

# REPACKING DESIGN THEORY IN GREEN

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## ABSTRACT

Rethinking “design thinking” as a curricular exercise takes on extra cache as the Ontario College of Art & Design rebrands and repositions itself within the landscape of art and design education. Design, as not just a culturally valuable endeavor, but potentially economically viable endeavor, becomes more of a way of thinking than a profession or series of professions within this new definition. How does this effect design education? How does this change how design theory needs to be taught? What are some of the positive repercussions of reframing design theory? Sustainability becomes a major part of this transformation as global economies and conventional modes and forms of production become obsolete and ineffective following the economic meltdown. How can we get beyond the hyperbole and make design relevant and how will this potentially make sustainability more substantial for all of us? An implicit thesis of this paper is to include design, as taught by art, architecture and design schools in engineering education in an embedded, but substantial way, perhaps through teaching design theory in more disciplines conveniently disguised as sustainability theory.

*Keywords: Design thinking, sustainability, theory*

## 1 INTRODUCTION

The Ontario College of Art & Design has been in existence for over 130 years and is not only Canada’s oldest and largest art and design university, but has also trained many of Canada’s most significant artists and designers and served as the place where many of Canada’s foremost artists and designers have taught. OCA’s transformation to OCAD and further recent transformation from a diploma granting arts school to a degree granting university with graduate programs, new initiatives, new leaders, and new faculty have created a rift, a crisis, and new directives calling for a rapid rethinking of how art and design education should be taught in the age of the “university of the imagination.”[1] Much of this rethinking is visible physically in the form of a challenging new building by Will Alsop, a dynamic entrepreneurial president, Sarah Diamond, and a growing faculty of liberal studies.

Teaching design methodologies as a non-studio based lecture course is a bit like going snow skiing at a mall in Dubai. It either requires a completely fictionalized context built on hyperbole or a great leap of imagination banking on new realities that have no precedents. Can theory be taught as practice? An essential premise teaching design thinking is an acknowledgement of change, an acceptance of eroding professional boundaries and a belief that theory can be taught within the context of critical creative practice as an alternative to purely skill-based methodologies.

## 2 HISTORICAL CONTEXTS

For much of the 20<sup>th</sup> century, Bauhaus functionalist theory prescribed the only methodologies taught to designers. These principles fed a global machine of production and consumption that made objects and places often without consideration of human nature and culture, the specificities of place, and the use of resources and environmental impact. The world has changed. Design is more than just the employment of materials and forms and the harnessing of production methods for personal recognition, economic gain, and market domination. Doing more with less, replacing objects with experiences, and design following user analysis rather than formalist aesthetics are all evidence of a rethinking of design methodologies in the 21<sup>st</sup> century.

Design practice today is also more interdisciplinary and not confined to particular areas of professional knowledge. The demand now is for a generalized knowledge about parallel design practices. In addition, designers need to be more informed on a range of issues—social, cultural, economic, psychological, and ecological—to be effective. The theories, philosophies, and approaches presented in this course describe and define an essentially pluralistic and self-consciously postmodern design methodology, which is contextualized and contrasted to the earlier production-based design methodology of modernism.

An awareness of contemporary issues as they relate to a broad spectrum of design fields, as well as an understanding of historical and current thought about the nature, practice, implications and effects of designing is much needed. Contemporary design methodologies as they pertain to the design of everyday objects now are much more inclusive and address culture, craft, history, tactility, ethnography, and experience based design prototyping. These new ideas are ironically, more often than not, old ideas repackaged and renamed to reclaim the human experience and material pleasure that objects once embodied. I ask my students to re-engage their relationship with history and culture through the apparatus of technological transformation and design innovation through an analysis of the design processes that have created the objects that inhabit our world and our memories.

Modernity assigned visuality as the primary sense that design had to please. This preference for the visual above and beyond all else resulted in decades of hollowed out shells of designed environments and objects that fulfilled little in terms of experience, tactility and thermal delight. A re-emergence of craft, which appears to us as the antidote to Le Corbusier's realization that "Mechanization has overwhelmed everything," [2] is bringing back tactile pleasures and human experience. After formalism and after modernism critical practice attempted to "present questions and challenges about the way the world is, the ways we perceive it, and the ways in which we act in it. These questions or challenges (were) presented in general terms or with respect to particular social detail or situation. The aspiration can be described as implication is that a world with different social arrangements, behaviors, or both is inherently critical, because the inescapable possible." [3] How can design can be critical and contemporary simultaneously?

