Articles

MY PROBLEM WITH DESIGN

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I was reminded today of the things I find troubling about our modern notions of design and designing. Hundreds of years ago, if one wanted to become a designer, one would first have become a master craftsperson. We learned how to construct distinctive artifacts (and worlds of artifacts) and then we began to innovate in that tradition. To say one was a designer without that background would have been Harry Potteresque: ridiculous.

I was reminded today of the things I find troubling about our modern notions of "design" and "designing." Hundreds of years ago, if one wanted to become a designer, one would first have become a master craftsperson. We learned how to construct distinctive artifacts (and worlds of artifacts) and then we began to innovate in that tradition. To say one was a "designer" without that background would have been Harry Potteresque: ridiculous.

In his book, *FAB*, Neil Gershenfeld shows us how, starting a long time ago, we began to separate the "manual" work of craftsmanship and the "intellectual" work of design into two threads, and we began, moreover, to ascribe classist differences to the "types" of work. This distinction, I think, is a poor one, and today gives us no end of messes in our world. The following is a reflection I started writing several years ago, about why that is the case.

When someone says they have designed something, what do we understand? In the world at large, after all, "design" is something pretty simple and universal. To design is an activity - to devise, contrive, intend, indicate, plan, arrange, strategize, scheme, sketch, or the like. Further, we understand designing as relevant in an enormous range of life's circumstances, usually in combination with two other activities: actions to implement "the design", and results produced by the implemented design. Put in its simplest form, ideas are translated into actions that in turn produce results. When our actions lead us awry - or don't give the results we want - we have the option of concluding that the flaw was in "the design."

So why do I say I have a problem here? I have a problem because this way of understanding design decomposes an important unity into arrangements of trivial components. If we observe the activities of a designer in action using the commonplace distinctions of today's normal interpretation of design as an arranging activities and components, we end up understanding design as something not very interesting. Imagine that we are observing a competent chef preparing a meal. We have our standard understanding of the activities of cooking, mixing ingredients, and tasting. If we attempt to understand the chef's design of a meal as a collection of activities, we will miss the essence of the chef and the meal. Ask yourself, "What are the essentials of designing a successful career, a successful party, a painting by Picasso, a graphical layout, or re-arranging the deck chairs on the Titanic so that they are pleasing to the boarding passengers?" Watching a "designer" put each into place, and writing a story about each, we will find ourselves confused about what made a difference in each case. Thinking and observing from the commonplace interpretation of design, each project is merely someone's arrangement of components according to some logic that made sense to that person at the time of the arrangement.

I will raise several questions about the way we commonly interpret "design."

First, our way of understanding design strips apart components, activities, and contexts. I like simplification, but not this kind of atomistic simplification that destroys the context.

Second, the commonplace notions of design don't give observers of the design process strong ways of making sense of the object of the designer's attention - what the designer thinks he or she is designing.

Third, the designer doesn't have a useful way of thinking about who he or she is in the process of design - the role they think they are playing.

Fourth, I want to question the accountability the designer takes in the invention of whatever he or she is designing.

Let's take them one at a time.

Atomistic Simplification

I want to examine the way that we remove context in the way we understand design and designing. I guess that several hundred years ago, designers didn't have a distinct role. Builders, artists, engineers, doctors, carpenters, goldsmiths, and others designed and implemented, and did not get separated from their inventions. Later in this paper, I'll argue that we need to find ways to repair the way that designers have gotten disconnected from the concerns of the communities in which they design, and from themselves as actors on the world stage, and that their designs have gotten disconnected from the worlds of practices and things in which they participate. I use the word "concerns" here not in the sense of "worries" or "anxieties," but rather to point to the rich and complex structures of involvement and care that each of us carry in the background.

