
Art and Innovation: Claiming a New and Larger Role in the Modern Academy

Joseph Squier

There seems then to be no place where the cultures meet. . . . At the heart of thought and creation we are letting some of our best chances go by default. The clashing point of two subjects, two disciplines, two cultures—of two galaxies, so far as that goes—ought to produce creative chances. In the history of mental activity that has been where some of the breakthroughs come

—C. P. Snow, *The Two Cultures and the Scientific Revolution*

C. P. Snow was writing in the mid-1940s about the cultural divide between the arts and the sciences. He argued that the intersection point between art and science is a place rich with innovative and creative potential. Snow believed that despite numerous distinct differences, art and science also shared significant common ground.

Sixty years later much has changed. Or has it? It is true that recent technological developments, particularly in the area of emerging communication technologies, have captured the imagination of a growing number of younger artists. And undeniably there is a younger generation of artists and designers that increasingly finds the connection between art and science—or at least art and engineering—to be obvious, a point that no longer needs to be argued. Snow's views are still highly relevant today. In fact, if we substitute the word "academy" for the word "science" in Snow's writings, what we have is a surprisingly accurate depiction of the relationship between, and the status of, the arts in the modern academy.

Just as the pursuit of science was, at least for most of the twentieth century, viewed as the polar opposite of art, much of the activity in the modern academy is viewed as antithetical to artistic concerns and practices. It is

assumed that what we artists do is primarily a decorative nicety existing on the margins of serious intellectual inquiry. On my own campus this view is neatly encapsulated by a recent comment from a colleague in engineering whose rationale for supporting our performing arts center went something like this: “We should support the arts on campus because it helps us recruit and retain engineering faculty.”

So this is the task at hand for those of us who produce culture and also work within the academy: to articulate and model a form of artistic practice that situates itself increasingly at the center of modern academic culture. It is time, and increasingly within our reach, to lay claim to and redefine some of the terms that have currency on university campuses. I am thinking here of the terms *entrepreneurship*, *inquiry*, and *research*.

CREATIVITY AND INNOVATION AS A DOMAIN WITHIN THE ARTS

Creativity—“the ability to create meaningful new forms,” as Webster’s dictionary puts it—is now the decisive source of competitive advantage. . . . The deep and enduring changes of our age are not technological but social and cultural (Florida 2003, 15).

To do things differently, we need to perceive things differently. In discussing where we want to be, breakthrough ideas often come when people look at the world through a fresh lens (Thackara 2006, 6).

Creativity is not simply a way to make things better. Without creativity we are not able to make full use of information and experience that is already available to us and is locked up in old patterns, old concepts, old structures, and old preconceptions. Creativity is the soul of business. Without creativity you have a body with no soul; creativity provides the value that is the whole purpose of any business (de Bono 1973, 10).

As the quotes above attest, there is a growing body of literature arguing that creativity is the central force not just in cultural development but across multiple domains, including business and engineering. Creativity and innovation—skills deemed essential for the successful entrepreneur—are increasingly recognized as defining aspects of leadership.

In undergraduate education, institutions are beginning to recognize that it is no longer enough to focus on the development of sequential, literal, analytical skills. Instead, the next generation of leaders will be distinct, and prized, for their ability to think in ways that are metaphorical, aesthetic, contextual, and synthetic. These institutions are struggling to make teaching creativity, innovative thinking, and the ability to empathize part of their educational mission.

I would argue that artists, and by implication university art programs, should be proactive in positioning themselves as major stakeholders in any such enterprise. Ironically, the very proclivities that have historically marginalized us—our tendency to visualize, act out, and improvise—are now the very same traits that are so highly sought after. We have the opportunity to educate the rest of the world that these qualities are, indeed, not just bad habits, but in fact discreet skills and modes of inquiry.

This is not so much a bold vision of the future as it is another instance of “back to the future.” To return to Snow’s quotes about the opportunities for breakthroughs at the intersection of two cultures, an example from the previous century or two provides some precedent for the above arguments.

A HISTORICAL CASE STUDY: FROM SCIENCE TO CINEMA

The 20th century’s dominant art form was born out of the 19th century’s predilection for machinery, movement, optical illusion and public entertainment. Film’s prehistory is a labyrinth of discoveries, inventions, part-solutions and failures. Some were accidental, others coincidental, but few were devised with the end product of projected moving photographic images in mind. It was an evolutionary process in which each new device or discovery inspired a fresh wave of emulation and experimentation, sometimes for the purpose of entertainment, but often in the cause of science alone (Parkinson 1996, 72).

