get attributed to the business that provides them. In many cases the business has invested in and used brand as a means to communicate with customers. The positive or negative experiences can lead to an interpretation of the validity and integrity of the brand.

The role of experience is not just about understanding how people respond to intentional value but also about understanding how people respond to problems and issues that may have never been considered. But it can easily get worse. As we pointed out in earlier chapters, the focus of design by business is often on the presales side of the customer experience, and what happens to a customer post-sales might not get the level of attention it deserves. Many companies ask too much of their customers and make them bounce between call centers, online forms, and FAQs. Customers see and hear different things at different times, lose track of what they're supposed to do, and get stuck at different critical moments. Employees, even when well trained and enthusiastic, are at a big disadvantage when faced with a customer who is already confused, frustrated, and in the midst of a bad experience.

In a 2010 Forrester study, 90 percent of companies with annual revenues of \$500 million or more thought it was either "critical" or "very important" that customer experience was in a company's strategy. And 80 percent wanted to be able to differentiate their company with customer experience.<sup>5</sup>

Remarkably, only 15 percent of respondents said that their companies do "very well" in maintaining a consistent user experience across all communications channels. And the challenges are growing as organizations address sales, service, and support options via a growing tangle of channels, including contact centers, websites, branch offices, agents in the field, mail and fax, e-mail, and mobile tools and apps. It's easy to see how improved levels of service for all areas of the customer experience can help build stronger relationships, and we agree. Customer service is not necessarily concerned with how a product, service, or solution is defined, designed, or delivered, though, nor is it necessarily concerned with how the use derives value through use. Customer service is often problem-focused, whereas we believe that businesses need to be value-focused and leverage the intent and meaning of the brand into value, not just problem solving.

It's clear that business is not setting out to create poor experiences. They often hire what they believe to be the best design resources to get it right. The problem is that there often is no strategy for making sure that business and design make the right choices. Without this there is no ability to broaden the influence design has and prevent it from being a Band-Aid applied as the last stage before a mediocre experience provokes a less than rational response.

We acknowledge that the business operations, the development and delivery of value, and the servicing of customers and business partners is a highly complex system, and we don't suggest that there are quick fixes to making everything produce top-level value all the time. But there needs to be a way for business to get more out of the efforts they make, and we believe that shifting the thinking to an experience-centric approach can help make changes over time that add up.



## Setting the Strategic Stage for Experience Design

Systems thinking essentially looks at all the components of a system in order to better understand all of the requirements, parameters, interdependencies, and true impact of decisions. It is especially appropriate when working on very complex problems, often called wicked problems. (*The Price of Fish* and *The Wide Lens* are both examples of systems thinking approaches.) We like systems thinking, but believe it misses a key point when applied to business and design: Why would one business take a certain approach, and why would a competitor do something different? In one sense, systems thinking is a heuristic for developing strategy but not a strategy by itself. Youngme Moon illustrates in *Different* that businesses can take different approaches based on how they choose to use their brand, their relationship to customers, and the market opportunity. This is why we think systems thinking needs more grounding. We have also seen processes such as design thinking and user-centered design being used as a more effective approach to creating value for customers. We think these are effective approaches, but they are tactics that should be used during problem solving.

We have worked with strategists who suggest that business strategy comes first and foremost and say all else serves business strategy. We argue that if that strategy is not based on value and customers, it is on shaky ground. We also argue that if you concede that value and customers are core components of strategy, then Brand (with a capital B—the big idea, not just the name or the logo) is the best summation we currently have on hand for the ways in which business, value, and customers tend to organize and behave. We raise this point because it will be necessary to consider Brand from a strategic point of view as we illustrate how experience design can become a framework for collaboration between business and design.

But first we should deal with some other baggage that can accompany using Brand this way. The first is the assertion that since Brands are built over time, thinking of Brand as a core component is irrelevant in many cases, especially if a business is a start-up or if the market in which a business operates doesn't typically compete on Brand. We believe that any business that has customers and does business under a fixed name has a Brand, whether they want to acknowledge this or not. In this case, the Brand is the set of elements used to distinguish the relationship between the business and its customers. It may be one-dimensional or it may be multidimensional, but it is clear that there is some kind of relationship based on the exchange of value (products, services, or solutions for money). Once the process starts, the Brand begins to accrue meaning, either intentionally or unintentionally. It may have very little impact or leverage, but all the experiences that occur during the exchange of value are being associated with the business and therefore whatever Brand the business has established.