We moderns think nothing of removing activities and things from their contexts - from the practices and histories in which they were born. We act as if we can understand things and activities in a way that is separate and distinct from the world in which they exist. For example, we forget that a hammer is only sensible as a hammer when we use it for "nailing" in the world we call "building," where we encounter nails, boards, saws that we use to cut board, the sawmill that produces boards, trees from which we produce boards, forests that produce trees, and so forth. (In another context, of course, we can understand a hammer as a weapon, or as a tool for forcing stubborn machinery to move, etc.) Absent its adjacent network of equipment (and the world of ambitions and activities to which they belong), a hammer is a curiosity, perhaps a work of art, an example of an artisan's work, or some piece of historical detritus, but not what we currently understand as a hammer. (I am standing on the shoulders of Fernando Flores and Martin Heidegger.)

In this era, too often we settle for atomistic simplifications in which we lose essential unities. It is not possible to think in a rich way about things and events and the worlds in which they arrive from descriptions of the things (or services) and characterizations of "what they are for." A great chef boils beef thighbones for many hours to produce the stock that will be the basis of a great soup or sauce; our recipe books claim to imitate the chef's construction with beef bullion cubes. The world of the design as a historical construction disappears when we think that we have understood it adequately as a thing and its purpose - the hammer for hammering nails, the beef bullion cubes to give a beef flavor to the soup.

For the kind of designer that I am attempting to be, and to prepare others to be, this standard way of understanding design - as a combination of a description and purpose - fogs the mind and impedes or stops innovation. The design of anything of significance, of anything that will result in people having new practices and new interpretations of themselves and the world in which we live, or that will help us reshape our world, for better or for worse, does not surrender itself to such an interrogation of its construction and purposes.

What is Designed

Recently a friend - a design engineer exploring the question of design with me - asked me, "Supposing I asked you to design a new one of these?" He held in his hand a plastic fork. I found it a great question to help me lay out some distinctions about what is being designed. I asked him, "Am I to build a duplicate of the fork - what is specified by the object? Or, perhaps I am to build an improved fork - one that will deal with some of the breakdowns of plastic forks? They do, after all, look tacky and tend to break when you try to cut meat with them. Or, am I to design a new thing that takes care of some of the things that a fork takes care of, but in some distinctive new way?" We can look at the history of automobile design to develop this idea.

In the American automobile industry during the 50s, 60s, and 70s, for the most part the main competitors built the same vehicles over and over, changing their outward appearance, and making incremental improvements in the interior and other characteristics. In that world, designing a new device - say a fuel pump - meant, for the most part, designing a "new" device equivalent to the last one. Perhaps it would attach to the car in a different way, or have a different profile to fit among other parts more conveniently, or it might have some components improved to deal with nagging difficulties of the old ones. "Design a new fuel pump," meant copy the last one with some slight changes in configuration. We'll call this kind of configuration of a thing (or event, etc.) *Type I Designing*.

In the 1970s Japan woke up to the opportunity of the US automobile market, and decided to enter the market by building cars of "better quality." Instead of simply copying things, they began to pay attention to the breakdowns that people encountered while using their automobiles, and to address those breakdowns. They began to make many improvements to automobiles by designing things that did not break in the same way that US cars did, worked more simply, and so forth. We'll call designing things (and events, etc.) to address historic breakdowns *Type II Designing*.

Finally, there is a kind of designing where designers go all the way back to interacting with people's concerns, and inventing new ways of addressing those concerns. Here are some examples. The Sony Walkman was invented as a way of making 'a personal music space' available to people, and not as a way of reducing breakdowns in tape players or boom boxes. The modern Japanese motorcycle was invented as an exciting, fast, light personal transportation device, and not as a better Harley-Davidson. Fuel injection was invented as a new way of getting fuel into the cylinder, and not as a better carburetor. When designers are dealing with the concerns that underlie some world of things or activities, and where the things or practices they come up with make a break with the traditions in that world, we'll call that *Type III Designing*.

Up to this point we are talking only about certain functional aspects of design. Aesthetic questions, and questions about how designs create identities also are profoundly important, and aspects of the same logic can be brought to bear. Take the example of putting fins on automobiles in the 1960's and '70's. I will argue that this was a change in a component - Type I Designing - while if we turn our attention to the introduction of the Volkswagen Bug at the same time we can see an invention that addressed other concerns in new ways, just as we can see that in the Toyota Prius - the "hybrid" gas/electric vehicle. These latter inventions are, I think, examples of Type II Designs. There are many features of our society today that we may, in the future, conclude are their own versions of fins - disposable everything, fast foods that are not nourishing and leave us a nation of fat undernourished people, health systems that are managing the wrong risks, the dot-com madness, to name a few.

