

INSTITUTE OF DESIGN, IIT

perspectives on

DESIGN + STRATEGY

Points of view from the
2005 Institute of Design Strategy Conference

Strategic Design

It is tough being an executive these days. “Managing” and a “leading” are curious jobs when the initiatives being managed or led are ever-changing and out of control.

There has been a power shift from producers to customers. “Any color they want as long as it’s black” has been replaced by “What they want, when they want it, at the price they want.” It is not only the customers who have gained control in a world of maximum choice at the “China price”. The companies in the supply chain who are closer to the consumer now tell the manufactures what to do. Twenty years ago, P&G told retailers what they would buy and how to display it. Now Wal-Mart tells everyone what they will make, the price, and how it will be displayed.

Standard segmentation models no longer describe customers. Toyota built the Echo and built the Scion brand for members of generation Y, but they are being purchased by members of AARP.

Competitors are not only the old assailants but are now coming from everywhere and anywhere. Are companies fighting low-cost providers in China they’ve never heard of? Or companies who, while still low-cost providers, are now buying major brands, like TCL with its acquisition of Thompson/RCA? Or is the competition coming from kids in dorm rooms inventing completely new categories of services and related products?

Whole industries are transforming. Three decades ago Apple Records let a start-up California computer company call itself Apple, little knowing that it would transform the music industry. And this is happening while long-standing giants in the music industry can’t figure out the industry’s new value web and have instead decided to sue their own customers.

A company’s increased technological possibilities, combined with an expanded number of available business models, give executives unprecedented knowledge of how to make anything. At the same time, consumers’ ever expanding options of what to buy to support how they live, work, learn and play mean companies have less knowledge about the people they are designing for. The confluence of these two trends leaves executives confused about exactly what they should make.

The good news is there are new kinds of design knowledge that executives are using to help overcome their chaotic world and create remarkable innovations. The ideas and examples from leaders of business and innovation represented in this publication provide rich examples of what is happening now.

Of course, structured methods of understanding the activities of daily life have become almost as common as the key step in creating great user experiences. Consumers now get angry when the interaction design of a product or service is not perfect. People used to think it was they who were stupid; now they say the offering and the company are stupid.

But design knowledge is more than just methods of understanding users. Executives are using design in the early stages of their processes and in solving types of problems that traditionally have not involved designers. This is in stark contrast to the conventional model of the past in which design was involved late in the process, making decisions about visual form after engineering and marketing had defined the basic direction.

Executives are doing this because designers are creating a new body of knowledge, a set of frameworks and methods that can be used by companies for understanding the relationship between the business context and the user experience; finding patterns in seemingly chaotic situations; designing systems of solutions that simultaneously creating user value and economic value; and visualizing and prototyping opportunities early in the development process.

Furthermore, these frameworks and methods are not only being used to create new communications, products and services; executives are using them to reform the ways their organizations work. The stories that follow provide concrete examples of how executives are using the new design knowledge to help them navigate the increasingly fast and chaotic forces that they face today.

Patrick Whitney

Steelcase/Robert C. Pew Professor and Director, Institute of Design, IIT



GK VANPATTER

THE INFODESIGN INTERVIEW

This reprint from InfoDesign, a publication about the design of information and experiences, is an edited version of a conversation with NextDesign Leadership Institute's GK VanPatter about leadership, business innovation, cross-disciplinary work, design education and the growing complexity load. Interview by Peter J. Bogaards; submitted by GK VanPatter.



Peter J. Bogaards: Your current initiatives and activities strongly focus on the role of design in business innovation. Why do you think the relation between design and innovation is so important?

GK. VanPatter: Well, I guess we would state it slightly differently, that innovation is important to all organizations including businesses. We believe that Design with a big D can play a central role in the realization of innovation at numerous levels. Much of human work activity takes place in the context of organizations of one kind or another. These are the human engines of productivity in the world today.

All organizations need to continuously renew themselves, adjust to external change, solve problems, create new patterns in the form of strategies, products, and services and generally keep moving forward. At its core the activity of design that we practice is essentially about strategic renewal and solving problems in human-centered ways. We find that smart business leaders have a growing realization that human-centered

design has become key not only to the creation of successful strategies, products and communications, but to the development of organizational innovation capabilities as well. From our perspective design can play a key role in both the creation and the enabling of the creation in ways that other disciplines cannot.