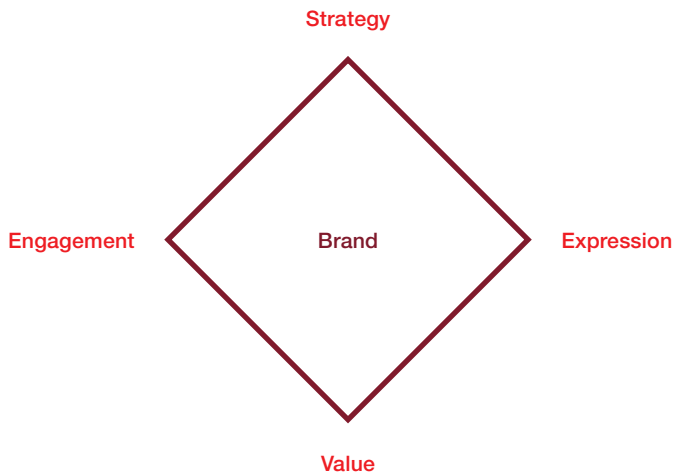
A second assertion that comes up is that Brands are something intangible, without real value, and somehow are only really manifested through branding, which generally falls under the marketing function in most modern businesses. As such, it's not a primary component of strategy. Branding as defined by applying the logo to products, services, and solutions through advertising, communications, packaging, collateral, signage, and so on, is a component of Brand management. Although important, it is often influenced by the goals of strategy. But branding is not Brand. Brand becomes a promise of what the company stands for and offers to the customer. In this way, branding elevates ideas from being visual identifiers of who is providing value to expectations about the value itself. Once you set expectations around value for

customers, you quickly begin to influence the ability to deliver on strategic goals and objectives (or not). In this sense, Brand is simply another way of representing strategy, and if the way it is represented is wrong or the decisions about enacting strategy and the expectations you're creating for the customer don't match up, the strategy may become compromised.

A third assertion that has been gaining traction over the past decade is that companies no longer own their Brand and that it is now owned by the customers. This is partly true. Gone are the days when consistent, unilateral communication about what a Brand stands for will convince people to buy the products and services of that Brand. The evaluation of value is increasingly based on experience—did my experience as a buyer match up with the expectation that the Brand set? In addition, with the efficiencies of communication technology, the message about expectation gaps from real people and real customers is often reaching consumers with as much influence as the message put out by the Brand, if not more. But customers do not invest, prior to buying, in what a business is going to create as value. They do not go to the business and tell them what to make, how to deliver it, and share in the risk if the decision is wrong. Customers also do not tell businesses how ideas and concepts that a Brand may rest on should be converted to actual, buyable value. (We understand that many businesses do have strong relationships with customers that

---

**Figure 4.1**  
**Brand as Arising from All of a Business's Activities**



affect product and service strategies, but a large percentage of these are likely to be based on existing products and services and how the business can make them better, not on what a business should invest in doing and why.)

Businesses own their Brands inasmuch as they are responsible for managing them and making decisions about how they are used. Customers react, and it is true to say that customers now define Brand meaning for themselves (based on experience), but this does not mean customers own the Brand.

To raise Brand to the strategic level, we use the diagram shown in Figure 4.1 working with our clients. We represent Brand as a diamond and propose it as a representation of the business through four connected areas: strategy, expression, value, and engagement:

**Strategy:** The corporate strategy (including mission, vision, and core meaning for the Brand and positioning) and the functional components of strategy that affect explicit areas of the business (such as technology strategy, product/service strategy, and market strategy)

**Expression:** The articulation of identity—how the company is recognized and distinguished from others in communications (advertising, marketing) and all aspects of presenting the company (graphic systems and applications such as trade dress)

**Value:** The actual products, services, and solutions a company might put into the market; includes the tangible, intangible, and aspirational value they provide

**Engagement:** How people outside the company (press, partners, and most important, customers) interact with and interpret what the business is doing (the manifestation of strategy, expression, and value). This includes the basic journey from awareness to consideration, purchase, and use of the brand, as well as the cycles of the customer relationship with the business over time. Experiences are delivered through a range of touch points and mechanisms, some owned and controlled by the Brand and some outside of it.

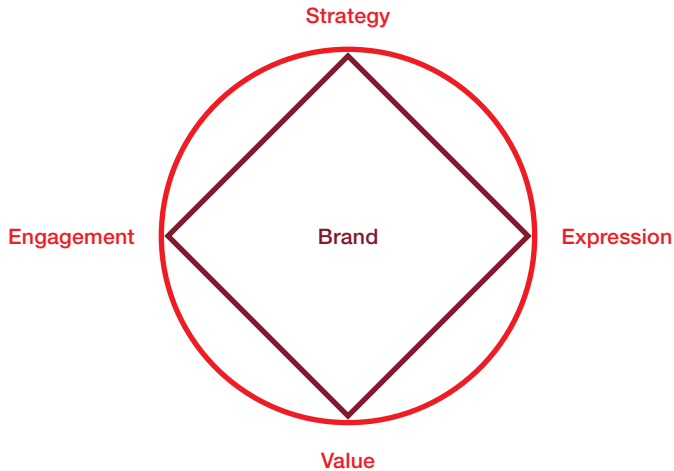
If you draw a circle around the diamond, as shown in Figure 4.2, you now have defined the entire set of components of the experience that is created through the reality of that business operating and serving customers.

