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Without Boundaries Design & Environmental Stewardship

ABSTRACT

To whom does design address itself?

*To the greatest number, to the specialist of an enlightened matter,
to a privileged social class?*

Design addresses itself to the need.

—Charles Eames

In a moment of increasing global attention to fragile ecosystems, sustainable techniques, and ethical practices, the time has come for the design professions to rethink. For problems that respect no disciplinary or professional boundaries, the time has come for designers to collaborate. For unprecedented new challenges, the time has come for versatile designer-tacticians. For complex problems, the time has come for designers capable of operating in the most complex technical, cultural, and political arenas. In short, the time has come for designers to address themselves ‘to the need.’

We—two design faculty in a school of art—are committed as educators to foster new cross-disciplinary models of design collaboration. Dropping our titles, “interior” and “graphic”, we work to create a classroom of innovative designers committed by talent, temperament, passion, and necessity to engaging the vital problems of our day.

These problems are large and numerous, but we are not discouraged. By fostering collaborations with those around us—experts, technicians, publics, and activists—and by listening, talking, and learning, the challenges of the world become recast as spaces of operation and engagement.

In 2009, the project that we tackled was sustainable local landscapes. Three forgotten and problematic corners of our campus were in need of re-conceptualization. There was an interest in creating student-designed demonstration-projects to offer new models for what the campus might become. The stage of collaboration was large, everyone from groundskeepers to environmental scientists, student activists, and the University president. Internationally renowned public artist Michael Singer offered insight and critique. The culmination would be a University wide exhibition offering new visions for sustainable campus landscapes.

The pragmatic structures were just as complex: 22 graphic and interior design students, 12 communication students, 4 environmental science students, 5 faculty representing four disciplines, 2 University-wide institutes, 5 course numbers, and 15 short weeks.

Our working method was introspective and opportunistic. To deepen our environmental thinking, we read essays by William Cronon (geographer), Thomas Berry (historian), Glenn Murcutt (architect), and Peter Reed (curator). When an opportunity arose, we designed environmental signage for campus storm-water infrastructure (self-identified by environmental planners as the most important sustainability initiative on campus).

Upon the conclusion of the studio, student teams exhibited seven completed design solutions. Their work spanned the professional disciplines, and included site-design, sustainable systems, outdoor pavilions and furniture, educational signage, plant materials, and lighting. One project has been selected for further development and implementation on our campus.

This paper will provide insight into a design practice and education that allowed students to break boundaries that labels imply. We hope that the example of our studio might serve as a challenge, and perhaps a model, for a pedagogy of social engagement and cross-disciplinary design thinking.

FULL PAPER

In a 1969 interview conducted as part of the exhibition “What is Design” at the Museum of Decorative Arts in Paris, American furniture designer, filmmaker, architect, toy designer, exhibition designer and educator Charles Eames was asked:

*To whom does design address itself?
To the greatest number, to the specialist of an enlightened matter,
to a privileged social class?*

He answered:

Design addresses itself to the need.

Today, two generations later, Eames’ answer seems more relevant than ever. In this moment of increasing global attention to fragile ecosystems, and within a profession hungry for both more sustainable techniques and new models of ethical practice, the “needs” seem overwhelmingly urgent and complex. The challenges of our moment do not respect our professional boundaries. They do not present themselves to us one at a time, and, more often than not, they are messy & political. For certain they are as technically complex as anything we have faced.

To “address” oneself to these “needs,” the designer must become a nimble tactician. We play on a terrain imposed and organized by external forces.¹ Appropriating the words of the mid-20th century philosopher Isaiah Berlin, the designer-tactician must become “the fox who knows many things.”²

The designer-tactician forms new kinds of alliances. Externally, collaborations must be cultivated with technical experts, activists, and public bodies. Within our studios, cross-disciplinary work, a modernist imperative at least as old as the Bauhaus, remains a pressing necessity. At every point—for the designer driven by the need—design techniques are understood not as goals in and of themselves, but rather as means to an end. As Eames reminds us, “Design is a mode of action.”

A Pedagogy of Social Engagement

¹ De Certeau, Michel. *The Practice of Everyday Life*, trans. Steven Rendall, 36-38, University of California Press, Berkeley, 1984.