When you hear someone asking for "thinking outside the box," they are asking for Type II or Type III designs - designs that break with the tradition of doing things as we have done them before.

Who the Designer *Is*

Everyone acts in ways that can be understood as designing. Some take on design as a profession, and some of them end up designing fundamental new human practices. Many of those that I understand as designers - perhaps most - do not understand themselves as designers. Rather they think of themselves as innovators, entrepreneurs, or simply people who had the fortune to do some

things that changed their profession, their company, or their industry. Some designers understand themselves in terms of the things they design, and others understand themselves as actors on the fulcrum of history.

Many years ago I was speaking with a software designer about his then-current passion for computer graphics. I asked him why he was so focused on the graphics, and he answered, "I just like it." I challenged and teased him, insisting, "You're pretending to be shallow, and you are kidding yourself. Graphics are important because they allow us to catch and shape people's attention. Building more skill with graphics will make you a better designer of people." As a shy, Western Canadian, Protestant male, he brushed away the challenge. (Deflected, not ignored.) On the other hand, he went on to design the most important computer language of our time. The deep structure of the designer's involvement in the world of design often is not readily accessible even to brilliant designers themselves. Yet even the best designers are more effective when these relationships are more accessible.

The distinctive character of the designer shapes each design that affects us, and at the same time the designer is shaped by his/her inventions. Successful designs shape those for whom they are designed. The designs alter people's worlds, how they understand those worlds, and the character and possibilities of inhabiting those worlds. Let's take only one example: the most extraordinary invention of our era: networked computers. The Internet, personal computer, word processor, and electronic communication tools of our world have changed who I am (and who each of us are), for better and for worse, and are leading our children into a way of being we/they can hardly imagine.

Most of our contemporaries tell a different story about designing, in which designers fashion or craft artifacts (including "information") that others "use." One reason that we talk about it this way, I think, is that it can be frightening to contemplate the actual consequences of our actions. Do we dare speak a story in which, in the process of designing structures in which others live, we are designing them, their possibilities, what they attend to, the choices they will make, and so forth?

By steadfastly putting our attention on artifacts, we are also able to escape the harsh light of a difficult adjacent question: Who do we think we are to mess around with others' lives? By what kind of audacity do we set ourselves up in that kind of position in the world? If we puncture the pretense of being involved only in the design of artifacts and the arrangement of activities, and we open ourselves to a fuller recognition of the implications of our designs, then we must ask where to stand to be confident in our judgments about what will be better, or right, for those on whose behalf we design.

Of course we have, ready at hand, two great feints (dodges) available. On the one hand, we can claim that we are only giving people what they want. That is how we run most of our politics and our marketing, our enterprises, and many other things these days. On the other hand, we have the great argument about the wisdom of the market. We don't need to claim that we have found a right way to do things; we leave it to the market to decide.

I propose we begin to craft another story about designers and what they are doing. Let me point in the direction I am thinking first with an analogy. Several years ago, I warned the community of archivists - the archivist profession - against persisting in the interpretation that the best way to understand what they did was with the distinctions of the computer industry. I told them that if they continued with the story that what they bring to the world is storing and retrieving information, they were going to get what they were asking for: they were going to be replaced by computers, to our universal loss.

We can construct for ourselves a parallel challenge. On what ground shall we stand to design practices - the way that people interpret what they are and do the things they do in the world - if not on the grounds of consensus, fads, market research, or the great wisdom of the market?

For What is the Designer Accountable?

The job of a designer, in my view, is to bring new practices to people. Designs,

in the conventional sense of the word, are components, not unities. Ink without a pen is not very interesting, nor is the light bulb without electricity. The relevant unity, when we consider the questions of design, is a practice - human beings in the midst of concernful activities, supported by networks of equipment and help, taking care of things that matter to them.