Experience design takes the view that the nature of the actual value provided to customers, along with the nature of the experiences customers have over time and across touch points, will define how customers feel about the business, how they interpret its Brand, and how they reflect the true nature of the business.

Experience design focuses on managing this system over time with the goal of keeping customers engaged around value for as long as possible. It should also be understood that the environment this circle sits in is ever changing (in ways beyond anyone's direct control).

Experience design is not the same as customer service design, nor is it organization or business process design. It's the design for all of the activities that most effectively bring the brand to life through real value for the customer and the development of a

Figure 4.2  
Experience Design Addresses the Totality of All the  
Elements of the Business, Brand, and Customer

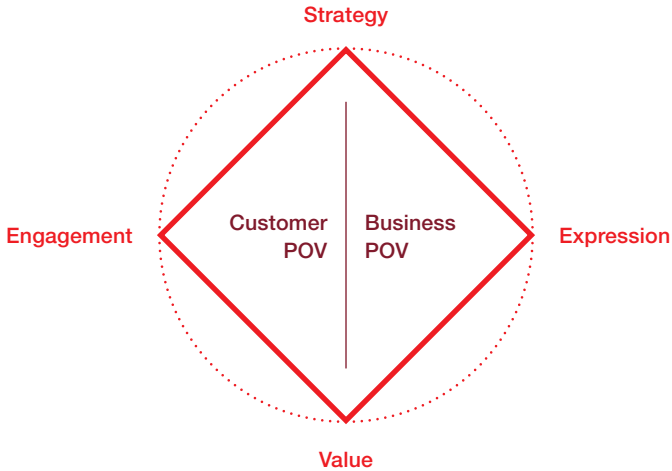


level of intent and quality in everything done on behalf of the customer. Again, the emphasis is on the *why*, not just the *how*.

It's tempting to take a more pragmatic view of the world and simply connect strategy and value, as illustrated in Figure 4.3, leaving expression and engagement for marketing and design to manage. This is what we believe a lot of business leaders have a tendency to do. It's interesting to see the outcome of this approach. Two triangles form by bisecting the diamond from strategy to value. The triangle on the right portion of this diagram is the business's point of view (POV) and represents the intent of the business. The triangle on the left portion is the customer's POV and represents how they see things. There is an inherent problem that happens when splitting the model this way, as it allows a kind of false logic to set in: It makes sense from an internal perspective; therefore, it will make sense to an external view.

One of our business's first and longest client relationships was with Autodesk, a global provider of design software for creating virtually any aspect of the human-made world. Most of our work was done with Shane Brentham, who managed the worldwide marketing organization at Autodesk for a number of years. He used to caution against the tendency for enterprises to allow their organizational structure to dictate how the customer experiences the Brand. His point was that it's easy for a business unit to make decisions that are advantageous for themselves but that may not be in the best interest of the Brand or the customer in the long run. As we stated before, as long as a business operates, whatever happens between it and its customers is attributed to whatever form of representation it uses (expression), and

Figure 4.3  
Dividing the Brand into Two Halves: The Business View and the Customer View



there are experiences and outcomes that customers will have (engagement). Stated another way, everything rolls uphill and accretes to the Brand, whether you plan it that way or not.

We believe that making decisions with an eye focused only on the right side of the circle is a mistake, yet we continually see businesses taking this approach. When the customer perspective is taken, it's often an incomplete picture, focused on what's next for value or problem alleviation through support. Instead they should be asking, Is the overall experience still engaging the customer in a way that delivers value?

## Principles of Experience Design

In his book *Frames of Mind*, Howard Gardner describes how the progress made by Western science in the past was largely attributable to the development of differential and integral calculus<sup>6</sup>:

Chemistry and physics are concerned with explaining change—the evolution of physical systems—not the description of steady states. Without the calculus, the process of dealing with such changes would be very difficult. But with calculus, it's possible to determine how the change of one quantity relates to the other quantities connected to it.