² Berlin, Sir Isaiah. *The Hedgehog and the Fox*, New York, Simon & Schuster, 1953.

As design faculty in a school of art, we are committed as educators to fostering this interconnected model of design action. We aspire to train tomorrow's future design-tacticians.

Regrettably, we have observed that, too often, our students experience design education as little more than the isolated study of technique. They move from class to class, working off of tightly scripted briefs to master predetermined skills (e.g.- form-making, design process, professional practice, presentation, etc.) Most of the time the projects on which they work are handed directly to them, some with the grading rubric stamped right on top. The rules are tight and the permissible outcomes pre-delineated. The students work diligently (or not) and present design solutions to their classmates in the classroom. The discourse is hermetic.

While of course recognizing the importance of professional techniques, far too often this conventional form of pedagogy perpetuates confusion between means and ends. Techniques are but the means of design. They are necessary but not sufficient.

To put it another way, if we imagine design practice as a romantic cross-country road trip, design techniques are the pistons and gears and axles. Of course they must work competently and smartly; the uncomfortable chairs in the mechanic's waiting room are rarely the site of great adventure. But it is the journey itself—in all of its wonder, discovery, optimism, and transformation—that makes the automobile worth owning. The journey addresses itself “to the need.”

In the fall of 2009, we tried to do better. We developed a design studio class structured not by the mastery of skills, but motivated instead by external needs. In our case, it was a rising community and campus-wide concern for environmental design and sustainable stewardship. By fostering collaborations with those outside of the conventional design ‘comfort zone’—scientific experts, technicians, diverse publics, and activists—and by listening, talking, and learning, we hoped to recast the challenges of our surroundings as spaces of operation and engagement. We hoped that by dropping our titles, ‘interior’ & ‘graphic’, and responding directly to the questions at hand, we might inspire innovative young student designers to be committed by talent, temperament, passion, and necessity to engaging the concrete problems of our day.

Our goals were broad and (naively?) ambitious:

- To develop, and then enact, a design pedagogy of social engagement.
- To learn more about the difficult questions of sustainable design
- To allow ourselves the flexibility to think and act like designers outside of our professional titles
- To challenge our students to tackle the most complex problems they could conceive of
- To develop visionary and transformative ideas for new campus landscapes.

In order to realize these goals, we committed ourselves to creating a studio project that was loose in its structure and driven by ‘needs’. We were invited to work collaboratively with two institutes at our University, the Institute for Visual Studies and the Institute for Stewardship of the Natural World, on a demonstration project for a sustainable landscape for our campus. The course also coincided with another team-taught course, “Environmental Rhetoric,” that was developing a marketing campaign for sustainable practices for the university. Our environmental design course would study models and “best-

practices” for sustainably designed landscapes within the built environment, with the goal of then designing our own local examples.

GRPH 392/INDE 300/INDE 400 Environmental Design

Before the class started, we worked to define the project’s areas of ‘need’ by opening dialogues with campus engineers, grounds-keepers, and environmental science faculty. We wanted to learn to see our campus afresh through their eyes and with their constraints. Working collaboratively with this group, we identified three overlooked sites on the campus. Each had significant environmental ‘issues’ and none had been addressed by the existing campus master plans. There were clear needs.

The first day of class was interesting (to say the least). The students were evenly split between interior design and graphic design majors. They looked at us as if we were mad scientists, proposing to use them as guinea pigs in an experiment. Of course, in a way, we were.

We explained that this was not going to be an ordinary design studio. If they were looking for a safe and predictable graphic or interior design course, this wouldn’t be it. We explained that they would be called upon to balance existing skills and knowledge with new concepts and problems while working in a team environment. The phrase “like a graduate-level class” was used. Although several students dropped the class, the ones who remained were enthusiastic and ambitious.

In total, we had 23 students and less than 15-weeks in which to work.