PJB: I understand you identify two important aspects: (1) the role of Design in a business strategy and (2) the role of Design to solve problems in a human-centered way. Are there specific types of business strategies or problems for which Design can add value? Connecting this with innovation makes me wonder how the added value of Design can be integrated. I mean, if innovation is to change products/services, behavior, and culture in organizations in a qualitative way, what then is Design contributing? Would the same apply for technology or to put it differently, find 'Design' and replace with 'Technology'?

GK: I see several questions intertwined here so lets unpack a few pieces. From my perspective, both aspects that you mention above are actually overlapping. We view strategy as just one type of challenge that human-centered design can help with.

Your question regarding problem types reminds me of a quote that we reference on the NextD site. Many years ago, Charles Eames was asked: "What are the boundaries of design?" Of course his infamous response was: "What are the boundaries of problems?"

The same logic applies today. The big change is that the scale of complexity of challenges facing clients, facing the world, and therefore facing design has changed. This is part of what we explore on NextD.

How is the landscape of challenges changing and what effects does this have on the notion of design leadership? We consider this the new territory of what we call 'Next Design'. We use that term to signal that we are talking about a reinvented design, not traditional design. You see our friends in the human-centered design movement at the Institute of Design and elsewhere sending similar signals. There is a need to move design forward into new territory where designers are better equipped to take on the challenges and opportunities in the world today.

From our perspective, Next Design is a human-centered way to conduct problem solving and to realize innovation. These are not separate activities. We have long since moved away from the notion that design is some kind of add-on decoration. It is not.

Look inside innovation, and underneath the mystique you find problem solving. Look underneath the mystique of design and you will find a form of problem solving there as well. At their core, this is a pattern creation activity. The difference is in how we do the how, what tools we use and how we think about connecting patterns to humans. All depends on what kind of patterns you seek to create. Wherever humans are engaged in interaction with the purpose of solving problems and creating new solution patterns, there is a need and a role for human-centered design. The world unfortunately has an overabundance of patterns that are not human-centered. This is the challenge condition and also the opportunity for next design.

PJB: There is currently much attention focused on simplicity, ease-of-use and understanding related to technology and information. Why do you think this is happening? Is this an emotional reaction to the tsunami of data, “feature-itis” in technology, or to the rapid changes in the business world? Can you share some of your thoughts on how Art and Design can contribute to these aspects?

GK: While I’m not exactly sure what you mean by ‘emotional reaction.’ We believe the increase in attention to the issues that you describe is being driven by very practical business reasons. To cut to the chase: Organizational leaders are waking up to the realization that cognitive and complexity overload undercuts human performance. This is not just about information and technology however. There are many more dimensions to the complexity overload equation.

The reality is that we can look at this picture from any one of a dozen altitudes and perspectives. We could look at this at a tactical technology interface level, all the way up the strategic ladder to the corporate strategy and the entire organization itself. We could look at the WHAT of organizations, its tools, information, products, services or we could look at its HOW, its processes. At the meta-level, we

are essentially talking about the system that employees have to navigate everyday to figure out what to do and to get stuff done.

Humans are amazing creatures of adaptation but often we ask too much of them. It is no secret that many people working in organizations are increasingly grappling with complexity overload in one form or another. If employees only had one layer of complexity to grapple with they could easily cope and adapt, but the reality is that multiple layers of complexity combine to create overload states. We consider information and technology to be just two of many layers. When overload conditions undermine productivity they have direct impact on the bottom line. The complexities become what employees spend their time figuring out instead of real work that adds value. This is not rocket science but we are often amazed how such realities are overlooked in organizations today.

Imagine a giant organization with 100,000 employees where the corporate strategy is incomprehensible, the technologies massive but not human-centered, the information in over-abundance but of very poor quality and the environments out of synch with the purpose of interaction, knowledge creation and innovation. What level of performance could we expect from such a company? This is not an uncommon condition today.

