

Creative Laboratories in the University

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It should be obvious that the institutions we work in deform the work that we do; obvious but very hard to see in practice. Perhaps the most critically astute have the hardest time, simply because success always marks the blind spot.

Howard Singerman has discussed very well the lack of fit between university art departments and their framing institutions. As he points out, there is a long established tradition that claims that art cannot be taught, and many university art teachers have managed to assent to this and still build their departments. Ideally, the art department is a kind of free space that exists on sufferance within the academy. But the pressure of accountability, the rationalization of teaching results and methods, the professionalization of the art world and daily submission to bureaucratic forms all break down the tenured walls that protect that space. We become academics despite our best intentions, and academics become service workers despite all the beautiful rhetoric about the humanizing role of education. Naturally, everyone wants to succeed in their profession, but academic success is in some profound way antithetical to art, or at least what many of us went into art for.

Lately I have found it helpful to take a more openly and deliberately instrumental approach in my dealings with the university. If I can initiate a new way for an artist to function within the institution then perhaps I can maintain the creative space both I and my students need. Instead of meeting the demands of the system, of just trying to survive within the conditions that exist, maybe I can influence those conditions. Of course my new way is not absolutely new, it is only new within the context of the art department.

My employer, the University of Waterloo, is very strong in math, computers, science and engineering. The math department is routinely ranked as one of the top in North America, even in the world, in the same league as MIT for example. Computer science started as branch of math, but has gradually become even bigger than the entire math department. In recent years Microsoft has often hired more graduates from Waterloo than any other university. Oddly, the university does not understand the need for a strong art department.

My strategy is to learn from the scientists. I have opened a lab. Just as a scientist hires post-doctoral students to work in their labs, producing collaborative results and jointly authored papers, so I set the direction of the research, hire post graduate students, artists with an MFA, and set them free to develop their work. Naturally I don't direct my researchers as closely as a scientist would, because the goal of course is to produce independent artists. But that is not the only goal. I also want to develop my own work and my own ideas, and I want to learn from my colleagues. I want to be part of a larger aesthetic enterprise, not a collaboration exactly but some kind of larger project that would give my own work a space to grow into. Because I have a vision of

what I want I have been able to raise a lot of research money to do this, even from peer committees composed of scientists.

What follows is a description of the research program, taken in large part from the main grant application. In academic terms I am succeeding. I raise research funds, I am building a community, I have results in the form of exhibitions and publications by myself and my fellows; the higher levels of the university are happy, but a bit surprised that this is happening in Fine Arts. But when I read over my grant application the language itself tells me how much I've been bent by it all.

New Research in Abstraction

The goal of the research program is to renew the practice and discourse of abstraction. For the purpose of the research, abstraction can be defined as art that avoids representation or narrative, and instead works with fundamental properties of time and space.

Since the early eighties at least, the most conservative definition of painting has prevailed, and many painters see themselves not as innovators capable of affecting the course of art in general, but as defenders of an historic and specialized tradition. But the traditional craft of applying coloured material to a flat surface is only one of the possible technologies of painting. Paintings can fill space, or move through time. They may also shed their materiality to a greater or lesser degree.

The research will consist of creative work that will explore an expanded conception of painting, not limited to traditional craft. In practical terms it may mean work with a sculptural or installation aspect, or that uses new materials and technologies, but the research is not concerned with style or medium but with whether painting can still teach us fundamental truths about ourselves and the world. Young artists who have recently completed their education but are not yet established in their careers will be invited to take up a postgraduate fellowship at the University of Waterloo. They will set their own direction and work independently within the parameters of the research. Artists chosen for the fellowship will have a demonstrated familiarity with the history of abstract painting, and with the major theoretical debates in the field. I will continue my own work alongside the research fellows in a shared studio. In concert with myself and in dialogue with a regular series of visiting artists and scholars, they will constitute a research community dedicated to the investigation of shared topics and the pursuit of shared ambitions. The fellows will not be required to make any particular kind of art; they will be encouraged to produce original work within a shared discourse and to open new and original possibilities in both practice and theory.

The goals of classic modernism have been rendered definitively historical by over twenty years of post-modernist practice and criticism. The proposed research is not a return to outmoded positions or practices of the past. It will recapture the speculative

and forward looking spirit of abstraction without adopting any already canonized modernist approach.

During the late sixties and early seventies the visual arts went through an enormous convulsion. Painting was relegated to a secondary, even minor position, and new practices took centre stage in contemporary art. For centuries visual art meant twodimensional pictures that required a contemplative mode of perception. Today it is often an installation of elements that cannot be contemplated from a distance but asks the viewer to physically enter the space of the work. This new work breaks down the distinction between art and everyday experience, and contemplation gives way to the normal perceptions of daily life, or to more conceptual kinds of knowing, such as the acquisition of information or the analysis of abstract ideas.

But it has recently become clear that what seemed to be a break with painting was in many cases a development and extension of it. Painters asked themselves what minimum gesture would be needed to constitute a painting, and this investigation opened up fundamental questions of perception and knowledge. Those questions are now presented in the forms of sculpture, installation and conceptual art, but rarely, if ever, as painting.

