LearnxDesign Remarks

Thank you for inviting me to speak here at LearnxDesign. I understand that we have guests from 34 different countries and 116 institutions joining us this week, so I want to begin by welcoming you all to Chicago, and to the School of the Art Institute of Chicago as well. We are honored to be the first city and school in the United States to host this 3rd international conference bringing together design educators and design professionals from around the world. I hope you enjoy your stay and encourage you to take a look around this great city of ours while you are in town.

I would like to begin my remarks this evening by stipulating that, unlike most, if not all, of you in the audience, I am not a designer. In fact, I have spent much of my career as a scientist—a theoretical physicist—with some experience in government policy and the business world. Today, I am the president of a school of art and design, but you could say that I bring an outsider’s perspective to this role. That is the perspective I would like to bring to my remarks this evening. So, rather than make an overarching statement about design or design education, which I do not feel qualified to do, instead I would like to ask a question or two of you and make some observations based on my own experience and status as a somewhat outsider in this world.

I think a good place to begin is to consider the history of design here at the School of the Art Institute of Chicago, or SAIC, as we call it. It is a fascinating history, and one that, as I understand it, reflects some broader historical trends in design education, at least as it pertains to this country, the United States. SAIC was founded in 1866—we will start celebrating our 150th
anniversary in September. Ironically, the original name of the school was “The Chicago Academy of Design,” but it was composed of artists, and it was not until the 1880s that subjects like architecture and design were organized into formal departments. Even then, these departments went largely underdeveloped until the 1890s or so. The school’s director at the time was a man by the name of William French, and he was something of a classicist who weighted the curriculum heavily towards figurative drawing, painting, and sculpture.

Fast forward to 1914, when the outbreak of World War I deprived the U.S. market of the goods that skilled European craftsmen had supplied for generations. The lack of trained artisans here in Chicago and the Midwest created an opportunity for the school, one it seized upon by opening itself up to the more pragmatic aspects, one might say, of art education. This led to the establishment of an Industrial Art School in 1929, right around the start of the Great Depression, and then, in 1934, to the formal reorganization of SAIC into a School of Fine Art and a School of Industrial Art. Although first-year students in both the School of Fine Art and School of Industrial Art took the same basic introductory sequence of courses, thereafter they followed a fairly rigid curriculum within their respective departments, with little opportunity to explore other areas of interest through electives. At this point, I would like to suggest that this rigidity, this forced separation between the disciplines, although perhaps an appropriate idea at the time, was perhaps poorly conceived, and in retrospect perhaps a mistake.

Indeed, in the post-World War II decades SAIC experienced a marked drift away from what were at the time called the “applied arts,” to such a degree
that a predecessor of mine was able to write that by the 1960s and 1970s students “were more interested in personal growth than pragmatic career preparation.” Now this may have reflected the more inward looking culture of the 1960s and 1970s, the so-called “Me” generation, but also was, I suspect, due to the renown achieved by two earlier generations of SAIC alumni, first from the late forties and fifties and then the sixties and seventies. These alums, who are broadly referred to as the “Chicago imagists,” although you may know them better as “Monster Roster” and then the “Hairy Who,” brought great popularity to our fine arts departments, and our Department of Painting & Drawing in particular. As you can see here, both generations of Chicago imagists produced some truly astonishing artwork by the likes of Leon Golub, Nancy Spero, Ed Paschke, and Gladys Nilsson.

Two developments reversed this drift away from design at the school, however. First, in 1969 SAIC left the major system behind in favor of a more open curriculum emphasizing interdisciplinarity and self-directed study. Second, in 1973 the school replaced its under-utilized Departments of Industrial Design, Interior Design, and Advertising Design with a newly energized Department of Design and Communications. The momentum these twin developments wrought continued throughout the 1980s and 1990s until, in 1998, the school undertook what it referred to as its “Design Initiative.” This was a concerted, and I think very successful, effort to help SAIC make the final transition from being an art school to an art and design school.

I will return to the present status and future of design here at SAIC in just another few moments, but for now I would like to use the historical sketch I have just provided to pose a question. And that is: given what we know about
the ups and downs of design education here at the School of the Art Institute of Chicago and elsewhere, particularly in the United States, how do we ensure that this time around design perseveres, not only in our curriculums but also in society at large?

To help us think about this question, it might be worth spending a few minutes looking at two other modes of engaging with the world that are somewhat different from design but have persisted for thousands of years. I am referring to the arts and the sciences. As I mentioned before, I spent much of my career as an academician and a theoretical physicist and was also Dean of the College at Brown University. For a time I ran Argonne National Laboratory here in Chicago, which is a part of the University of Chicago and grew out of the Manhattan Project, and then I was Director of the National Science Foundation. So, science is in many ways what I know best, but my tenure here at SAIC has also inspired me to spend a great deal of time thinking about how the arts and the sciences are related, and also to think about the great value that can result from the interactions between them.