Organizations today often build systems in silos as if one project, interface, technology, information set is the only complexity that employees have to grapple with. Certainly this is a formula for complexity overload. In addition, many organizations have been sliced, diced, merged, and built in remarkably unsystematic ways. Somewhere along the way many lose their ability to think about themselves in a holistic way.

Design with a small d and big D can play important roles at many of those intersection points. Next Designers are the folks who get real stuff done. One of the great things about design is that it can help and add value in many different ways. There are many options for starting on that path. Suffice it to say that Next Designers can step in and add tangible value at an amazing number of points within an enterprise system wherever the organization might be in their development journey.

From our perspective one of the most important things that Next Designers bring is the ability to show visually how all the levels are interconnected, to see the organization through the eyes of what we call visual systems thinking, to think about the organization and its many systems, holistically and in a human-centered way.

Perhaps most fundamentally, we can help business leaders meet the challenges they are now facing as expectations shift around what it means to be a manager and a leader in business organizations today. Management itself is undergoing a revolution. Gone are the days when focusing on efficiency and optimization was enough.

There is growing realization that management in the 21st century is about new pattern creation as much as the optimization of existing patterns. This realization connects directly to design. We are master pattern creators so we can help business leaders and managers learn the mechanics of next design. This is one of several forces driving the systemization, the codification of design synced with cross-disciplinary ways of working but lets leave that part of the story for another time.

Today design itself is a work in progress. To use the airplane metaphor: We are in a sense reconstructing the plane of design as it is in flight, while at the same time promoting its new value. At its core, design is really about helping to create new paths into the future. We have a lot to contribute when this is the goal.

GK VANPATTER:

GK VanPatter is Co-Founder of the innovation acceleration consultancy, Humantific in New York. He has more than twenty-five years of design leadership experience and has consulted to numerous global companies including Pfizer, EDS, General Motors, IBM, Morgan Stanley, BMW, Marriot, HP, Bristol-Myers Squibb and many others. Prior to forming Humantific / Understanding Lab he was a Scient Fellow and Co-Founder of Scient's Innovation Acceleration Lab. He was an early advocate of extending designs' reach into the realms of business transformation, strategy development, knowledge creation and organizational innovation. GK's work has received numerous excellence awards and he has spoken at many international conferences including Vision Plus and Doors of Perception. Concerned about the future of design leadership he co-founded the NextDesign Leadership Institute with Elizabeth Pastor in 2002.

LARRY KEELEY

THE EMERGENCE OF NEW INNOVATION DISCIPLINES

As an obsessive investigator into the causes of innovation failure, Larry Keeley contends that, “Almost everything about the way innovation is taught and practiced and asserted is wrong.” Larry is the co-founder and president of the 24-year old innovation and strategy consulting company Doblin Inc. He shares his intimate understanding of innovation in his classes at the Institute of Design, the Kellogg Graduate School of Management, the University of Chicago, numerous executive education programs, and in an upcoming book to be published by Harvard Business School Press.

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Brandon Schauer: Your soon-to-be published book, *Taming of the New*, is billed as a guide to the new disciplines of innovation. What are these disciplines you speak of, who are the practitioners, and why should we consider them new?

Larry Keeley: There are several different questions overlapping here. Let's start in a slightly different place. Let's start by recognizing that almost everybody has decided that this is a time when they need to innovate effectively if they run an enterprise. A growing number of business leaders and a growing number of government leaders have come off of two decades of trying to find greater efficiencies in new forms of business process reengineering to do the old things we used to do much more effectively, much more efficiently, and to get massive improvements in productivity. And the evidence is overwhelming that that has worked.

But I think it's equally clear to good leaders that they can't continue to expect in the next period massive improvements in efficiency each and every year. We've gone through a couple of recessions and a couple of wars, and during all of that period well-run businesses were trying to do more with less. Now most good leaders are saying, "I've got to figure out a way to get to organic growth; I've got to figure out a way to do something powerful and new — because the world is impatient, because the world engages in very careful scrutiny — unless the new things I do are successful, and unless they're newsworthy, and unless they're startling, and unless they really compel customers, they tend to fail." So that's what's sort of the background behind a greater demand for methods that ensure innovation effectiveness. And that's been the focus of my work for two decades and the focus of my writing intensively for the last five years.