In 1872 Leland Stanford, the founder of Stanford University, hired photographer Eadweard Muybridge to determine whether a galloping horse raised all four hooves off the ground. As the story goes, this commission was prompted by a twenty-five-thousand-dollar bet. Muybridge proved this hypothesis by having Stanford’s trotter sequentially trip the shutters on several still cameras. The experiment initiated a collaboration between Stanford and Muybridge, with the goal of providing visual information about animal and human locomotion. News of the sensational photographs was first published in *Scientific American* in 1877. French physiologist Etienne Marey, inspired by Muybridge’s work, conducted similar experiments on skeletal and muscle movements. By 1888 the inventor and entrepreneur Thomas Edison, building on this work, decided to design machines for making and showing moving photographs.

The invention of moving photographic images was a lengthy process involving engineers, technologists, and entrepreneurs. But the new apparatus was understood primarily within the context of scientific research. Very few grasped the full implications and the larger cultural importance of this technology.

Cinema, as we understand the term today, came later. In 1895 the Lumiere brothers invented a portable hand-crank camera and opened a cinema in the basement room of a Paris café. Their films exhibit the first basic narrative patterns of a *cinematic language*. In the first years of the twentieth century, filmmakers worked to continue widening cinema's vocabulary.

How was the technology of the moving photographic image transformed from science to cinema? And who was behind this evolution? The answer is simple: it was artists. The key was the migration of moving photographic images from the scientific laboratory to the art studio. Artists appropriated a scientific tool—a piece of information technology—and pushed it to the limit, used it in unintended ways, and tried to break it. They experimented, improvised, and eventually saw the possibility for a new narrative medium. The point at which engineers forged collaborative, entrepreneurial relationships with artists signals the true birth of the twentieth century's most powerful cultural language—an industry that continues to be a huge economic and globalizing engine, and one of this country's most profitable exports.

There is no reason to assume that the evolution of cultural media is at an end. Cinema is likely not the last rung on the evolutionary ladder. And, indeed, by the late twentieth century it was clear that we were entering a post-cinema era. What will the cultural media of the later twenty-first century look like? History suggests that these nascent new media are probably in today's engineering research labs, and that once they become more widely available, other people will drive their evolution toward innovative, creative, entrepreneurial, and possibly even artistic uses.

Modern telecommunication networks give rise to new audiences and new collaborative possibilities. Virtual reality presents new performance spaces, unexplored interactive possibilities, and revolutionary narrative forms. Electronic multimedia blurs the division between image, text, and sound—and this is just the beginning. Artificial intelligence, robotics, and data mining will in the coming decades be taken up by artists and used in unexpected ways. As the computer apparatus becomes increasingly invisible but also approaches near ubiquity, technological advances in smart devices, wall displays, and wearable computers, to name just three examples, will also engender new forms of cultural expression.

Cultural media and practices in the twenty-first century will be radically different from what preceded them. Many of the most exciting and disruptive developments will likely emerge from the gaps between traditional disciplinary boundaries, and will be discovered by cultural entrepreneurs: aka, artists. Leading universities are beginning to understand that artists—their sensibilities and their skill sets—should be positioned increasingly at the center of both their educational and research missions.

CURRENT PRACTICE

In my own practice as an artist and educator at the University of Illinois, I can highlight two activities that bear direct relationship to the issues raised above. In the spring of 2004 I helped cofound *Ninth Letter*, an interdisciplinary collaboration between the School of Art+Design and the Department of English. Our intent was to position ourselves as a hybrid at the intersection of visual and literary cultures. We wanted to support traditional forms of writing but also reinvent and reinvigorate the definition of a literary journal. Additionally, our goal was to become the premier venue for new and nascent literary forms engendered by emergent technologies.

Toward these ends, *Ninth Letter* exists in two related but distinct forms. We publish a magazine issue twice a year and also maintain a website¹ that features new electronic content on a continual basis. Both incarnations of *Ninth Letter* have received significant critical attention, being praised in both literary and design circles. This recognition has come both in the form of multiple design awards and the selection of several stories first published in *Ninth Letter* for inclusion in prestigious anthologies. *Ninth Letter* was recently named “The Best New Literary Journal” by a unit of the Modern Language Association, and the website was a Best of the Web nominee at the South by Southwest Festival in 2005.

While the magazine features content reliant on the technology of ink, paper, and the printing press, ninthletter.com features content that utilizes new communication and media technologies. These works cannot, and should not, be reverse engineered to fit older formats. As younger artists continue to experiment and exploit new tools, we see ninthletter.com as a laboratory for an emerging new definition of “literary culture” in this century.

As an educator, I have developed a pilot course called “Art and Innovation: The Artist as Inventor, Entrepreneur, and Outlaw,” which combines a traditional “professional practices” course—résumé and grant writing, and so on—with case studies of individual artists and art projects that are entrepreneurial in the way that they define art making.² I am particularly interested in focusing on case studies of contemporary artists whose work challenges prevailing notions of typical art practice. My goal is to present students with alternatives to “off the shelf” visions of what artists do, and to create in students an expanded sense of what opportunities might exist for them as practicing professional artists and designers. Students research and develop nontraditional projects, and write proposals, résumés, grants, and marketing plans.

