

Introduction

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In 1946, weighing 28 tons, occupying a large room and requiring 170,000 watts of power to run, the first computer was developed. The first personal computers, sold in kits, were introduced in 1975 and the first Apple desktop was released in 1977. Depending on which date you choose, we are somewhere in the fifth to eighth decade of the digital era. What has been referred to as a digital revolution has been, in reality, an evolution. While a discovery or invention may be heralded as groundbreaking or disruptive, in reality it takes time for new ideas and ways of making to take hold and gain acceptance. It takes even longer for individual designers and industry to accept, master, and fully integrate these tools and ideas in practice and manufacturing. This is true across many industries, including jewelry design. Humans have been making jewelry for thousands of years. As they've mastered new technologies the designs and aesthetics have changed as materials and tools have changed. This evolution has continued with digital techniques where new fabrication processes are impacting how we make, but also what we are capable of producing.

But just as photography emphatically did not replace painting as painters once feared, digital design will not replace handcraftsmanship. But is digital design just another tool—a fabrication technique? A new material or method, a product differentiator to be exploited in advertising? Or is it such a departure that it can reset the entire industry?

Our thirty-seven speakers from around the world gathered at FIT in May 2018. Each is an expert in the field and brings, with that expertise, a unique point of view. However, each has had to grapple with the changing reality of the field of jewelry design. In this book you will find these designers and academics applying their creative and critical minds to a number of issues, among them:

Annika Pettersson, a Swedish jewelry designer, investigates how the digital “noise/tool mark” to copying and printing digital models can effect design—and can be deliberately exploited in creating new aesthetic statements.

Lynne Heller and Dorie Millerson, both assistant professors at the Ontario College of Art and Design, in their research “Craft, Pedagogy and the Digital Challenge: A Jewelry Perspective” point out a “generational shift” in the learning orientation of their students, the first generation of “digital natives,” as they grapple with learning and applying more traditional skills.

In her paper, Alba Cappellieri, Full Professor at the Fashion Design program at the Politecnico di Milano, suggests a classification of the different types of interaction systems enabled by jewelry as a medium: the static linear system (analog jewelry), the dynamic linear system (relational jewelry), the close circuit dynamic system (jewelry made with smart and reactive materials), and the open circuit dynamic system (wearable technologies).

Jeff Deegan, along with Jane, his wife and partner, founded Jeff Deegan Designs, takes a more critical approach in his paper referring to the democratization of design that has occurred as a result of digital revolution. For the first time in memory anyone, whether or not they possess bench skills, can, by sending a file, generate a 3D jewelry model. Deegan asks, “What is the soul at the core of the piece?” He argues that most successful and passionate designs will continue to require attention to technical detail and be in accord with real world methods necessary to manufacture.

The issue of making or wearing designs that digital techniques make possible, or the issues of economy and the speed at which the designs can be developed and marketed, was argued at the event. But for me and many participants as educators, bigger questions emerged:

- How do we teach digital techniques?
- How can we continue to afford to buy the ever-more-sophisticated machines our students and faculty need to learn it?
- How can we compensate teachers for the time necessary to become enthusiastically proficient in these new technologies?
- Should we continue to teach digital design in its own silo? Or should digital design be part of everything an institution such as FIT teaches?
- And what of industry? An industry that is shared by organizations and artisans making pieces of jewelry by the millions and pieces as unique one-off creations?

Different students and different faculty members will bring different talents and different priorities to institutions such as ours and to eventual employers.

I do not wish to guide readers one way or another, but rather to stimulate readers into considering the full range of ideas presented here. To an overwhelming degree the participants in this symposium warmly embrace new digital software, prototyping equipment, and production equipment. For many, adapting to and integrating technology in their practices has been a decades-long process. The fact that for each designer that adaptation has taken on a different and idiosyncratic form demonstrates that a personal vision, and the artist's hand, is still at the heart of jewelry design. Creative individuals willfully select from all of the tools available to them to make and solve problems.

This brings me back to my role as Dean of FIT's School of Art & Design and as a lifelong educator. I, my colleagues, and my peers have to figure out how to teach this stuff and to find and fairly allocate the resources—human, institutional, technical, and monetary—to continue moving into and expanding this exciting field. We cannot ignore it. We cannot even remain neutral.

I think you will agree after reading these thoughtful and stimulating papers that we most wholeheartedly embrace these new creative gifts and meld them into the canon of established design norms already in our curriculum, continuing to expand humanity's range as we continue to evolve.

Just as we learned to melt and shape materials and to bend wire, we will learn and embrace digital techniques.