Another part of your question is what are these new disciplines. To a startling degree they consist of abandoning long-held beliefs that I would prefer to call "myths" about what innovation is, how it works, and how you get it to succeed. For instance, it's commonly believed that innovation is fundamentally about the search for a new product, when in fact evidence shows clearly that new products, while important, are incredibly swiftly copied these days and rarely get a sustained advance that contributes to high value growth of an enterprise. New products, thought to be the core of innovation, turn out to be, if anything, a mistake — an overly emphasized, not-very-important basis for innovation. And that one myth is so pervasive that it's captured in lots of cliches: "the greatest thing since sliced bread," or "build a better mousetrap and the world will beat a path to your door." Our research suggests that many other types of innovations — changes to channels or brands or customer experience, changes in your processes or in your service systems or in your business model or in your relationship to other suppliers — are vastly more likely to give you sustained advantage.

There are many, many other mistaken beliefs, myths if you will, about innovation such as that it is fundamentally about creativity. Again, our cliches are revealing. We say it's time to "think out of the box," when people are trying to innovate. This turns out to be extremely inefficient. Starting innovation with brainstorming — as virtually everyone does — mostly is a force of chaos, and it tends to distract a company and to give them the vague sense that

they are innovating when in fact all they are doing is being random. Good companies need to begin someplace else, and to then use the right methods in more or less the right order and in more or less the right proportion to innovate effectively.

Another part of your question is what specifically are those methods. Any good innovation exercise should begin with diagnostics. Not with thinking out of the box, but with a specific attempt to identify the emerging market needs, the new sources of value that might come from technologies, the errors of omission by our own firm or specifically by our competitors in a field. These are the things that give you the insights that you need to concentrate the time, energy, and talent of a team inside of an enterprise and to get it to have some chance of producing something that is (a) needed by customers, (b) overlooked by competitors, and (c) reasonably possible inside the corporation itself. And that's how you get to innovations that start to make a big difference.

BS: So we should examine our language and cliches as the trailing indicators of how we think of innovation?

LK: Think of them this way. Language always — not just in innovation but in any field — reveals the underlying structures we have in our heads about what to do and how to do it. The language that exists around innovation is both imprecise and implausible. So if you go ask people “What is innovation?” they don't know. They can't define the term. If you go ask them how to pursue innovation, they start listing the oft-repeated but frankly dysfunctional approaches to generating more ideas that enterprises have used for hundreds of years.

So the question is what will it take for this to become a discipline? What will it take for it to be another arena of management science that can be taught in say, for instance, business schools or design schools so that people can do it routinely and reliably. Designers have no trouble trying to help someone understand legibility in a sign, for instance, or usability in an artifact, for instance. Meanwhile, business schools have no trouble telling you how to do effective budgeting or effective auditing or good HR practices. But bring the topic up a level of abstraction to the loose goal of

innovation and suddenly it's anything goes. Suddenly it's go nuts, don't hold back, think out of the box, the crazier the better. This is naïve, it's silly, it's wasteful, and it doesn't work. In fact one of Doblin's discoveries is that 95.5% of the innovation initiatives pursued around the world by different enterprises fail — by their own measures! — by the measures of sponsoring companies 95.5% of those initiatives fail. It's when we got to that salient fact that we started to say, “Uh-oh, maybe everything about the way innovation is taught and practiced and asserted is wrong.” And it turns out that *almost everything is wrong*.

The world that I see just a few years down the road is a world where innovation will be just another part of management discipline that is well understood, thoroughly analyzed, shared, and taught. And some people, many of them designers, think that that's a depressing point of view. That somehow or another we can do innovation by the numbers. I don't quite think of it that way. I think of it as cracking the genetic code of innovation so that regular Joes and Josephines, not just geniuses and crackpots and gadflies and tinkers, can do innovation. It's what the world needs, it's what the time demands. That's what will cause us to enter a new renaissance, a time when a great many, many more organization and individuals can be effective at creating something new and noteworthy and workable.