Discussing the dated concepts in Peter Rowe's *Design Thinking* is where we begin to discuss how not to be a designer in my course and in my discussions with students. Rowe opens his chapter, "Procedural Aspects of Design Thinking," by reminding us that "Beneath the surface irregularities of designers' modes of operation, common information-handling procedures can be identified." Rowe further goes on to inform us how design as a systematic problem solving activity can be defined and therefore taught. The "prescriptive orientation of the design methodologists" laid out in the text are counter-intuitive to all of the grounded design methodologies being practiced today. [4] Revising traditional design studio-based education is not a new idea. Among the most resonant calls to wake up design education in America was the highly influential Mitgang Boyer Report published in 1996. The report precisely analyzed the performance of architectural education with a biased look at how professionals were being trained to practice. The report questioned the role and the culture of the design studio as the primary vehicle for delivering design education and other sacred remnants of late modernist Bauhaus teaching methodologies. [5]

Texts used in my current course, Design Thinking, range from those instructing about the increased moral implications of design's potential roles in creating amore sustainable world like *Ecological Design* by Sim van der Ryn and Stuart Cowan to *Beyond Green: Toward a Sustainable Art*, an exhibition catalog from the University of Chicago gallery exhibit that provides compelling case studies for how design can be reconceived though production and consumption of newly defined artifacts.

This course is structured around sustainable design as theory by organizing itself critically by subjects such as Culture, Technology and History; Globalization, Green Consumerism and Industrial Ecology; Traditions, Methods and Materials; Big Buildings, Urban Planning and Communities; Designing for Industry; Eroding Professional Boundaries; and lastly Greening the Campus.

### 3 CONTEMPORIZING DESIGN THEORY

An awareness of contemporary issues as they relate to a broad spectrum of design fields, as well as an understanding of historical and current thought about the nature, practice, implications and effects of design is much needed. Contemporary design methodologies as they pertain to the design of everyday objects now are much more inclusive and address culture, craft, history, tactility, ethnography, and experience based design prototyping. These new ideas are ironically, more often than not, old ideas repackaged and renamed to reclaim the human experience and material pleasure that objects once embodied. The historical potential for this kind of re-invention also has bearing on how we see ourselves evolving and what we surmise that we have lost forever from the world that once existed.[6]

Where and how did the areas that I teach in (industrial design, environmental design and material art and design) participate in bringing sustainable thinking to students? Why were these fields immune from these issues? Was not design education in charge of helping forge the creative classes that would transform our cities, our economy and our material world? [7] The syllabus for my OCAD “Design Thinking” course states, “This course will examine the most pressing theoretical issues for designers today, including how the study of design theory can promote a critically engaged practice...Our starting point will be an investigation and critique of existing models of design methodologies including the tendency to compartmentalize design thinking into a rigid process-based model that lacks relevance to the contemporary demands placed on designers to be more than production mechanisms. The emphasis on design thinking as a trajectory in this course will be based in discovering new and relevant way of thinking and practicing design by looking at a range of design disciplines ranging from architecture and industrial design to contemporary craft practices. Throughout the term, we will emphasize design’s evolving role in contemporary culture.”[8]

Art, design and architecture have been historically placed on campuses as non-essential embellishments that have added richness to the cultural education and tradition that the university could offer to its students, but did not perform the work of the other more respectable majors like the hard sciences. While arts programs offered more technical and vocational training than the traditional Liberal Arts they did not provide the core general education one needed to move on to be a great doctor, lawyer or politician. Architects and industrial designers, usually the most confident and arrogant artists on campus since they will earn actual paychecks and instinctively sense employers desiring them throughout their studies, can defend their future practices as being the future producers of public art as opposed to the fine arts. Utility and function make their art necessary and therefore valid for commerce and therefore for society. To return to the Mitgang Boyer report, the authors state in their chapter titled, “Service to the Nation,” “Perhaps never in history have the talents, skills, the broad vision and the ideals of the architecture profession been more urgently needed.”[5]

A precise theory of sustainability as it is defined in terms of a design theory course attached to practice-based design studios is difficult to clarify in a single statement. Sustainable design as theory is presented as a shift in values and concerns that need to be incorporated into design decision making holistically and before projects are even conceived. If modernity was concerned about defining new problems for a new industrial age, sustainable design theory is about defining new methodologies and discarding traditional outcomes.