If design has become a tool that business uses to focus on specific points or states in the creation and delivery of value, the complexity of all the components of the experience that business needs to manage and the rate and fluidity of “environmental” change would suggest the need for new tools. Although it is in no way a science or even a predictive tool, we like the analogy of experience design as the calculus for businesses to use in building engagement around value for their brand and customers.

**The primary building blocks of experience design are:**

<p><b>Time</b></p> <p>The recognition that change is constant. This perspective allows the scope of context for any problem, product, service, or experience to be expanded in ways that uncover useful information, opportunities, and interdependencies.</p>	<p><b>Brand Intent</b></p> <p>Who you are as a business and what you stand for. This provides a guide for the kind of value the business is producing and the attributes and qualities (not just the look) that should differentiate the experience of doing business with the company; this is not the same thing as branding.</p>
<p><b>Products, Services, and Solutions</b></p> <p>The actual value customers are paying for in the first place. These must deliver on clear value propositions in a consistent manner over time and meet reasonable customer expectations.</p>	<p><b>Engagement Experience</b></p> <p>Where, when, and how you interact with customers. This defines how business engages and manages the customer relationship over time (not just when the business is in sales mode).</p>

Using experience design as an approach is based on frameworks and tools that help both business and design tackle problems with an objective view as to basic criteria upon which a solution should deliver.

These rely on the following principles:

---

- 1 There is a real cost for value. Qualities and attributes that cannot be tied to value for the customer are a luxury and should be applied only after a basic level of value exists.
- 2 The benefits and outcomes produced by design become compromised when design is treated as a stage-gate for completing a solution that has already been “approved” by a business-only evaluation process.
- 3 There will be more ability to engage customers when the Brand, the products and services it delivers, and the experiences customers have remain aligned over time and are focused on the business delivering value to the customer.
- 4 There is no such thing as “Build it and they will come.”  
Engagement is always based on:

$$\text{Perceived Value} > \text{Cognitive Overhead}$$

- 5 Just because you captured a customer’s attention or money doesn’t mean that person is satisfied and will stay a customer. A person will remain a customer only as long as they perceive value:

$$\text{Perceived Value} = \frac{\left( \text{What has been done or provided by a business} \right) - \left[ \left( \text{Customer needs} \right) \times \left( \text{Customer expectations} \right) \right]}{\text{Customer context}}$$

- 6 An engaged customer is of more value to a business than a nonengaged customer (especially in the service business).
- 7 Understanding and targeting emerging needs of existing customers is a base level of innovation that should be a standard operating procedure.
- 8 When products and services are enabled by technology, they become more effective at providing full solutions, but by definition, this shifts expectations to what happens on an ongoing basis, rather than at a single point in time.
- 9 The pace of technology change means that relentless innovation is the norm and is not restricted to specific industries and sectors.
- 10 With customers evaluating relationships over many interactions over time, there are a lot more places where a business/brand can make mistakes; management is a job that never ends.

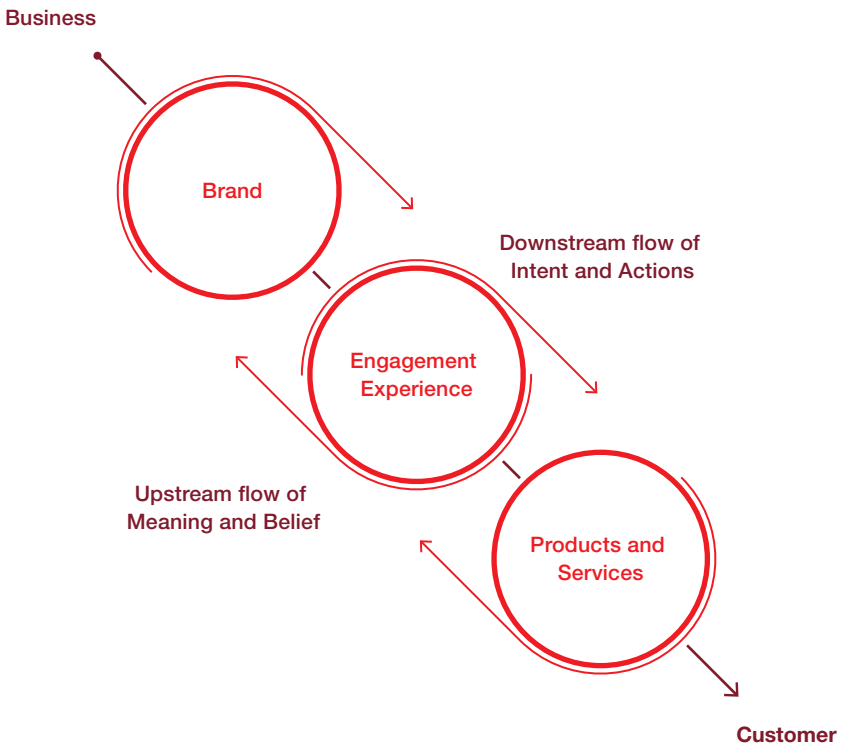
The purpose of these elements and principles of experience design as a concept and a process is to help translate the Brand into engaging value and to reinforce Brand meaning through the real experiences of real people.