In selecting the case studies we review, I have attempted to present a wide variety of interests and methods. A brief sample of artists includes the following:

- Matthew Barney: Possibly the most well-known practicing American artist. Although he trained as a painter, Barney works outside of traditional categories—film and performance—and with very idiosyncratic materials. For instance, he is the creator of sculptures made from Vaseline and performances utilizing rock-climbing equipment.³
- Karim Rashid: An industrial designer and cultural provocateur whose products defy categorization: furniture, fashion, interiors, lighting, music, and visual art.⁴
- Jim Campbell: Trained as an electrical engineer but now more accurately described as an installation artist, Campbell is equal parts tinker, poet, and philosopher.⁵
- St. Louis City Museum: In this museum housed in an abandoned shoe factory in downtown St. Louis, everything is built from recycled industrial materials. It is a cross between a junkyard, art museum, playground, sculpture park, and community center.⁶
- Futurefarmers: This studio is by day a graphic design firm, by night a grassroots activist collective. Their work spans the spectrum from traditional book design to politically subversive electronic games.⁷

TODAY'S STUDENTS, TOMORROW'S ARTISTS AND INNOVATORS

Young artists are entering a world in which rapid change is the norm. Over the course of their careers the available skill sets, materials, and tools will be in constant flux. Artists with a proclivity for experimentation, evolution, and adaptation will have some of the best prospects for success.

It is useful, and important to remember that most textbook examples of significant modern art movements, or exemplary individuals, that students study today were initially met in their own time with surprise, suspicion, or outright derision. Many of the artists presented as role models for young students were outlaws for much, if not all, of their careers. In the nineteenth century, for example, the response to the first Impressionist paintings was outrage and ridicule. In the early twentieth century, cubism shocked and confused audiences. These works of art rejected the artistic norms of the day, putting in their place radical new strategies for representing the world. Later these works came to be celebrated both for their innovative genius and the way in which they powerfully evoked their unique historical moment.

Today this same spirit of invention and innovation—as well as controversy—continues in the work of contemporary artists who challenge common assumptions about what constitutes art, what materials it is created from, and where it is engaged. If we look at these artists, and their various methodolo-

gies, consistent traits begin to emerge. All thought “outside the envelope,” recognized new opportunities and unexplored possibilities, used materials in new ways to create objects/experiences of cultural value, and succeeded in “bringing their product to market”—that is, they sought out audiences and successfully promoted their work.

When interpreted narrowly as the production of commodities for sale at maximum profit, this definition of entrepreneurship does not encompass most cultural work. But if we view entrepreneurship more expansively as creative thinking, recognition of opportunity, marshaling of resources, passionate risk taking, producing value from raw potential, and marketing to an audience, then suddenly we have defined an activity that could just as easily be called artistic practice.

I believe that if art students can understand their education from this perspective, it will also increase their options for deploying their skills in their lives beyond their school years. After all, let’s not forget that only a fraction of students who earn a degree in the arts will actually build successful careers in traditional professional categories. This does not mean, however, that we are failing in our mission to train leaders. But it does suggest that we should help students develop expansive self-identities and flexible, entrepreneurial strategies for how they might contribute to the world.

The world is changing. The old twentieth-century model in the visual arts—for instance, the lone artist who gets picked up by the “right” gallery, strikes it rich, and becomes a cultural celebrity—no longer works. The museum and gallery system that rose to such prominence during the last century is entering a twilight phase. Audiences now encounter art over an electronic network, in a virtual space, or simply on the street. Artists are creating cultural experiences that defy, sometimes explode, traditional models, spaces, and vocabularies. Younger artists show a lessening interest in many of the forms and venues that have preceded them. Yet the educational system through which this new generation of artists passes carries on through sheer inertia, as if the world has not changed. Too often we point students toward the past, not the future.

Lastly, art faculty and art programs can now make the argument that what we represent and what we teach have currency across all disciplines. We are no longer on the margins of the academic enterprise but are increasingly at the center. Our modes of expression and inquiry are very closely aligned with the real world, a world that the academy is struggling to remain engaged with. As we move further into this century, the training of the next generation of leaders and the production of new knowledge will be increasingly tied to a vision that is holistic and values that are deeply humanistic. Art in the academy will be one of the pillars on which the leading universities will be built in the coming decades.

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NOTES

1. See www.ninthletter.com.
2. See <http://literalmeaning.net/artandinnovation>.
3. See www.pbs.org/art21/artists/barney/index.html.
4. See www.karimrashid.com.
5. See www.jimcampbell.tv.
6. See www.citymuseum.org.
7. See www.futurefarmers.com.