To encourage the students to focus broadly on the challenges before them, we solicited as many outside voices and perspectives as we could. The class talked with storm-water experts, gardeners, engineering faculty, neighborhood community groups, other students, and campus facilities staff. The environmental artist Michael Singer visited the classroom twice to direct and critique student work

We organized the course into three components:

1. Warm-up exercise
2. Main design project: Sustainable Landscapes at JMU
3. Exhibition and presentation to the community (including the University President)

To enrich the ideas and conversations of the studio, and to deepen our visual precedents, we devoted much of the first few weeks to seminar readings and project presentations. We read, among others, Thomas Berry, *Art in the Ecozoic Era*³; Cynthia Davidson’s interview with Glenn Murcutt, *Raised to Observe*⁴; and William Cronon, *The Trouble with Wilderness; or Getting Back to the Wrong Nature*.⁵ We looked at case studies collected in three texts: *Signage and Wayfinding Design* (2007), *Groundswell: Constructing the Contemporary Landscape* (2005), and *Tactile: High Touch Visuals* (2007).

³ *Art Journal*, v.51 no.2 (1992): 46-48.

⁴ Davidson, Cynthia. *Raised to Observe: Glen Murcutt*. *LOG8*, 2006, 31-40.

⁵ Cronon, William, ed., *Uncommon Ground: Rethinking the Human Place in Nature*, New York: W. W. Norton & Co., 1995, 69-90.

1. The Warm-ups

Recognizing that our students were unfamiliar with each other, and with the cross-disciplinary working model we hoped to use, we began the course with a three-week warm-up exercise. We approached campus environmental scientists and asked them, “What is the largest sustainability accomplishment on campus?” They replied, “Storm-water mitigation.” That was certainly interesting news to us, as we had never heard that, nor presumably had the rest of the community.

There was an obvious disconnect between the University’s most consequential sustainability initiative and public awareness. So for this small project, the ‘need’ was glaringly obvious—help publicize and celebrate the storm-water accomplishments. We identified three modes that our students might use: moveable signage, architectural surfaces, and site-specific constructions. We also randomly assigned the students into groups.

Each group was asked to investigate one of the ways that the University was working to mitigate storm-water runoff, including: rain gardens, sand filters, drop inlets, green roofs, retention ponds, and bog gardens. They were then asked to share and celebrate those accomplishments with the University community. The results of that work can be viewed at www.jmu.edu/ivs/envppt.html.

2. Sustainable Landscapes at JMU

Following completion of the warm-up storm-water projects, the studio turned its attentions to the main work of the semester—the design of sustainable campus landscapes. Three sites were identified as ‘needs’—a vacant lot owned in a nearby neighborhood, a side-entrance/courtyard to a generic academic building, and a drainage channel/walkway between a parking lot and tennis courts. Working in teams of three, students met with environmental scientists and University grounds staff, researched site issues, researched sustainable materials, studied design alternatives, and proposed design solutions.

Students were asked to address the challenges of each site by developing compelling aesthetic alternatives to the manicured “golf-course look” that dominates most of the outdoor areas on campus. We hoped to show that thoughtful, highly designed, sustainable landscapes could be as beautiful, perhaps more beautiful, than any other.

Research was one key technique to encourage students to venture outside of their familiar design areas. The environmental issues were complex for all of us; we were all in over our heads. The topics included: natural systems (rainwater, wildlife, and vegetation), human activities (seating, gardening, nighttime safety), water conservation, sustainable hardscape and plant materials, energy use (including lighting), signage/graphics, and overlapping social constituencies (neighborhood residents, student users, groundskeepers).

To succeed in the research, the students needed intelligence, imagination, teamwork and the ability to synthesize. Certainly no one design discipline has a monopoly on any of those.

While the students were working on research tasks, we simultaneously brought them through a model-making and form-discovery process. The process moved (approximately) from abstract 2-dimensional; 2.5 dimension; 3-dimensional; scaled models; and finally full-scaled elements, components, and materials.