To put it succinctly, at the end of a successful design project - no matter how modest or grand - we will be able to observe a community of human beings working together in ways that are new to them, and those new ways of working will bring specific incremental (or marginal, to use the economists' term) benefits.

Bringing a New Practice

A number of years ago I invented for myself a way of staying in touch with the way I frame the outcome I aim for in my design work: a practice fully incorporated into a community. It had become clear to me that I was no less susceptible to falling in love with my "designs" (as components) than anybody else, and that falling in love with a component was a surefire way of wasting my time and that of a lot of other people as well. I called my invention Five Aspects of Bringing a New Practice. I named the five: Provocation, Diagnosis, Offer, Mobilization, and Accumulation.

Successful design work, I claim, goes forward in all five of these domains at the same time, in parallel. As has been my practice in inventions such as this one, I selected each word to be slightly awkward and opaque, even to me. This way they are hard to dismiss as simple translations of familiar distinctions. I wanted to avoid having people miss the point of the inventions by saying, "Oh, I see, that's just like this other thing." A diagnosis is not a problem, and an offer is not a solution nor is it a design. You'll see how the five play out in the following short introductions to them. Each time I work with these names I have to re-invent (re-discover) each one. They stay fresh for me. When I introduce them to others, hopefully, they appear less what I remember and recite, and more something invented in our conversation, so we may work together in the space they provide as a living structure.

Let me introduce the five, and then we can see something of their utility.

Provocation

A designer seeking to bring new practices must provide a big provocation, because changing practices is expensive and dangerous. To begin to work in a different way costs money; people lose power and identity; and it takes a substantial human investment to bridge the chasm from old to new. Formerly skillful people lose their reliable stations in life, and upstarts end up with new power. Moreover, it takes more than one provocation. The designer needs at least one sufficient provocation for each party and role that will be involved in and affected by the coming changes. Executives, investors, workers, suppliers, even spouses each have different kinds of concerns, and need provocations to get and keep them involved in positive ways.

To get a community moving on the development of an authentically new set of practices, you need powerful reasons that hang together in a set of stories. Without sufficient provocations, people will invent themselves as indifferent to, or enemies of the changes that the designer is preparing. Finally, the right kinds of provocations are not stable; they change over the course of the project of bringing the new practices. Provocations that are sufficient to create the space of speculation are insufficient for funding a pilot. Provocations sufficient for a pilot are insufficient for constructing a whole new way of working for a whole company, and so forth.

Diagnosis

A successful modification of practices, or an introduction of new practices, always stands on top of a good diagnosis. In the jargon of the age, we provide solutions to problems, and our children are trained in "problem-solving" in school. If we are purchasing a new brand of pencil, a couch, moving our office, or adding a computer, we do not need a diagnosis. We are making a choice or a

decision. Speaking of a "diagnosis" would be a pretentious way of talking about the analytic process of selecting our new pencil. However, if we are changing essential practices, then we need a powerful diagnostic interpretation about the current situation in which we find ourselves that can allow us to select the right team and design the actions to guide the community as it moves from one world of practices into another. The diagnosis provides an explanation of what gives rise to the current situation in which we find ourselves, and, at the same time, serves as the declaration about the kinds of interventions we will make to change the situation.

Think about a medical team going after some malady arising from unclear or ambiguous origins, for example, an ongoing series of severe head or stomach-aches. The medical team must do the right kinds of tests, articulate a diagnosis in a preliminary way, assemble a team who are competent to act in the space that the diagnosis defines, develop a plan of action, and then manage it and the client to a successful resolution. At its center a diagnosis is a declaration about the space of interpretation in which a competent team is going to go to work to change something. It does not mean an answer to a problem.

Answers to problems, ultimately, are trivial. A big opportunity needs a good diagnosis, and to move forward without one is either to risk wasting the opportunity.

Offers

One needs a series of effective offers, between customers and performers, in which each next offer brings essential conditions for the next step of building the new practice. There are a whole gaggle of customers and performers in this equation. End-customers, investor-customers, employee-customers, ally-customers, executive and manager-customers, and so forth. Taking it incrementally, in order to deal with the fact that people almost never build instantly the kind of trust needed for a major project of changing practices, we see a sequence of steps: a) finish the diagnosis, b) demonstrate the possibility, c) develop a plan of action, d) do a pilot, e) plan the full implementation, and so forth. As each subsequent offer is made and accepted, the resulting exchange of promises (I offer you 'x', in exchange for 'y') produces the force and authority for changes to be made.

