Interdisciplinarity | Diversity | Sustainability | Creativity: Pursuing Invention, Innovation + Ingenuity in Environmental Design Education

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"A point of view can be a dangerous luxury when substituted for insight and understanding."
(Marshall McLuhan, The Gutenberg Galaxy)

Contemporary times are highly complex and undeniably complicated. Higher education, inextricably interwoven with its surrounding parent culture, grapples and struggles for meaning and value within an increasingly uncertain milieu. Without current and relevant metrics, the academy is arguably confused about the look and feel of success. Perhaps the modern university is marching to the beat of a distant and different drummer. With its tightly contained silos and firmly delineated boundaries, the university's momentum and trajectory seem at odds with the characteristics and approaches seemingly demanded today to manage chaos, conflict and dilemma. Turf protection and restricted points of view severely limit innovation, invention and ingenuity – subscription to the status quo translates into ineffectiveness and inability to handle current problems, crises and even impending catastrophes.

Environmental design education, introduced several decades back, proved from the beginning forward looking and anticipatory as pertains sustainable design & development. While the arrival of environmental design theory & practice was controversial and has been somewhat turbulent over the prevailing years, its relevance, applicability & potential impact to today's world is remarkable. In the new millennium environmental design is witnessing meaningful deployment, deeper understanding, and wider respect. In an academy that arguably suffers from at times debilitating (yet admittedly at times necessary) specialization and narrowness, environmental design as mindset and method affords a potent vehicle for systems thinking, integration and holism. Environmental design accepts as a basic condition an embrace of dimensions physical, social and economic (the so-called 'triple bottom line'). Added to this requisite triumvate are aspects psychological, geographical, cultural, political, and even spiritual.

Environmental design education has a number of qualities and features that, considered together, place the field at the forefront of advanced education. Such features include: studio-based experiential learning; praxis (theory + practice) orientation, whereby students work in collaborative teams on real world projects; concern about the promotion of civil society and the fostering of citizenship; a focus on sustainability as defined in broad and far-reaching terms; and the evoking of interdisciplinary models for seeing,

thinking and acting. Overarching issues routinely at play in environmental design education include a profound concern with humanity, a sincere search for humility, an acceptance of impermanence (change), and an awareness of our own fallibility (and indeed the fallibility of our many ways of working within the overly cognitive and self-referential halls of higher education).

At the present time university education needs to carefully and critically question its purposes, processes and products. The academy needs to transition from a pool of rampant aggressive individuals obsessed with personal self-preservation into a much more egalitarian and selfless crew with collective health & wellness placed front and centre. We need to search with sincerity and resolve for universally shared values. Once found, said values must be developed, protected, propagated and celebrated. Included in the mix will likely be human rights, diversity, freedom, tolerance and respect for the other. Pursuit of such basic facets of humanity must pervade the academy, reaching impressively into both undergraduate and graduate curricula and witnessing operational cultivation within research, scholarship and creative endeavor. Inculcating rich knowledge in our curious & clever students is both opportunity and obligation. Instilling wisdom is, however, a far more demanding, vital and noble goal. Wisdom can be seen as the coupling of head a heart, a tall order within the western academy where the objective trumps the subjective and the rational eclipses the emotional.

Environmental design education presents us with an alternative approach to building responsible citizens, enlightened professionals, and functional healthy communities. In our fast-paced, greed-driven, confusing and consumptive society, it seems we desperately need alternatives. Environmental design education affords the academy a different and perhaps more potent way of conducting its affairs – one that respects and relishes interdisciplinarity, diversity, sustainability and creativity, and one that promotes and pursues invention, innovation and ingenuity at every turn. William James once astutely noted that, "Genius is the faculty of perceiving in an inhabitual way." The world is, no doubt, in dire need of such genius.

Keywords: interdisciplinarity, diversity, sustainability, creativity, invention, innovation, ingenuity, environmental design, higher education, contemporary culture.