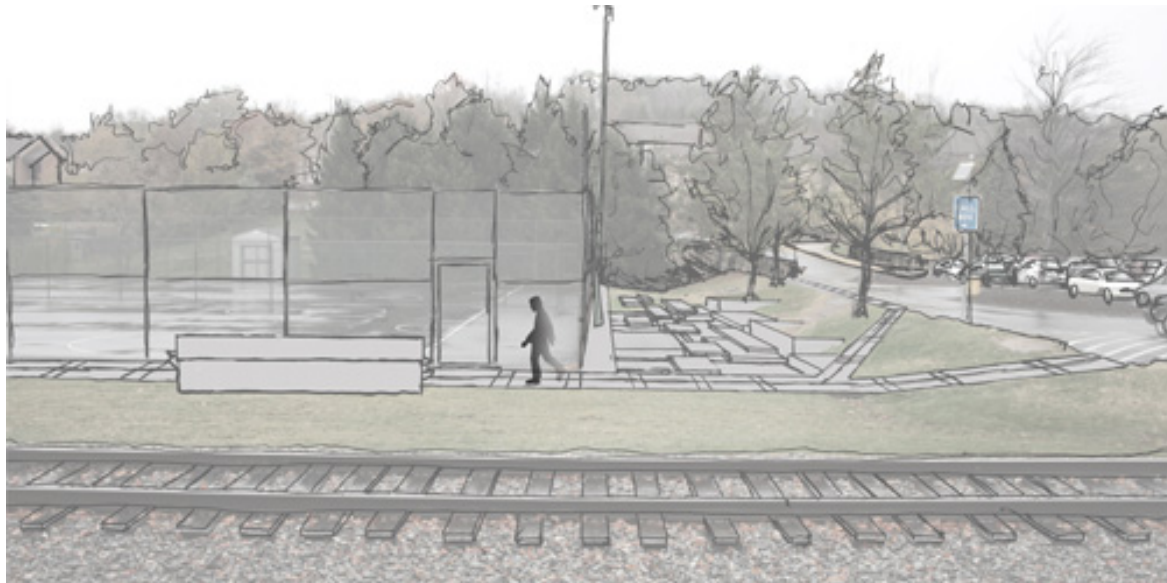
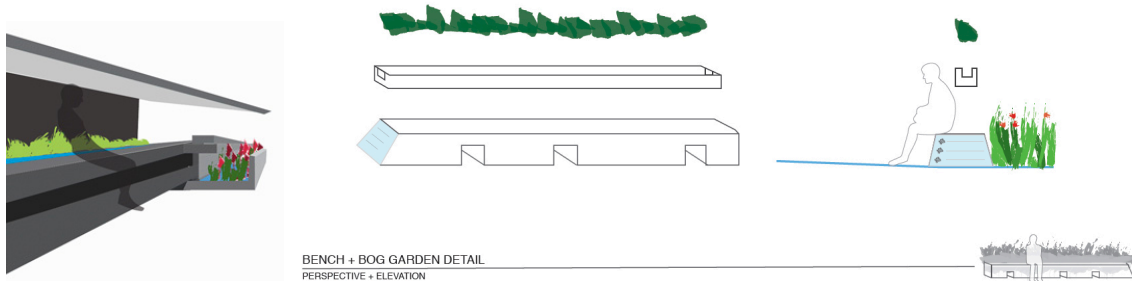
As the form-making advanced, the groups began to fold-in their outside research. Each team developed a project statement, graphic language, material palate, and site-specific strategies and elements. The designs were refined through technical drawings, renderings, and combine visuals with the use of Photoshop.

Throughout the process, the studio remained focused on the need to communicate our ideas to larger, non-design publics. No one lost sight of the fact that our studio would conclude with a University-wide public exhibition, visited by hundreds of students & dozens of faculty, but also facilities staff, engineers, student life coordinators, and even the University President.

Although the work of each of the 7 teams was distinct (and some of their projects truly extraordinary), with hindsight we observed that the projects addressed themselves to five consistent themes and questions:

- First was the ongoing ‘need’ to foster and deepen interactions between humans and site-specific natural systems.
- an interest in energy conservation
- solutions for flood-water mitigation
- the cultivation of native and low-maintenance plants
- a commitment to see the designed landscape as a pedagogical and phenomenological tool of environmental education