Notice that none of our list of five aspects of bringing a new practice is called "the design." Characteristically "the design" is a component in several of the five, most critically the offer. The design provides the grounding for making an offer about where we are headed.

Mobilization

We need a set of activities in which we will build the new practice - bring the new practice into operation in the community. The result of a successful mobilization is not that we finish some artifact or product, but that a community of people is now working in a new way. A mobilization can be easy or hard, and the kinds of foundations with which you start are critical. The central challenges of the mobilization are threaded throughout the other parts of this story: the right provocations, diagnosis, offers, and evidence of the accumulation of capital through the shift in practices. A mobilization is managed through a process of keeping coherence among all aspects of a program for bringing a new practice, fulfilling the promises made in the process, building new habits in the bodies of the people involved, and doing that in a way that does not get caught in the crossfire of old habits that would, otherwise, take the community in a different direction.

Accumulation

The ultimate test of a new practice is that it allows us to accumulate one or more types of capital: financial (money), pragmatic (know-how), or symbolic (identity) capital at a faster rate than before the change of practices. If an investment to produce a new set of practices does not produce an increased flow of one or more kinds of capital, then the change was for the sake of change, and it is just too costly to do that. Changes in the rates of accumulation of capital produced from a new practice will function as important primary

provocations for various communities.

The Whole of Design

While I have presented these in a particular order, my recommendation is that the designer keeps all five in his or her attention from the first moment of considering the possibility of a change. The five overlap all over the place in a successful project, and they cannot be accomplished serially. For example, we need to have a plan to accumulate more capital of some sort as part of our provocation, and we all have experience with the way that "quick hits" - early results - amplify or transform the provocation available to us. Each of the five will found to be interwoven with the others in analogous ways.

Now, if I say that designers are responsible for bringing new practices, and I recommend that designers design in all five of these domains throughout a project, let us ask where does the work of the designer begin, and where does it end?

My answer is not good news to those who would attempt to do a nice clean division of labor between strategists, designers, builders, commissioners, operators, and maintainers. Each new design brings a set of practices that help a community, institution, or organization accumulate more capital over time. The designer's job spans the lot. If an implementation fails, it is an error of the designer. If it turns out that there is something in the community that was not visible to the designer that ends up stopping the effectiveness of the design, it is the error of the designer. If a design results in something that, when managed, doesn't produce new capital for the investors, it is a failure of the designer.

For What Do I Want to be Accountable?

Finally, then, I come around to where I stand as a designer. Human beings, it appears to me, are wired for concernful involvement with each other. We arrive in a world already "designed" for that. Every day, and everywhere we look, we can see things broken, missing, and in the way. Those with the audacity to invent themselves as designers, and with the good fortune to find a place to stand from which to collaborate with others in the design of their lives, will dare to intervene in this world. They will invent new practices, habits, artifacts, tools and systems that will reshape the coordination among us all.

My focus is on improving our capacity to take care of ourselves, each other, and this world. To do this well, we need to stand in history, responsible for ourselves and our interpretations. We need to be competent for inventing new distinctions around which new actions will be brought and coordinated in our new world. We need to be competent for listening to the moods and concerns of those whose lives we will interfere with. We need to be competent for inviting, asking, offering, and all manner of conversations with which we will invite, cajole, guide, and bring those with whom we share an old world as together we traverse to a new world. Change is expensive and dangerous, and those who will join us as we set out for a new world, losing sight of the shore, will be anxious at least, and sometimes downright frightened.

September 6, 2007

COMMENTS

Perhaps the most sensitive (and moving) account of what deeply occurs around innovation, from deeply first and second person perspective that boring, misleading "third person" accounts completely miss. This piece informed me and inspired me to continue on, with greater clarity and accountability.

— *Steven Olson, PhD, Sun, 07 Jul 2013 13:59:25 UTC*

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