ENVIRONMENT | BEHAVIOR | DESIGN

> *"Nothing in this world is more dangerous than sincere ignorance and conscientious stupidity."*
> *(Dr. Martin Luther King Jr.)*

There is no doubt that behaviorally-based design theory is rich, multi-dimensional & far-reaching. It is also the case that environment-behavior theory & design are more relevant and crucially needed today than ever before. Stephen & Rachel Kaplan (1982) in their seminal book entitled Humanscape: Environments for People, underscore the uncertainly, complexity and vastness of modern environments. I argue that said environments encompass an ever-more complicated interconnectedness of aspects physical, social, cultural, political, spiritual, etc. The lessons & learnings of recent times (i.e., post-industrial) need to be meaningfully applied as environmental designers strive, and often struggle, to improve the quality, vitality and success of our buildings, spaces and places.

From my perspective there are many components in need of concerted attention as environmental designers work to employ/deploy environment & behavior theory within practice. The pursuit of potent praxis, or the marriage of theory and practice, seems an ethical imperative for all environmental design professionals. As professionals one defining characteristic is our reliance upon an established and proven knowledge base. While our professions are arguably and comparatively new, the need for highly informed decision making is nonetheless essential. The fact that our endeavors bring together unique blends of art & science, of the subjective & objective, and of the emotional & rational, does not forgive our obligation for rigor, thoroughness and scholarship. If we seek to be well respected and held in the company of other professions, such as medicine, law and engineering, then the bar must be set high, competencies must be ensured, and standards of practice (including codes of ethics) must be religiously enforced.

My formula for our path to progress, as pertains behaviorally-based design, contains six linked and symbiotic parts: 1. research; 2. education; 3. design; 4. policy; 5. respect/relativity; and, 6. wisdom. In the end all of these parts must synergize together to generate knowledge, disseminate intelligence, and crucially to equip, empower, inform and inspire citizens, communities and broader culture.

1. Research: Environmental designers need to engage in solid, well-considered and relevant research in order to strengthen the profession, build the knowledge base, promote respect in the marketplace, and foster the realization of better products, environments and lifestyles. Such research must arise through accepted methods with findings subject to verification. This does not mean the pursuit of empirical science alone, but rather the scholarly embrace of a range of approaches (i.e., from the fine arts to the social sciences to bench science).

2. Education: Cultural shifts are very hard to realize, akin to turning around an ocean liner on an expansive sea. To enact a shift there typically needs to be many forces pushing in the same direction. This does not imply a 'sledgehammer' to be the only tool for change – as commonly wise and strategic force, small but leveraged, can make a profound difference. One key vehicle for cultural change is education. While university education and professional education are vital, most demonstrable in the change equation is K-12 education. Fostering awareness in children and young adults, from the traditional subjects to topical areas such as sustainability, diversity and civil society, can render remarkable results. Environmental designers need to influence curriculum and experiential learning in this realm. Within university & college education, environmental designers should be working to include creativity, behavior and design within core curricula and liberal arts grounding.

3. Design: Design is a powerful mindset and method that can 'move mountains'. Unfortunately design is little understood and under-respected in the marketplace, and undeniably in the academy. A part of the problem is a failure by environmental designers (e.g., architectural and design educators) to raise the flag, cultivate understanding, and demonstrate value. Often design colleges and programs are under-funded, with their administrators scrambling for resources and creatively making ends meet. Further, institutional metrics/models for success are commonly drawn from the hard sciences,

with assessment and performance based too commonly on funding levels, journal articles, and student head counts. Design matters, and environmental designers need to ensure this message is understood.

4. Policy: The best ideas do not necessarily have the greatest impact. In fact, often the converse is true. Good ideas need to be implemented, and implementation often necessitates the creation of a supportive and leading policy and regulatory milieu. For example, if we as environmental designers believe that Post-Occupancy Evaluation (POE) is a crucial part of life cycle assessment and continuous improvement, saying this publicly is not sufficient. Authorities with jurisdiction and legislators need to take actions that require or at least reward such mechanisms and initiatives. While more government is not always an ideal path, in many instances that pertain to public well-being, and the promotion of health, safely and welfare, it is positive.