Figure 4.4 shows how these two flows of meaning operate. Realizing that time plays an important part in the concept of experience design is important for understanding the concept as well as using it at a tactical and implementation level.

The downstream flow from the business begins with the definition of Brand. When done correctly, Brand is a guide for the value propositions of the products and services offered by the business. If everything goes well, customers perceive the value as the business intended.

The upstream flow from customers begins with the experiences they have around value with products and services, from initial awareness through to purchase and use. If there is real value and the perception of value can be strengthened through the experience of how the business conducts the relationship after the initial purchase

**Figure 4.4**  
**How Intention and Experience Lead to a Brand's Meaning and a Customer's Belief in That Meaning**





(which includes support but also how the business continues to communicate and engage the customer on an ongoing basis), this contributes to the closing of the cycle as customers give meaning to the Brand.

We also want to point out that design is best considered as both the process and the outcome; experience design acknowledges that for business, the need to optimize experiences around value, especially through change, is not a one-time, or piecemeal, process. It's ongoing. And it's about creating a framework through which business and design can collaboratively apply systems thinking to the problem of creating value and engaging customers.

There are many touch points to consider and an increasing need to enable customers to move seamlessly across and between them. Translating knowledge, intent, and insights into a customer experience for every touch point has become a complex task. This complexity is unlikely to slow. People rarely experience a brand in isolation; they experience a brand over the course of time in many different situations and derive value and meaning from the totality. Every touch point should be viewed as an opportunity to drive further levels of engagement with customers. The better the experience, the more loyalty gained. Design plays a critical role.

Experience design is based on the belief that business can be intentional and opportunistic (in a good way) by managing the business and the Brand to create competitive advantage by building value-based relationships that are difficult for a competitor to fully reproduce, and function in the classic sense of Brand in which there is equity through loyalty, recommendation, and price elasticity. This allows for a smarter and more informed approach to innovation by making ongoing small bets that create value and minimize risk, even as the surrounding environment rapidly shifts.

In his seminal work on design theory and patterns in architecture, Christopher Alexander speaks about the relationship between a pattern or solution and the context to which it applies. The basic premise is that if the context doesn't accurately represent the need, the pattern or solution that has been defined to solve the problem will be ineffective. In this case, we suggest thinking about context as the circle around the information that is deemed as important and relevant. If the circle excludes key information, there's a problem. If the circle includes too much information, there can be issues as well, as the problem becomes too complex to solve (as Shane Brentham used to say, you can't boil the ocean).

In 2011, Marc Shillum joined Method as a principal guiding our Brand practice. He was very interested in extending his thinking of Brands as patterns into our thinking around experience design. Shillum's point of view was that people have a proclivity to see patterns as a way of making sense of the world, and as such, Brands should be considering how their actions are guided by intentional patterns of artifacts (objects), behaviors (experiences), and concepts (meaning) in order to produce coherent experiences over time that become recognizable by customers. Shillum had intuitively come to the same conclusion that we had reached about the upstream influence on brand that experience had, and it was not a huge leap of logic to see how a more intentional and systematic view would allow the business to better use the Brand in the downstream flow. Our belief is that this downstream flow is also where experience design and innovation intersect.

What separates experience design from pure systems thinking is this focus on Brand and how it can serve as the DNA for all of the activities involved in creating value and engaging customers. But for the experience design approach to tap into this, the Brand has to be seen as a central element of business that is codeveloped

and managed by the business-minded and the design-minded. Even when there's a dearth of available information, business and design still have a framework for building suppositions and extrapolations and producing a solution that can be highly successful.

One of the goals of experience design is to make sure that the right breadth of information is considered, even if it's not absolute or statistically validated. This is where the role of time comes in. Time can be used to explore different scenarios and ask questions that can point to information (or the lack thereof) that can be beneficial to creating more value.

Following are the basic ways in which time should be considered:

- What potential situations will customers be in, and what would be of most value to them while still aligning with the business goals?
- What most likely preceded the current customer situation, and what are the next steps, driven by customer need, to help further engagement between customers and the business?
- What other parallel processes or touch points are relevant to consider (including other businesses, products, services, and solutions)?
- What are areas of change outside of the current focus that might influence perceptions of value in the near future?