Let’s start by taking a look at what is thought to be the standard scientific model. At the most basic level (and this is over-simplified of course), scientists begin by developing hypotheses that they then test with experiments. These experiments generate data from which scientists either confirm their theories or make new discoveries. Now let’s contrast this notion of the scientific approach with the artistic process. A few years ago a Professor of Sculpture here at SAIC named Frances Whitehead produced a wonderful document called “What do Artists Know?” It consists of a list of eleven qualities that characterize the artistic frame of mind. I have posted some of
them up here and have also bolded a few key words and phrases that, I think, reveal some of the subtle differences between the arts and the sciences. These are words and phrases like “meanings,” “cultural values,” “qualitative assessment,” “re-contextualization,” “authorship,” and “intangible.” At the same time, however, I could have just as easily chosen a number of other words and phrases in Professor Whitehead’s document that make the opposite point—that is, that demonstrate how the arts and the sciences are in many ways similar. These are words and phrases like “synthesizing diverse facts,” “production of new knowledge,” “problem solving,” “analysis,” and “data.”

My point is that although the arts and the sciences are different in many respects, they are by no means incompatible. In fact, at root each reflects a common human desire: the desire to understand our universe, and to give order and structure to our experience of it. As a result, and although they express themselves in different terms and in different ways, I believe that it is incumbent upon the arts and the sciences—artists and scientists—to reach out to each other from across the disciplinary gap, to communicate with each other if only to try to see things from a different perspective. And, in another few minutes I will suggest that the same is true of design, broadly considered, and of designers.

To focus on my own area of interest for a moment, physics, consider a recent argument made by Carlo Rovelli, who is a fellow theoretical physicist. Rovelli believes that theoretical physics has shown a relative lack of progress over the past sixty years or so. This is by no means an agreed upon opinion. Rovelli has a number of reasons for his opinion, but among them, he argues, has been the lack of engagement by theoretical physicists with the arts and
humanities over that time, philosophy in particular. He notes that Isaac Newtown “thought of himself as a philosopher” and held wide-ranging philosophical discussions with Descartes, and that scientific geniuses like Heisenberg, Galileo, and Einstein all had minds “full of philosophy.” Rovelli’s point here is not that there is a one-to-one connection between Einstein’s discovery of general relativity and, say, his reading of Aristotle, but rather that Einstein’s commitment to engaging with another way of thinking about and looking at the world enabled him, as a scientist, to see things just a little differently. In a sense, Rovelli argues, Einstein’s reading of philosophy expanded the imaginative and creative possibilities of his scientific work.

Rovelli also makes a strong case for how scientists are indeed similar to artists in many ways. He notes: “First, science is about constructing visions of the world, about rearranging our conceptual structure, about creating new concepts which were not there before, and, even more, about changing, and challenging the a-priori that we have…Science is a process in which we keep exploring ways of thinking, and changing our image of the world, our vision of the world, to find new ones that work a little bit better.”

Now also consider a study from 2008 that was published in the Journal of Psychology of Science and Technology. In this study, a team of psychologists found that Nobel Prize winners in the sciences were significantly more likely than the broader public to pursue arts and crafts avocations in their spare time. These results are of course correlative rather than causative, but once again I think they demonstrate the value to be found in building bridges between different modes of thought, in encouraging students, professionals, and thinkers of all kinds to look at things from an angle they may not otherwise be accustomed to.
doing. Recently at SAIC, we developed a program called “Conversations on Art and Science” to accomplish this exact same goal, to encourage our students to think about and engage with scientific concepts in ways that might ultimately enlarge their artistic practices.

So what can design educators and design professionals take away from all of this? Although design has, of course, been around for generations, it is only relatively recently that, I think, we have begun in earnest to conceptualize it as a distinct mode of thought and way of approaching the world. One expression of design—and I want to emphasize that this only one among many possible ways of looking at design—is design thinking. I am sure all of you, for example, are familiar with the design firm IDEO. Founded in 1991, IDEO describes design thinking as such: “The design thinking process is best thought of as a system of overlapping spaces rather than a sequence of orderly steps. There are three spaces to keep in mind: inspiration, ideation, and implementation. Inspiration is the problem or opportunity that motivates the search for solutions. Ideation is the process of generating, developing, and testing ideas. Implementation is the path that leads from the project stage into people’s lives.” This aligns closely with the quotation I referred to earlier by Rovelli, as well as with another quote from Herbert A. Simon, a pioneer of computer science and artificial intelligence. Simon once observed: “Everyone designs who devises courses of action aimed at changing existing situations into preferred ones.”