The proposed research will investigate how the formal analysis of painting has become the analysis of fundamental properties of knowledge, perception and representation, and why the pursuit of those topics, for many artists, necessarily entails the abandonment of traditional painting. Further, the research will investigate how an experimental and open-ended practice concerned with the elements of time and space relates to scientific theories and discourses. This research will take the form of creative work produced by the artist/researchers.

Sculptural, installation and conceptual modes that reference painting are newly vital areas of activity in contemporary art, and there are many artists now working in the zone between sculpture and installation on the one hand, and traditional painting on the other. The research program aims to move beyond this already accepted area of practice by proposing that painting in the expanded field is an investigation into the limits of knowledge. It will have two aspects: one investigates two dimensional work, the other takes up three dimensional strategies.

When scientists conceptualize a universe of many dimensions, they necessarily have recourse to two dimensional diagrams and illustrations. That such diagrams are meant to point to a more complex reality that can't actually be represented is one parallel with the art of painting, which also seeks to describe a three dimensional universe on a flat surface. Abstraction is explicitly concerned with the conditions of such representation, and with the properties and limits of the plane. In this view, the celebrated flatness of classic modernism is both an acknowledgment of a fundamental feature of any picture, and an obstacle to painting's further development. In fact, we can never know that a picture is flat, only that it looks flat; flatness is just as much a matter of illusion as deep pictorial space. It is axiomatic to this proposal that flatness

and pictorial space can be perceived simultaneously, and one of its goals is to determine through experiment, namely through creative practice, how much information about space—about the positions and movements of objects—any plane can bear. This is a genuinely new development in painting because it breaks with the famously influential theory of flatness developed by Clement Greenberg without returning to older ideas about pictorial space. This is something that post-modernist painting, for all its rejection of Greenberg's influence, has not been able to do. It also brings art into proximity with discussions in theoretical physics.

Physicists have found that the amount of information inside a black hole, that is to say the number of particles and their positions and speeds, is not proportional to its volume, but to its surface area. This discovery, called the Bekenstein Bound, suggests that the surface of a black hole, the so-called "event horizon," is analogous to the picture plane, a surface that also carries limited information about the space behind it. It has led to a number of theories in which two dimensional surfaces play a central role. This means that the surface on which scientists work out their ideas, the flat piece of paper or chalkboard, is in an important way equivalent to the cosmic structures they try to analyze. Such unity of material and concept is a fundamental principle of abstract painting. This proposal marks the first time that these parallels between scientific thinking and art have been noticed. It is important because it does not put the artist in a secondary position to the scientist, as an illustrator of scientific ideas. The intention is not to raid the popular scientific literature for ideas to use in art, but to find a common conceptual ground between the two activities. As such, the research can take the relation between art and science to a new level of sophistication.

The flatness of classic modernist painting is an aspect of a movement toward literalness which reached one culmination in the sixties in minimalist sculpture. The current research is concerned with how painterly features of transparency, colour and illusion persist even in sculpture influenced by minimalism, and how attention to these properties can challenge existing dogmas about both painting and sculpture. Some of my own recent work explores ways of projecting illusionistic forms into real space, and so deals with these ideas.

It is a critical convention that the traditional functions of painting, such as portraiture and narrative, have been taken over by new media such as photography, film and video. Further, in the last two decades there has been intense research into the science and mechanics of perception with the goal of teaching computers how to see and render. It is as if the technologies invented in the Renaissance to serve painting—sciences of perspective and of lighting and shadows, anatomical research, theories of colour, studies of the geometry of complex shapes—have found their ultimate development in the new industries of photo-digitizing and computer animation. Today, artists with the manual skills of a Michelangelo can be found applying their talents in animation and comic books, but rarely in the realm of advanced contemporary art. Meanwhile, art has been utterly transformed by the developments of the sixties, and many artists are involved in an open-ended exploration of concrete experience. The proposed program is basic research, and is not directly concerned with

applications. It is not concerned with new media, digital media, or new technologies, but with the relationship between science and art on a conceptual level. Scientific theories are images of the universe; in a complementary way, abstract artists explore the conditions that enable and limit the formation of any kind of image. Precisely because it is not directly concerned with existing applications, this program of research has the potential to mark the beginning of a new cycle in the relationship between technology and art. It is the furthest explorations of artists that will open up the future of technology, not narrow, application based projects. Further, art is not a “soft” humanistic counterbalance to a hard technological world, but an open-ended field of research with the ability to create future needs. The applications that will meet those needs are yet to be imagined.

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So there it is. I can't even begin to express my ambivalence. The grayness of academic language, the constant need to build in the answers to the anticipated obvious questions, the forced self submission—I made the plan, I did the paperwork, I added up the money, I channeled the language, I pushed myself into the mold so that my fellows could be free.

But now that's been done and the program is running. And in practice it's really a lot of fun, in fact it is what the university is supposed to be. I've surrounded myself with very smart young people, and I can bring the best visitors to work with them and myself. I don't push my own ideas but I can see in the work produced that on some subterranean level we all influence each other. Now, if only I had the time to enjoy it.