BS: You can look at a discipline a being positioned on a spectrum that stretches from being an art, to being a *craft*, to being a *science*. For example, manufacturing of products such as silicon chips has progressed from the craft of engineering to the science of chemistry. At this chemistry level there's a high degree of certainty and prediction, substantially increasing manufacturing yields. What do you see as the underpinning of the discipline of innovation that will take us to these higher yields? I'm guessing it's not going to be chemistry?

LK: Well, there is a chemistry component when you put together a team. If the chemistry's not right and they don't trust each other and they don't like each other, as everybody knows, that's an obstacle to innovation.

But, underneath your question, the central thesis is correct. It is possible to crack a general process at a very high level of what now needs to be done if you want innovation to succeed more often than it fails. If you want it to succeed let's say 50% of the time or more. It starts, as I said earlier, with diagnostics, so that you have a sense of where to concentrate your innovation talent and skills. That part you can do reasonably objectively. You can get a sense of patterns of ideas that are emerging around an industry. You can get a sense of the comparative strengths and weaknesses of an individual firm or teams within that firm against others in the industry against whom it competes. You can get a sense of intellectual property and other degrees to which an industry is participating in an arena where either more or fewer ideas are emerging that are new and getting some form of legal recognition and protection. So there's a part of it at the very beginning, a preparatory part, which is reasonably objective.

What I think comes next is also very disciplined and has little or nothing to do with creativity. It's assembling the innovation components, the innovation pre-work in a way that the average person — not a genius, not a brilliant scientist or a brilliant engineer — can actually participate with productively. And that's where you assemble the combination of *the customer needs*, most of them unmet and many of them subtle, often developed by anthropologists; *the competitive patterns*, the actions being taken by the players in an industry; and *the company's own capabilities*, which sounds like it ought be self-evident but my experience is that most organizations larger than a thousand people don't know what they're good at anymore. And giving them a clear and definitive catalog of the things that they are really quite skilled at can double or triple innovation successes — just that one phenomenon. Good diagnostics may also double or triple your success rate. Good customer insights can easily double or triple your rates of success. So you compound all those things and you combine them with good step-by-step protocols, and you help people to innovate in a way that makes it a routine activity. The

a perspective on the intersection
of design and innovation

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LARRY KEELEY

kind of thing that anybody should be able to participate in and anybody should be able to succeed in. That's what we mean by an emerging discipline.

One of the things you asked is why is this important, why now? I think it's pretty obvious that we live in one of the most intense times of change in the history of our species. I think it's even possible to assert that part of the reason why there is a rising amount of terrorism around the world is because there is a sense, maybe not really consciously understood, but more unconsciously sensed, that there's a fast moving bus — call it the bus of human progress — and there's a bunch of people who are on the bus and a bunch of other people who aren't on the bus. And I guess, for some of the people not on the bus, there is a thought that if you just bomb the other folks back to the vague and dubious charms of the fourteenth century that somehow or other we'll all be equal and the world will be better.

That's not the most attractive future we could have. It's a really sad and pathetic one. A better future, one that's more encouraging, I think, for everybody, is to sense that we could all learn to deal with this time of change and that we could all become successful at innovating better, and faster, and more reliably. That we could have a few bold ideas pertinent to the times we live in and the challenges we face and give each other the confidence we need to take action on those bold ideas. What appeals to me as an innovation leader is the sense that we could crack innovation enough so that everybody that wants to can feel like they can participate in this time of intense change, and that they can help to author a future that they will love and a world that they can live in and enjoy. So I've devoted my career to the topic of innovation largely because I think it's the greatest gift we can give each other as a species in a time of change — a way to author a future that we want to live in.

LARRY KEELEY:

Larry Keeley is president and co-founder of Doblin Inc, an innovation strategy firm known for pioneering comprehensive innovation systems that materially improve innovation success rates. He has worked with, among others, Aetna, Amoco, Apple, Citigroup, Consignia, Diageo, Hallmark, McDonald's, Monsanto, Motorola, Pfizer, Shell, Steelcase, Texas Instruments, WellPoint, Whirlpool, and Zurich Financial Services. He lectures frequently and publishes regularly on strategic aspects of innovation, and is completing a book on innovation, *The Taming of the New*, to be published early next year by Harvard Business School Press.