### 4 REVISIONISM

Design has historically been extremely valuable in times of financial and emotional crises as a form of healing, recovery and visualizing and enacting progress. Urban regeneration projects to save blighted neighborhoods, the heroic dam projects built for the Tennessee Valley Authority and other New Deal public infrastructure projects in the US and the bold murals of Diego Rivera immediately come to mind, but there are many others. “Design tends to thrive in hard times. In the scarcity of the 1940’s, Charles and Ray Eames produced furniture and other products of enduring appeal from cheap materials like plastic, resin and plywood, and Italian design flowered in the aftermath of World War II.”[9] Design as a psychological practice is a way of rethinking about all that we know in a creative, innovative and liberating way.

The Ernest L. Boyer and Lee D. Mitgang report, *Building Community, a New Future for Architecture Education and Practice*, which commented on the state of architectural academia and its shortcomings published in 1996 laid out a litany of antiquated trends that needed to be corrected quickly to save the profession from obsolescence and indignity. Mitgang and Boyer provided hard statistics such as in 1994-5 5.7% of architecture faculty were African American and 30.6 % were female. The report further showed how these numbers did not even remotely match other fields and disciplines. Further abysmal statistics such as only 3.8% of all graduates in architecture were African-American showed that architecture remained a mostly white, male middle class endeavor, just as it had forty years ago.[5] Change was not occurring and those in charge of designing curricula expressed a belief that these things would work themselves out over time naturally. The world was becoming more diverse, global and reliant on collaboration but the academy was not teaching this Boyer and Mitgang discovered. Architecture was not a social art according to the report. This same oblivion is what worries me today.

My point is that artists, designers and architects themselves have not viewed themselves as being culturally efficacious, and now that society is calling for design to be the key component to envision our new world we need to jettison our old misconceptions and stereotypes on our campuses first and foremost about what it is we artists and designers do. The art, design and architecture programs that intend to set the pace and make themselves efficacious are too often still producing waiters, nannies and house sitters for lack of having other alternatives. Stardom is possible, but rare.

## 5 GREENING THE NEW VISION OF DESIGN THINKING

In Ann Rappaport and Sarah Hammond Creighton's book, *Degrees that Matter, Climate Change and the University*, the authors lay out a survival strategy for the American College Campus using their own campus, Tufts, as an example. Rappaport and Creighton stress the facilities, emissions and waste aspects of massive institutions as places to monitor and cut, but also touch on more important concepts like setting clear institutional goals and stressing personal responsibility as well as creative ideas like making buildings living examples on campus for how to behave. [10] David Orr's groundbreaking curricula, programs and even facilities on his campus at Oberlin College remains the very best example of teaching by example when it comes to sustainable education. Needless to say he writes very intelligently about how design will be a part of the new vision for a sustainable world.[11]

Within this new reality of conscious consumption and fear of climate change the role of art and design has gotten richer and significantly more important. My own university, the Ontario College of Art & Design, under the vision of Sara Diamond and others is forging a new vision of what OCAD can become in the "Age of Imagination." [1] OCAD has a newly developed centralized office for sustainability, participates in a numerous community based endeavors to green Toronto, runs core courses that require students to design and work within their community, offers a minor in sustainable design with others being drafted, as well as tries to practice what it preaches institutionally by eliminating bottled water, sponsoring creative recycling programs of all types and encouraging our students to design and practice sustainably in all kinds of ways that range from eliminating dangerous toxins in some labs to making projects that encourage social interactions. We collaborate, motivate and critique our own actions. Being a role model is the job of all universities.

We are, however, actually doing very little in truth. Our bold new building is poorly insulated, made from wasteful and shoddy materials, and the cobbled HVAC system that heats and cools OCAD is a case study in inefficient outdated heating and cooling strategies. Sweltering print labs and a thermally sealed addition without operable windows add up to an unhealthy environmental disaster. Sustainable initiatives abound, but we did seal up and destroy our interior courtyard that provided natural light and ventilation as well as social spaces for our students and faculty by our own free will.

How can "design thinking" save the day? Current thinking requires major paradigm shifts to effect real change. We are greenwashing ourselves, while placating our consciences with tiny acts and good deeds. As we watch General Motors tank once again we all understand how GM was the victim of itself in terms of not diversifying its product line, over-compensating executives and simply not

changing how it did business, but do we really understand about how bad and even worse thoughtless design played its own massive part in the disaster which is still unfolding? The framework of sustainability as design theory can provide an umbrella that describes an increased level of social responsibility, environmental stewardship and a revised attitude towards material culture and modes of production and consumption.

SAAB's, while not great design necessarily, were great design in that they resulted from taking the manufacturing facilities for fighter planes and retooling them for other needs out of necessity. "A Saab had to be the right size, type, construction and price - a small, affordable car." [12] That is good design. Lego factories are strategically placed near distribution points in Europe and utilize highly mechanized production methods to reduce labor and transportation costs, and while ABS plastic is not sustainable making a toy whose connecting joints are not meant to fail for seven years minimum is. That is good design. That is what design thinking can produce.