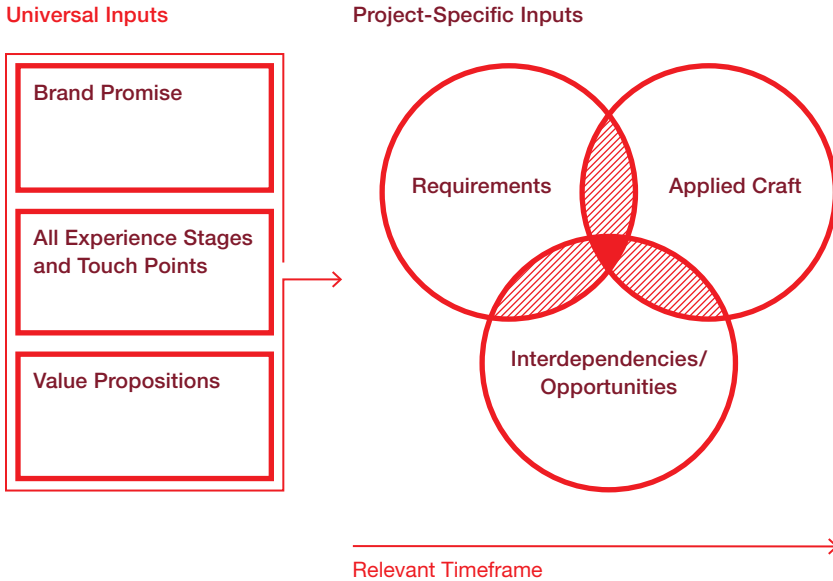
In some ways the problem is very similar to playing a game of chess. One has to consider the current situation but think through many “what if” scenarios and successive stages of play before committing to an actual move. In some cases the move may be quite small in immediate impact but set up for a more powerful finish. One can see this only after expanding the perspective and analysis forward through time and accounting for many possible variations of response.

Figure 4.5 illustrates how any project that is intended to create value for a customer would be approached through experience design. The basic premise is to make sure that within the context of the project, the following three considerations are considered and resolved in a way that matches business and customer goals using design (in the full sense of the term) for both processes and outputs.

**Consideration 1:** Solve for *why*. Any project should begin with a clear statement of why the business is doing what it's doing and why this is valuable for the customer. There may be many degrees of separation between the two, but ostensibly there will always be some connection. If we can't posit that there is value, it raises two questions: (1) Are we considering a broad enough circle of information to understand why it is valuable? and (2) If we're sure we have considered every angle and we still can't determine any value, why is it being done?

Identifying, articulating, and prioritizing requirements is an effective way to look at what a solution needs to deliver and to be clear enough about the intention of the requirements to be sure that they are likely to provide value to the customer. In many cases, business leaders may have a general idea about what they want a product to do but are unable to articulate the requirements that would deliver upon the goal. There can be effective cost savings for businesses as well if they can weed out unnecessary ideas that have no real business case or customer value.

Figure 4.5  
Relationship of Universal Inputs and Project-Specific Inputs  
Under an Experience Design Approach



**Consideration 2:** Make sure the how reflects the character of the Brand and enhances value. The focus should be on identifying how the value for the customer can be enhanced (through the craft of design) in a way that differentiates the Brand and supports business goals. The point we want to stress here is that coming up with a great how doesn't mean much if the why was never answered. And sometimes less is more—a compelling answer to why is better than an exceptional execution of how.

One of the purposes of this step is to make sure that the approach taken to delivering value isn't hijacked by a particular design discipline. Visual design, interaction design, interface design, industrial design, environmental design, technology design—every one of these has a high level of craft that can be applied to a given problem. But it's rare that a single discipline can provide all the answers.

It's becoming increasingly common to hear a designer describe himself or herself as an experience designer or to hear references that all design is experience design. This is great. We encourage designers to think more about designing for experience; however, we also believe that there is a dangerous tautological belief that can follow, that is, the belief that a designer's choice and recommended solution will produce a better experience than one suggested by a nondesigner. The challenge is that the experience of design in the real world is multifaceted. As such, only a multifaceted approach to problem solving can begin to address the myriad requirements and possibilities.

It may seem odd that we're explaining principles of experience design yet we're brushing aside the importance of how the design (as output) behaves. There is also the question, why isn't all design experience design? There is great temptation to look at techniques used for how value is delivered and equate them with value. In 1999 a seminal book on service thinking was introduced, and it had the arresting title: *The Experience Economy: Work Is Theater & Every Business a Stage*. Authors B. Joseph Pine II and James H. Gilmore detailed how the shift from products to services in our economy raised the importance on the *how* of experience and that in many cases this how was both the core value that the customer was paying for and the competitive advantage certain businesses had over others.<sup>7</sup> We agree that an experience can be delightful. But delight should be considered in a subjective sense. What delights you when you have a flat tire in the middle of nowhere is likely to be a tow truck; during a delay in business travel, it may be an upgrade to business class; and during a stressful day, maybe a message from a loved one that simply expresses happiness that you are there for him or her.