5. Respect/Relativity: With increasing mobility and widening spheres (geographic, cultural and otherwise) of activity, environmental designers must have skills, knowledge and values that will permit them to intervene with respect and results. In many cases there is common ground in methods and mindset as pertains professional practice – that said, there is also an increasing need to be apply to practice with sensitivity and sensibility at local scales and with specific user populations in mind. We need to be respectful in the execution of our duties and able to respond to particularities + nuances in the various communities we serve.

6. Wisdom: Lastly, we need to possess & practice wisdom in our professional lives. My definition of wisdom is the coupling of head and heart. In our modern world, and especially in the academy, we cherish and celebrate the cerebral and the expense of the emotional. Compassion, caring and love are seen uncomfortable concepts best left in our personal lives. The academy relishes in the intellectual and heralds the hegemony of the head. To my mind, however, modern crises arise from this pathology and solutions prove elusive as long as we discount the worth of our intuition, instincts and feelings. Somehow, sometime, and hopefully sooner rather than later, we must awaken to the need for inclusive, left & right brain, complete and full embracing of the human journey. As long as we continue to separate, isolate, and differentiate the various parts of ourselves and our lives, we will continue to increasingly suffer. While we need to inculcate facts & figures within our educational systems, far more critically we must teach each other to deeply, wisely and compassionately think, respect, consider and care.

Clearly there is pressing need for more integrated, holistic, interdisciplinary and behaviorally-based design and intervention. It is certainly the case that governments and universities are fraught with fragmentation, silos, turf protection and perceptions of

disciplinary supremacy. As environmental designers, whether in education or practice, we need to push hard, persist and succeed in being agents of change. Human aspirations, human needs, and human potential suggest that our efforts are important, our causes worthy, and any successes worthwhile.

ACADEMY | HUMANITY | ENVIRONMENTAL DESIGN

"The heart has its reasons which reason knows nothing of." (Blaise Pascal)

A major challenge, in terms of advancing contemporary culture, is harnessing and optimizing the power of the academy. Teaching, research and service realms should be reformed, recharged and coordinated in order to address some of the perplexing problems of our times. While disciplinary depth and specificity is critical, more critical are the opportunities to bridge between disciplines, develop new disciplines, and apply knowledge in unconventional ways. Academics, despite bold claims of progressive thinking and world-leading practice, are commonly trailing behind industry. However, the potential of the academy, and its members, to make a difference is staggering. The prospects for educating new generations of bright, bold and responsible citizens are magnificent. The obligations for dissolving arrogance and selfishness are intense. The need for proffering loving kindness and compassion is profound. The reasons for advantaging the heart before the head are many.

It is, of course, a major challenge to reform institutions entrenched in status quo thinking, lumbering in bureaucracy, burdened by politics, and intensely complex in composition & dynamics. For real reform to happen we need to transition the culture of the university from endemic individualism to a more egalitarian, caring and collective milieu. John Bennett (2003), in his book Academic Life: Hospitality, Ethics, and Spirituality notes: "there are significant proclivities toward individualism across the higher education world. The disposition to behave in self-absorbed and self-protecting ways and to put narrow self-interest ahead of the welfare of others or a broader common good is widespread. Individual and institutional identity, worth, and fulfillment are understood in terms of power to shape and control others, and to resist their power." Environmental Design education, founded in interdisciplinary cooperation, promoting respect for humanity, focusing on user-needs, employing inquiry-based learning + evidence-based creativity, and subscribing to an integrated, holistic + systems-oriented approaches to intervention, provides a model worthy of broader emulation within the academy. Gilliland (2005), in her article entitled 'Presidential Leadership for the Public Good', stressed "the term *higher education* is synonymous with the phrase *higher education for the public good.* If we are not educating people and creating knowledge for the public good, then what are we doing?" Perhaps a modern world in desperate need desperately needs a modern university. Perhaps to this end environmental design, as an exemplar, can open eyes, minds and hearts.

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