I also found another, less formal expression of the designer’s unique frame of mind provided in a recent obituary for the departed and legendary typeface designer Hermann Zapf. In this obituary, a friend of his is quoted as
saying that Zapf’s genius lay in “expressing creativity while being circumscribed by practicality.” Zapf’s friend continued: “Type design is constrained by the alphabet...The designs have to be read, so we cannot change the nature of the alphabet beyond a certain amount without losing the readers. Zapf’s ability to find originality in his faces while not going outside the acceptable canon of legibility is really a triumph.”

In both cases, design is described in a way that is not quite the arts, which are perhaps more purely rooted in free-form creativity (with fewer constraints); and not exactly the sciences, which are perhaps more rooted in empiricism and objectivity. Design is, as I understand it, somewhere in between; it is iterative; it is responsive; it crosses borders and boundaries. Again, here I should remind you of Rovelli. Even as design continues to formulate itself, refine itself, and distinguish itself from other modes of thought, my own experience has taught me that it is always important to continue engaging with colleagues from other disciplines who might view the world in a slightly, or even completely, different way. Thus, as design endeavors to integrate itself more fully into our schools and societies, I would suggest that its practitioners consciously and deliberately reach out to and be receptive to ideas, modes of thinking, and creative impulses that emanate from other disciplines. Not only will this receptivity open designers up to new possibilities within their work, it will have the added benefit of pushing them to think critically about their field and to ask the difficult questions that will ultimately help design flourish in the years ahead.

Having learned from our past missteps during earlier parts of the twentieth century, this is the approach we have taken up at SAIC in the past
fifteen years or so. Ever since our “Design Initiative” was completed in 2002, we have developed and implemented a curriculum that brings our design programs into intimate engagement with our fine arts and other more traditional programs, and vice versa. The point of this interdisciplinary—some say transdisciplinary—exchange is, as a predecessor of mine put it, to provide “context.” Our design students receive an education that encourages them to be receptive to other points of view and teaches them to look at the world through many different lenses at once. Through initiatives such as our Art & Design Nexus courses, in which designers team-teach contemporary topics with different artists, our design students graduate from SAIC with expertise in their chosen area of design, but also with a more holistic perspective on how the world functions and how others understand and interact with it. This interdisciplinary emphasis, we believe, enables our design students and alumni to have an even larger and more lasting impact on the world with their work.

To cite an example, you may have also noticed these two large structures across the street, to the north and west of us, on your walk over here, the sculptures with the large faces projected onto them. This is Crown Fountain, and the story of how it became a fixture of Chicago life, visited by thousands if not millions of people per year, is quite pertinent here. So, in 2000, around the time the city was beginning to plan for what we call Millennium Park, Spanish artist Jaume Plensa won the commission to design a water feature for the park. His winning concept was for a socially relevant and highly interactive piece that would, among other features, be light intensive, signify the waterways of Chicago, and celebrate the ethnic diversity of Chicago. Multiple aspects of this project required outside help to execute, however, and so Jaume brought on board SAIC faculty members John Manning and Alan Labb for their expertise
at the juncture of art, design, and technology. Working with SAIC students and alumni, over the next few years John and Alan identified the specific video formats and designed the production techniques that would suit the specifications of Plensa’s 50-foot towers and their high-intensity LED screens. Moreover, a separate group of SAIC students worked with 70 different community groups around the city to identify the 2,000 individuals whose faces are projected onto the screens to this day. Crown Fountain is therefore not only a beautiful piece of public artwork and design and a representation of Chicago’s diversity, it is also a testament to how much can be achieved when different ways of approaching an issue or a problem come together.

Going forward, we here at the School of the Art Institute of Chicago hope to continue creating many more such opportunities for our design community to interact with their peers and experts from other disciplines and areas of thought, to “get them to the table,” so to speak. To our thinking, not only will this bridging of gaps be good for design itself—and for the arts and the sciences, too—but for the world as well. So, even as you meet with your colleagues from design education and the design professions over the next few days, my only advice to you is to also remember to continue reaching out to your friends and acquaintances in other fields and to continue to indulge your interests in other areas and disciplines. We are in an exciting time where we are learning new ways of knowing and making, and design is a key part of this.

Thank you once again for joining us in Chicago and at SAIC—I hope you have a wonderful and productive time together, and that your discussions strengthen design in our country!