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Elizabeth Sanders

Design Serving People

Abstract

Design is not serving the needs and dreams of everyday people today. But new design spaces are emerging that provide them the means with which to balance consumptive and creative experience. In the near future, designers will learn to use their own creativity to amplify the creativity of everyday people.

Is design serving people?

No, design is not serving people today. Design is serving markets, not people. Design is serving the needs of companies, not people. And as a result, consumerism is out of bounds. We have too many “innovative” products that we desire but do not need. We are degrading the planet with the debris of overabundance and overconsumption. Environmental sustainability is in big trouble. Meanwhile, cultural and social sustainability are finally being recognized as having tremendous importance to human survival and well being.

We were warned, but did not listen. Over 30 years ago, Ivan Illich, a radical theorist of the 1970’s said, *“People need not only to obtain things, they need above all the freedom to make things among which they can live, to give shape to them according to their own tastes, and to put them to use in caring for and about others”*(2). He suggested that we learn how to make convivial tools instead of continuing to add to the array of industrial tools in existence at the time. Today design has evolved to the point where Illich’s suggestion is not only possible, but also inevitable.

People need creative experience

Design is not serving the needs and dreams of people today. In comfortable American homes, schools and workplaces, people are beginning to feel uneasy. It has become increasingly evident that they are no longer satisfied with simply being “consumers.” Everyday people want to be “creators” as well.

This unmet need for creative experience tends not to be voiced in the open since it is a tacit need. It can, however, be seen and heard when we give people simple visual tools with which they can express their dreams and aspirations (7). Their unmet need for creative experience emerges when we conduct research using generative tools. It emerges whether we are researching their home, work, learning or play experiences. Their unmet need for creativity is being expressed in full force on the Internet through personal websites and blogs.

Everyday people’s examples of what constitutes creative behavior are surprisingly varied. For example, some people say they feel creative when they are

exercising or when they are cleaning out the closet. Others feel creative when making scrapbooks from family photographs. And others feel creative when they are cooking “freestyle,” making up the recipe as they go from whatever ingredients they have on hand.

In the near future we will learn how to use design to serve people’s varied needs for creativity. We will help them balance consumptive with creative experience. I propose that the new design expertise we need to do this balancing will be found in people, i.e., everyday people. They are the experts in living, working, playing and learning. Utilizing their expertise will significantly change the process of designing and the role of future designers. Designers will not longer only design **FOR** people, they will learn to design **WITH** people. Co-designing will require new forms of communication to support the collective creativity that arises between designers and everyday people.

Everyday creativity

People like to make things and feel creative in their everyday lives. Everyone is creative, but to varying levels across the many experience domains in their lives. There are at least four levels of creativity that everyday people seek. These levels have been observed in fieldwork and through conversations with everyday people. The most basic level of creativity is **doing**. The motivation behind doing is to accomplish something through productive activity. For example, people have told us that they feel creative when they are productively engaged in everyday activities such as exercising or organizing their homes. Doing requires a minimal amount of interest. The skill requirements are low as well. Many of the goods and services offered to “consumers” today can be said to satisfy the doing level of creativity. They come to the consumer readymade. For example, in the food preparation domain, a doing activity would be to buy or select a prepackaged microwave entrée and prepare it for a meal.

The next level of creativity, **adapting**, is more advanced. The motivation behind adapting is to make something one’s own by changing it in some

way. People might do this to personalize an object so that it better fits their personality. Or they might adapt a product so that it better fits their functional needs. We can see adaptive creativity emerging whenever products, services, or environments don’t exactly fit people’s needs. Adapting requires more interest and a higher skill level than doing. It takes some confidence to go “outside of the box.” In the food preparation domain, an adapting activity might be to add an extra ingredient to a cake mix to make it special.

The third level of creativity is **making**. The motivation behind making is to use one’s hands and mind to make or build something that did not exist before. There is usually some kind of guidance involved, *e.g.*, a pattern, a recipe, or notes that describe what types of tools or materials to use and how to put them together. Making requires a genuine interest and prior experience in the domain. People are likely to spend a lot of their time, energy, and money on their favorite making activities. Many hobbies fit in this level of creativity. In the food preparation domain, an example might be to create a meal using recipes.

The most advanced level of creativity is **creating**. The motivation behind creating is to express oneself or to innovate. Advanced creative efforts are fueled by passion and guided by a high level of experience. Creating differs from making in that creating relies on the use of raw materials and the absence of a predetermined pattern. In the food preparation domain, creating is making up the recipe as you go and having to improvise along the way when you discover that you have run out of a key ingredient.

The path from doing to adapting to making and finally to creating develops in the individual over time and through experience. Consequently, people differ in the level of creativity they attain in different domains. In fact, they may find themselves at all four levels of creativity simultaneously in different life domains.

The roles people play are changing

The roles people play in the design and development process (for products, services, spaces, etc.) have been changing. This is reflected in the labels we have used over time to refer to them. As Figure 1

shows, in the 1980's we emphasized their roles as shoppers and buyers, referring to them as "customers" and "consumers". In the late 1980's and early 1990's, sparked by the emergence of software driven products and devices that were not always easy to use, we emphasized their roles as "users". Today we have a variety of ways to think about the people we serve through design, depending on how we include them in the design and development process with us. We may see them as adapters of products available in the marketplace, or as participants in the process when they specify the exact product they want on a website. The evolution of roles that people play is leading to the emergence of everyday people as co-creators in design and development process.

