

Historical and Sustainable Sensibilities:

A Socio-Cultural Speculation within Architectural Education

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Abstract

Although sustainability is more of a constant inquiry rather than a definition, it can be reassuringly projected as the ability and the potential of all species and physical environments (manmade and natural) to *survive*. Sustainability's accountability to survival into the future is intrinsically linked to the longevity of cultural architectural and urban artifacts that range from historic buildings to everyday spaces that are somehow significant to social relations. The paper is drawn from a study that explores how architectural studio participants approach, understand, interpret and apply values of preservation when designing for culturally sensitive areas, and while employing the principles of sustainable design. Since it is broadly stipulated that studio participants engage in processes and express notions of cultural heritage in ways that respond to a variety of stimuli, the study examines the contemporary cultural subtexts, as well as the role of architectural education and idiosyncratic sensibilities. Through a range of studio participants' projects set in historical buildings and in cultural and traditional neighborhoods, the study aims to detect and codify trends and iterative courses that inform the decision-making process. Design projects considered include contemporary retrofits in interstitial spaces, elevated structures embracing historic structures, industrial reuse and others. Since the meaning and practice of sustainability are key components to the architectural education of the participants whose work is examined, the paper also explores the theoretical underpinning that frames an understanding of sustainability both as a social and as an environmental condition. Thus a narrative is created that aims to connect social sustainability to a cultural understanding. The study embarks on a socio-cultural speculation of causalities and cultural nuances, which combined with more structured pedagogical methods, influence participants' design priorities and perceptions in local architectural academies. Knowledge is drawn from the authors' five-year involvement in advanced architectural design studios where architecture and urbanism have been considered from a distinct position of sustainable priorities.

Keywords: education, culture, heritage, sustainability

1. Introduction

The challenges studio participants encounter in prioritizing their design strategies are examined in the course of a five-year advanced architectural design studio. Participants were in their fourth and fifth year of study. The studio's brief was poised at exploring aspects of sustainability as they pertain to architectural practices, with contextual references to broader aspects of sustainable development. Issues of management and stewardship of cultural heritage areas have entered the studio's brief via participants' particular research interests. From these projects that explore dimensions of sustainability in historic or cultural sites, five are chosen to be qualitatively examined because of their notable design process and the high quality of the final output.

Throughout the paper, participant projects are described in terms of three formats of design intensity: under-design, over-design and distance-design. Under-design refers to a preference to remain faithful to historic form by injecting new uses while restoring original architectural elements. Building additions are kept to a minimum or concealed in order to maintain an atmosphere of antiquity. Oppositely, over-design refers to an intensive reinterpretation of cultural buildings and sites where design relies on a layering of structures and functions while historicity is maintained through less literal means. Distance-design refers to the practice of injecting physical distance from the article or environment of preservation.

2. Values: Injected and Instilled

'Survival is the ultimate ideology' rasps a menacing character of a popular show that delved into conspiracies and paranormal activity. Can survival be condensed to an imaginary set of ideas or should it be reduced to a normative condition of endurance? According to the visual media and fictional novels, the future of humanity is given a dismal prognosis, riddled with tales of incurable viruses, nuclear holocausts and bloodsucking aliens. Notable authors like Cormac McCarthy and the speculative fiction of Margaret Atwood often regard mankind's apocalyptic demise as a point of narrative departure. The frequency and prominence of these themes and their impact on

popular culture is doubtlessly shaping the psyche of the millennial generation, thus *time* is reframed to become a valuable commodity.

In most architecture students' demonstrated design positions, there seems to be a clear and confident correlation between the notion of heritage and time, where time is a defining factor that legitimises the need for preservation. As such, *old* seems to be the undisputed noun and epithet of architecture that ought to be preserved. Although most studio participants seem far less confident in quantifying, or even qualifying, the properties of *old*, the term *old* is approached with unspoken reverence and a tendency to under-design.

Participants often go to great lengths to discuss the concept of *time*, as a determining factor in understanding the notion of cultural heritage and assigning personal value to it. Mental quests such as how time leaves an indelible mark on a surface, a building or a street - and indeed, just how indelible this mark really is - seem at times to overtake other priorities such as aesthetic acceptance, functionality or sustainable performance. Participants' struggle with contextualizing *time* is often framed around conditions of permanency and temporality. Frequently, the participant tries to position him or herself with respect to his or her site's time-dependency by synthesizing a proposal that addresses the temporal aspect rather than the permanent.