Strategies and conceptual models for intersecting sustainability, education and engineering with design disciplines abound, including abundant possibilities for interdisciplinarity, funded research and positive upheavals of traditions and new opportunities. This is the age of imagination that OCAD's mission describes. It may be necessary for companies like GM to stop making cars to survive and perhaps we should stop making art but use our talents elsewhere? What if the solution to the US real estate market meltdown was written as a design brief? The answers for others in looking at art and design education and practice may lie in organizing everything that we do in a studio format. The studio is tense, competitive and collaborative. It functions on a spirit of competition that only works if everybody is working at the same level. It is not based in teamwork or hierarchy, nor is it based in democracy. It is fluid and flexible. Abstract concepts need to be visualized and debated to synthesize into a clear design problem that merits the invention of a process to explore the problem, not necessarily solve the problem. The process may be reinvented anew or may be done in collaborative teams of experts solving tiny aspects of the problem or simply proposing many new problems rather than looking for solutions. Each problem is unique and unfolds ad infinitum as it is explored. The process is based in plasticity.

"The word 'university' is closely related through its Latin root, to 'universe.' And the university is a universe; a vast, constantly expanding, living thing; a place that stores learning but also creates it, and containing infinitely more knowledge and opportunity than even the most diligent student can master." [13] This quote comes from Maclean's 2008 *University Rankings* issue. Both dreaded and feared, we all do read these and do take them personally when our institutions are praised, chastised or overlooked. The subtext of the categories that McLean's uses draw heavily from NSSE (National Survey of Student Engagement) statistics. When you see how the rankings are categorized according to best professors, best chow and other categories as well as the more telling categories such as "Student Faculty Interaction" and "Level of Academic Challenge" you realize that reputation, tradition and other factors have been replaced by the student as client. McLean's also proudly informs its readers that many universities wanted to keep the NSSE reports confidential since what was revealed was not what they wanted to be revealed. [14]

## 6 PROGRESS AND METRICS

Like all reports the NSSE reports can be used strategically by institutions. We, at OCAD, are disappointed to see that we rank near the bottom of "Supportive Campus Environment" but seem to be excelling at "Student-Faculty Interaction" since we pride ourselves in our intimate studio-based learning environments. [14] The studio seems to be working, but our lack of campus social interaction space seems to be a problem, but we already know that. "The NSSE survey is particularly valuable, as it reveals objective assessments of so-called correlates of educational quality, such as degree of faculty-students contact." [14] This studio model of education is at the core of everything that design educators hold sacred and what makes us unique. This form of creative interactive classroom is what the engineering school and business schools most want to borrow from us. It may not be what we have to offer but how we offer it. It may be the process not the product, which again is what every design educator when asked what they are teaching in their studios will explain that they are teaching. They

are all teaching the process of design and after having numerous studio experiences each student will fashion their own process borrowing the good and hopefully not bad habits from each of their mentors.

Indeed, sustainability, from a university perspective is the ideological vehicle to encourage and create student engagement, makes students care about their physical campus and also give students a means of interacting with administration and faculty. I would argue that it is not just working what designers that will help revise the world, but working like designers will be the answer.

Recycling and not using coffee cups will not save the day, but figuring out how to get an entire business school into our studios with our students may. Treating our wasteful buildings as raw resources to make them generate their own energy income and provide greenhouses and gardens, may work as well. We will see. My conclusion is to model educational delivery of art and design educational models and to treat sustainability as a campus-wide problem that needs a well written and explored creative brief to rephrase sustainability as the core problem of the upcoming decades. Empower design and designers to participate in the forging of a new world where design does not just provide fodder for consumption, but provides an opening of vision to visualize and actualize “change” by placing design at the center of the process to create a new vision for restructuring how we live, consume and participate in a global culture.[15]

## 7 CONCLUSION

I was quoted in a small local magazine as stating that I did not care about sustainability, but merely wanted a contemporary curriculum at my art and design school. In retrospect I believe this more and more. Sustainability may provide the linguistic trope, obvious metaphor or even poetic thematic glue that is able to redefine design’s role in the post communication age and help us redefine our relationship with our belongings and our material culture. I purposefully abuse this opening to redefine design theory in my courses. In the end sustainable design as theory becomes an opening into making environmental science, sociology and philosophy credible again void of a solid political crises, revolution or technological innovation that changes our relationship to our histories.

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- [14] *Macleans* November 24<sup>th</sup> 2008.

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