There is no question that behavior, aesthetics, materials, human response, and craftsmanship are all important. They are, after all, the components from which experiences are made. But we think that our approach to experience keeps the discussion of these aspects of design at the implementation level—the how of delivering value, not the why.

It's too easy to get seduced into believing that customers will agree that the experience is valuable when there may not be enough value to keep customers engaged. The craft of design can have an immense impact, but we think it can only enhance core value, not replace it.

We also believe that the pace of technology change means that there will always be an opportunity for a business or its competitors to produce a novelty and to create an experience that others don't have. However, in most cases, these will not be timeless. Others will quickly follow suit, or the novelty will wear off and the question will come back to: Does the customer get enough value to continue to want to pay? This is especially true for services and solutions. We believe that framing experience design the way we have helps businesses more effectively differentiate products and services, deliver a higher level of value, and create lasting relationships.

The other crucial part of this step is being able to translate the Brand into meaningful inputs that actually describe or inform the question of how. This can be a big challenge because a Brand often starts in the boardroom as a presentation deck, and the assets available to downstream teams tend to be logos and guidelines. Developing an actionable understanding of Brand in terms of behaviors and experiential qualities that can be used to inform the development of and serve as evaluation criteria for the solutions of how is the best way to differentiate a Brand.

**Consideration 3:** Identify all of the key interdependencies and opportunities. What information might be missing, and what's the best way to deal with it? To some degree, this begins with asking why and seeking to understand where the Brand can influence the how, but there are several other ways that we suggest this be done. The first is to use a customer journey framework. This allows teams to expand their view and understand what the likely states of mind and need are for a customer before, during, and after using a product or service. It also helps team members begin to think about what the rest of the business might be doing that might affect or be affected by the problem they're trying to solve.

The second is to expand beyond the current set of requirements that are being solved for to try to understand what would be a logical progression of value. This may

be a free-form exploration, or it may be tightly bound to a product or service road map. In either case there are benefits and opportunities. One of these is a realization that in order to support future needs, certain requirements need to be added or supported in ways that weren't being considered. Another is the realization that there may be things of significantly higher value that could easily be included with the scope of effort and would increase value for customers at no real additional expense. A final one could be that a completely different idea can emerge through the process—a true innovation that no one could have predicted but that clearly has high value. It may not replace the current requirements—it may even be a completely new line of business—but these kinds of innovation can occur through this process and it is not a large investment to allow this kind of investigation. In some cases it almost comes along free for the ride.

What we see as a key advantage to this approach is that the ratio of effort and expense for each of these steps—why (requirements), how (craft), and time (interdependencies and opportunities)—can be different depending on what the business is trying to accomplish. We even suggest that design be brought to the conversation before the actual project or program starts to help discuss the nature of the problem, what might come from each area of effort, what kinds of processes and time might be involved, and what kinds of skills would be needed. We believe that this approach would do much to increase the experience and value that customers see and is a far better approach for increasing the return on investment than a procurement-generated request for a proposal (RFP) will ever be.

## Experience Design versus Agile

Some readers may be asking the question, How is this different from agile, lean, MVP (minimum viable product), or iterative design methodologies? We see these methodologies as complementary, functioning at a tactical level within an experience design approach. Agile is a methodology for approaching complex problems involved with developing digital products and services. Some practitioners will tell you is that agile is just waterfall development broken down into more manageable chunks. In any case, agile is going to be successful only when value for the customer is driving decisions and prioritization of efforts. Otherwise, agile is just a way to shift risk to the buyer of development services. Lean and MVP, in our opinion, are process optimization approaches based on limiting efforts to what is known and needed. A challenge for lean is ensuring that all the needed craft experience and thinking are available to the effort. As long as team members are truly multidisciplinary and objective, the right leverage from craft should be available. But it's often hard to really know if all team members will treat the importance of different areas of craft with equal importance and diligence.

The two areas that none of these methodologies guarantee in and of themselves is the ability to use Brand as a meaningful influence and differentiator and the ability to look at all aspects of the customer and business interface around value over the course of the relationship. We suggest that using these methodologies in conjunction with experience design would be more successful. We also caution against thinking that you are taking an experience design-centric approach simply because you used an agile or lean methodology.