Where do the design disciplines fall on this landscape today?

We can place the disciplines of design along the evolutionary "hill". The placement of the design disciplines that is shown in Figure 2 is generally agreed upon by design practitioners.

Interaction and software design is the furthest along in the evolution of design expertise. Concepts such as adaptive design and meta-design (1) are already moving from the research laboratory into practice. When you type "human-centered architecture" into Google, you will find links to software engineering and information architecture, not to the built environment. Software architects have made more use of Christopher Alexander's Pattern Language than have his architectural colleagues.

Industrial design is next in line in the evolution of design expertise. Here we see the indirect inclusion of user knowledge in the design development process. New forms of rough and fast prototyping have increased the tendency to bring user expertise

into the design process. Industrial design awards now recognize the social impact of the designed artifacts.

Architectural design, however, appears to be stuck in the expert-driven phase. The planning component of architecture is embracing the user perspective but it does not always seem to be in synch with the design component. Architecture could embrace co-creation, learn from the other design disciplines and shortcut the evolutionary process. But to do so, it will be necessary for architects to see the built environment as a stage for human experience rather than as a finished product.

It is time to move away from the traditional design disciplines that are founded on the materiality of the artifact (graphic, product, space, software, architecture, etc.) and instead organize around human experience domains such as learning, creating, healing, living, working, playing, shopping, etc. People are people whether they are finding their way around a building, using a product, reading a package or using a software application. Design should be about making sure that our results advance people's personal growth and support a harmonious relationship between people and their environments.

The emergence of new design spaces
Discontinuities on the hills of change are revealing new design spaces as shown in Figure 3. The emergence of new design spaces does not imply that the traditional space will disappear. Because people have differing needs for creativity across the various domains of their lives, it is more likely that all the design spaces will coexist over time. The emergence of new design spaces implies that significant changes are needed in the education of designers. In fact, each successive "hill" demands greater participation

Figure 1. The evolution of roles played by everyday people in the design process

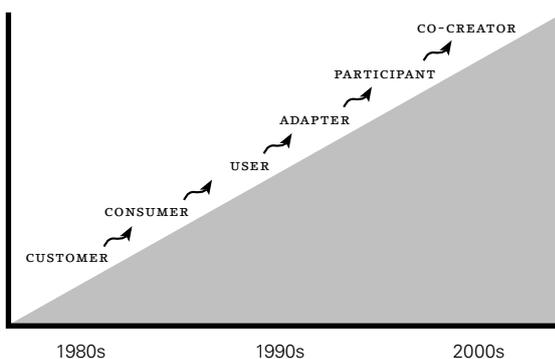
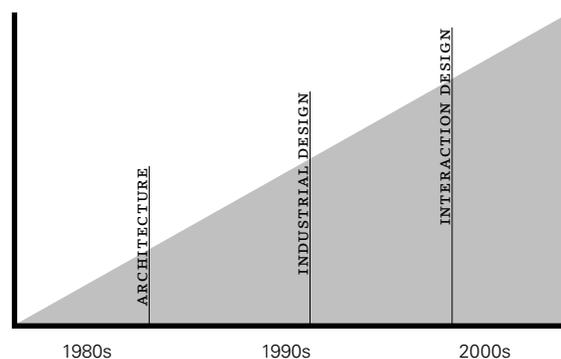


Figure 2. Positioning the design disciplines

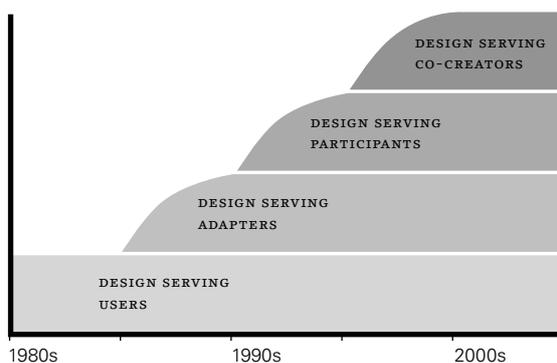


by the people being served by design. These new design spaces will become especially important in highly complex domains. They will also become important for domains that people are passionate about.

The traditional design space can be described as **design for consuming**. This space is focused on designing for consumptive activities such as shopping and buying which lead to owning and using. Because design in this space is often market-driven as opposed to human-centered, it has resulted in many over-featured products that are easy to sell, yet may be difficult to use. Companies spend large amounts of money communicating about and advertising these products and services. The Design for Consuming Space is a good example of design serving markets, not people.