Design need: User sensitivity to environment/nature



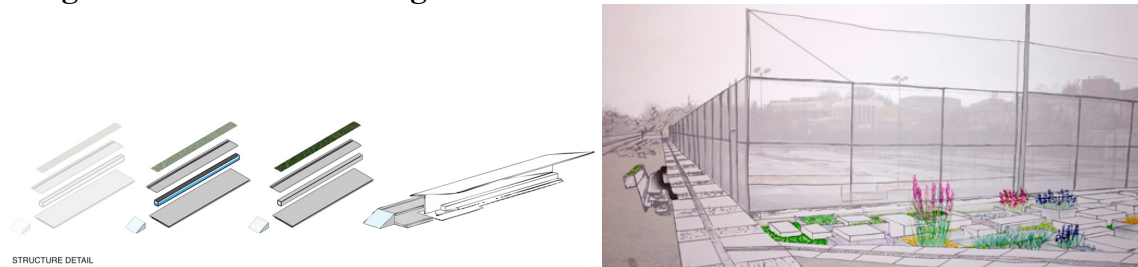
Design need: Encourage human-nature interaction



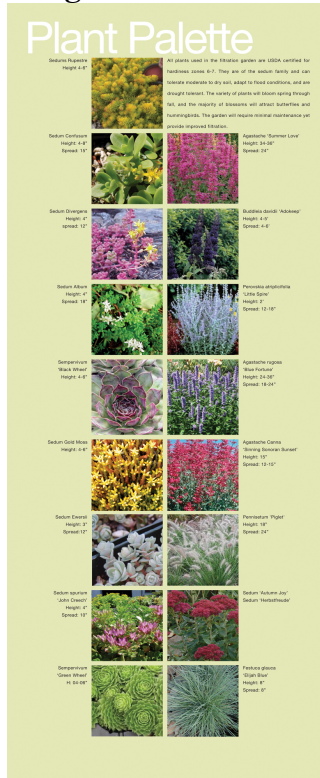
Design need: Energy conservation



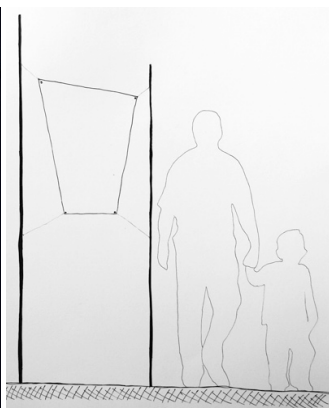
Design need: Flood water mitigation



Design need: Native low maintenance plants



Design need: Environmental education



Total time for the sustainable landscape projects was 12 weeks.

The outcome from this project has had an enormous positive effect. By presenting the University with concrete and accessible alternative visions of landscapes that were—simultaneously—beautiful, environmentally sensitive, site-specific, thought provoking, and imminently feasible; the studio demonstrated realistic alternatives to the existing manicured institutional status quo.

One of the projects, ‘The Alluvial Garden’, was selected by the University President for further development and implementation. A short video featuring the project and interviews

with the participants can be viewed on YouTube
(<http://www.youtube.com/watch?v=MtBW6NDyT94>)

Disappointingly, current budget realities have stalled the Alluvial Garden project before construction could begin. But interest and support for the larger concepts remain. This spring, a new collaboration has begun—including Michael Singer again, campus facilities staff, University administration, and art and design students—that is revisiting the issue of visionary sustainable landscapes.

Conclusions

We began this project by thinking about the word design as a verb—a mode of action. We imagined a design project, and a design education, driven by social needs and directed toward social ends. Design techniques were valued not for themselves, but for where they could help us go. We were hungry to collaborate broadly and work outside of our disciplinary boundaries.

It was an experiment in design action.

And so we ask, what did we learn?

In the end we observed that the students—by addressing themselves to the broad challenges of a project, and by not focusing on merely achieving predetermined final outcomes—were absolutely capable of a sophisticated engagement with complicated social and technical problems well outside their traditional disciplinary boundaries. They learned to put a high value on intelligence, research and process. Working in teams, they learned to learn from each other.

The studio was a 15-week experiment in designing without boundaries. Working across disciplines, and collaborating with folks from across the community and University, we demonstrated the enormous possibilities when designers engage with complex social problems. By shedding our disciplinary labels, and by simply bringing professional skills (which we cherish) and design intelligence to the table, designers are freed to become nimble tacticians. In the face of daunting and complex social problems, design can become again “a mode of action.”