Some readers may also be wondering about experience design's relationship to innovation, especially since we brought it up in this chapter in regard to the

relationships between requirements, craft, and interdependencies/opportunities. We think that innovation would benefit from experience design as a foundation that helps innovation thrive. Consider the analogy we made in Chapter 3 between evolution, the current pressures on business, and what innovation can do to help react to environmental changes.

In *The Innovator's DNA*, Jeff Dyer, Hal Gregersen, and Clayton Christensen describe innovation as a set of behaviors: questioning, observing, networking, and experimenting.<sup>8</sup> We think that the nature of experience design and its emphasis on expanding information inputs, looking at interdependencies, considering time, and focusing on value for customers, is the perfect context within which ongoing innovation occurs. We see standard design techniques such as design thinking, iterative design, and user-centered design combined with processes such as agile and lean/MVP to support the behaviors of innovation. More important, we see a connection between a better understanding of requirements and the ability to deliver down-market innovations and sustaining or incremental innovation through exploration of the relationships between requirements, craft, and opportunities. We also believe that allowing for a dynamic change in focus across these three related areas, in the context of how a Brand can create value for customers, is the natural place for disruptive innovations to emerge (and form a foundation on which to encourage the development of innovation). Although we have never thought that design and innovation are the same thing, we do see them as closely related. We believe that experience design can be a framework that allows design and innovation to function together, making it easier for business to respond to change.

The fundamental problems facing business—and therefore design—are changing and will continue to do so. Formal systems of design established at one point in time will not anticipate future needs. The relationships and interdependencies between different touch points along the continuum that is the interface between a business and its customers will shift. What we need is a new approach for problem solving, one that places an emphasis on keeping customers engaged through value and that allows for coherency in the face of change. This approach would allow brands to use the meaning of the brand as a way of differentiating the experience and meeting future needs and expectations of customers.

Experience design, as we propose it, is about solving the problems of creating and identifying value for customers and creating a coherent experience across the entire interface between the business and its customers.

## In Search of the Ultimate Example of Experience Design

In talking about our view of experience design with others, we usually get nods of encouragement and understanding and often additional points that help us deepen our thinking. One question we keep asking ourselves is, Why aren't more businesses adopting this view? After all, it seems self-evident, and it is not exactly rocket science. Shane Brentham (our longtime client, mentioned earlier in this chapter) provided an interesting two-part answer that probably has a lot of truth in it. The first part is timing—the people who lead businesses often entertain this kind of thinking only when they aren't under pressure to deliver financial results. When they are under pressure, this view of the world is not connected directly enough to near-term financial change to be relevant for them. The second is the need for evidence—he believes that most businesses would generally agree with the premise but rarely

make the effort to change without seeing evidence that it has been done successfully by other similar businesses.

Ironically, the company we see as the poster child for experience design—Apple—is often seen as being successful because of its superficial design, from the iMac to the iPad era. And the follow-up is usually that the only reason that Apple could do this was because Steve Jobs controlled design.

A few weeks after Steve Jobs died, we wrote a blog post about what Jobs had helped Apple accomplish. Our view was that from the beginning, Apple had taken the value of computing—the promise of digital technology—and made it accessible to a broad audience. It did this by understanding that if the power of computing could be made into an easily usable tool that didn't require a lot of training and support, more people would be able to use it.

Our main “interfaces” with the world, as humans, are the five senses, the use of language (written and oral), and our hands. Apple products have always done a great job of reducing complexity to the point where most people can have the power of computing at their fingertips, literally and figuratively. And Apple understood that the value of a single product could be extended into an ecosystem of products and services. In this way, not only did it deliver a full solution, but it often redefined the original needs and use cases for which the products were intended.

But Apple didn't rest at simply bringing all this power to a user's fingertips through hardware and software designs that accentuated the user's control. It realized that this control needed to extend beyond the products and services and into the purchase and out-of-box experiences. This is an example of a company that has truly used the *why* and the *how* to shape the possibilities for experiencing value that define a Brand. The result has been that Apple customers tend to be highly engaged with the products, services, and the brand.

It will be up to future assessment and evaluation to determine whether Apple's success was the result of a single-minded visionary or whether it can continue to function through the application of an approach like experience design. But we think it's incorrect to attribute Apple's success solely to the outcome of design or the control of a single person.

We believe that using an approach such as experience design can redefine how business and design work together to create value in more efficient ways that also help business be more nimble and proactive in negotiating change.

The frameworks we will present next can help any organization be more effective in engaging customers around value and getting more out of the collaboration between business and design. This shift has already started, and we encourage businesses of all types and scale to begin to ask how can they start to take small steps to make better outcomes.