Design serving users was first introduced in the mid 1980's when everyday people began to try to use computers and found that they could not use them. New disciplines, such as usability engineering, emerged to help bring about more "user friendly" products. Microsoft, for example, a pioneer in usability testing, had four usability engineers on staff in 1988 (8). The usability domain has grown and gained tremendous momentum. Today Microsoft has hundreds of people involved in usability testing and user-centered designing. The focus on usability led to improved products and tools. Yet, important as it is, usability has not been enough. In 1992, I suggested (7) that that we needed to learn how to design products and tools that were simultaneously "useful, usable and desirable". Today thousands of people are involved in user-centered design practices, most often in the field of Human Computer Interaction (HCI), many of them succeeding in designing product and/or systems that are simultaneously useful, usable and desirable.

Figure 3. New design spaces are emerging



Design serving adapters emerged over the last five years as people who have been inundated with options for consumption seek avenues for creative expression. Design serving adapters is not only a reaction to an overabundance of choices. It has been enabled by our use of information technology to find what we want, when we want it and to be able to purchase it, for the lowest possible price, over the Internet. Companies such as Levi's, L.L. Bean, Converse and Dell Computer are capitalizing on this need/want and now offer people the ability to customize products online, making it possible for them to enjoy one-of-a-kind products made to their specifications. New publications such as *Readymade* and *Make* cater to the adapters among us, as well.

As designers serving adapters, we will learn how to design things that are not only useful, usable and desirable, but are also reusable and customizable.

The new information and communication technologies have spawned another of the new design spaces: **design serving participants**. We now have the ability to locate and to communicate instantly with people anywhere in the world having similar passions, interests or hobbies. We already have community sites such as eBay, wikis, and blogs that support these activities.

In the Design serving Participants Space, we will learn how to design things that are useful, usable, desirable, reusable, and customizable. We will also learn how to design to support immersive and collective experiences.

Beyond the current edge of practice are the **co-creating spaces** where designers and everyday people work collaboratively throughout the design development process. Co-creation has been noted across different domains. There has been a synchronicity in the appearance of this idea which has been referred to as "underdesign" (4), "meta-design" (1), and "loose fit" design (5).

Co-creation is no longer a future dream. Recent research (3) shows that over half of all on-line American teenagers create their own content. (The following activities counted as the creation of new content: create a blog; create or work on a personal website; create or work on a webpage for school, a friend, or an organization; share original content such as artwork, photos, stories or video online; or remix content found online into a new creation). Although this study was conducted in the us, it is not hard to imagine that the results would be similar for other parts of the world. Imagine the world ten years from

now when these teens are finding their places in it!

As designers we will learn how to design things that are useful, usable, desirable, reusable, and customizable. We will also learn how to design for immersive, collective experiences that provide and support generativity and conviviality.

New languages for co-creation

Co-creation requires a language that both designers and nondesigners can use. Such languages are emerging from the recent "design for inspiration" movement (9). Maketools is one such language that has the potential to unleash the creativity of everyday people and give them the means with which to express their tacit needs and dreams (7,8,9). With maketools, simple and ambiguous components (both visual and verbal, 2D and 3D) are put together into toolkits that people can use to express their memories, fears, dreams, and ideas. In practice we have seen that people already know how to express themselves with the maketools. They enjoy the creative process.

Moving toward a co-creative process is a big change for designers who have been trained in the traditional design space. Co-creation requires new tools and methods and a new language for designing. It also includes the acceptance of new design partners and a new attitude about the inherent creativity of everyday people. The next section describes typical questions that arise when designers start to think about the new design spaces.

Questions associated with the new design spaces

Are we losing control of the design process?

Yes, we are losing control of the traditional design process, but we are at the same time opening it up to others. We are entering new design spaces where we let go of our control in order to amplify the creativity of other people.

How much do we want everyday people to drive design?

They should drive it to the extent of their expertise, abilities and interest. People with high levels of experience and/or passion will probably want to co-design. We should encourage them to do so.

What about aesthetics?

A new aesthetics of experience is emerging. It may challenge the aesthetics of traditional design. It will be relevant to the needs of everyday people and resonant with their dreams.

How will the tools and methods for research and design change?

When we invite everyday people into the design process, the tools, rules and methods for research and design blur. Research becomes more creative. Design becomes more relevant to the people we call users, adapters, participants and co-creators.

If everyone is creative, then what is the role of the designer?

Designers will learn to use their own creativity to amplify the creativity of other people. In the future, designers will be the creators of scaffolds upon which everyday people express their creativity.

How will we evaluate the results of designing to serve people?

The best way to evaluate the effects of design is in the betterment of people's lives. If we, as designers, can improve the sustainability and conviviality of human experience, then we will have succeeded in our efforts.

What's next?

We are entering new design spaces where everyday people co-design with us. These spaces will be living, thriving, diverse, and may feel somewhat messy. These spaces have the potential to foster experience that is socially and culturally sustainable.

Design serving people tomorrow

In the future, we will learn how to design "convivial tools". I will close with Illich's thoughts on convivial and industrial tools. By "tool", Illich refers to anything from "simple hardware such as drills.....to productive systems for intangible commodities such as those which produce "education," "health," "knowledge," or "decisions".....

"Convivial tools allow users to invest the world with their meaning, to enrich the environment with the fruits of their visions and to use them for the accomplishment of a purpose they have chosen. Industrial tools deny this possibility to those who use them and they allow their designers to determine the meaning and expectations of others" (2).

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