Some participants operate within an unspoken assumption whereby elements of permanency are commonly protected and preserved under the mantle of their legal status of historic preservation. Consequently, allowing the permanent to direct their inspirational process would be considered unnecessary or even trite. Thus focus is set on either exposing or enabling what is perceived as temporary or temporal which appear as poetic qualities in their fleeting, often obscure occurrence. The process of defining the temporal or the temporary can be particularly alluring because of its subjective, inaccurate nature. The inherent fluidity of temporality allows for the participant to flex some creative muscle while personalizing both process and findings.

Time is also regarded as a parameter in the understanding of memory. Participants are

strongly prompted by faculty to define memory as it pertains to their project's priorities, in order to prevent it from acting as a blanket term of misplaced romanticism. Thus participants begin to consider memory as a tool that somehow demarcates the passage of time. One participant referred to a building as a vessel of data storage, where data represents experiences and memories (Postekkis, 2011). Since time is quantified as an incremental process, the same participant chose his design strategy to follow a 'step by step execution,' where the historicity of an old industrial building of landmark value is preserved by gradually allowing it to deconstruct. This enables materials to transfer from the original building and to be added to adjacent new buildings and annexes that house new, proposed, commercial and community uses. The incremental approach of this project is further imbedded in two key elements: the recycling of building materials and the gradual reclamation of the brownfield site through phytoremediation. In this project, time becomes an element to be harnessed only to be reapplied in such a way so that the boundaries of the permanent (which in this case are not protected by the authorities) and the temporary are no longer relevant (Fig. 1).



Figure 1: Postekkis, A., Incremental Revitalization: Abandoned Industrial Buildings, Degree Project, 2010-2011

Another participant interpreted memories as a creation or as a creator of conditions of familiarity and comfort (Kyriakou, 2013), thus inadvertently making the argument that under-designing spaces of historic preservation can evoke positive emotions of nostalgia while remaining loyal to the architectural language found onsite. Additional

buildings are tucked away so as not to overshadow the principal architecture of preservation. In fact, additional construction and interior spaces follow an understated, linear, almost sterile architectural language that intends not to distract from the feeling of antiquity. In a project that centres on an urban block of dilapidated, listed buildings, located in the historic centre of the city's historic centre, the design proposal is broadly limited to spaces predefined by original walls and perimeters. Once rehabilitation of existing building elements has occurred in a process the participant named 'resurrecting the ruins' (Kyriakou, 2013), newness transpires through the injection of new uses and users (Fig.2). The strength of the particular proposal lies in the temporal activation of space that is projected from the restored site's new use as centre for performing arts. As ever, the challenge of rehabilitation focuses on where to stop the preservation clock, i.e. which additions, building materials or stages of construction should be preserved and which should be eliminated for the sake of authenticity. The participant's instincts dictated that *old-looking* elements deserved to stay. Corrugated metal roofs had to be removed, because, to paraphrase an old Dean Martin song, memories are *not* made of this.



Figure 2: Kyriakou, Y., Abandoned Ruins Given New Life: Performing Arts Center, Degree Project, 2013-2014

Another way participants have chosen to frame the notion of time is as a function of dualities. Through a potentially limiting process of abstraction, participants juxtaposed opposite (or complementing) meanings such as *new vs old* and *before vs now* (Kyriakou, 2013) allowing the participants to position their intervention with dynamic respect to the dual elements in question. One participant, however, conglomerated and at the same time negated the two aforementioned dualities and stripped away their romantic brushes. She did so by identifying the past as what is represented by the present, i.e. the physical built space, whereas the act of construction is a nothing but a fictional projection of the future (Theokli,

2015). Instead, she exchanged the dual systems with two other descriptive conditions that also have a fluctuating relationship with each other: 'threshold' and 'growth.' She subsequently focussed her explorations on flexible spaces that can accommodate conditions of flux.

Growth is also linked to an understanding of environmental realities where making allowances for the unplanned expansion of ecological systems is an added value that serves to impress most audiences. In fact, allotting spaces for all-purpose greenery and general softscapes is a popular feature among studio participants with sustainable sensitivities.

Although much effort is set on behalf of the faculty to help distinguish the differences between green, ecological and sustainable architecture and particularly to steer the meaning of green architecture away from the literal, there are occasions where participants apply green roofs and planting patches as decorative elements and not as part of integrated design solutions. This is an unfortunate consequence of the narrow understanding of architecture students on the biophysical characteristics of trees, plants and soil. It should be noted that this condition has more to do with educational curricula than poor student performance. Within and beyond architectural education, ecological elements are generally not regarded as building materials, but as autonomous, unpredictable, complex systems that can exist in parallel to the constructed environment and add mostly aesthetic and sentimental value. In fact, apart from their environmental contribution and significance, ecological systems can and should be employed in order to create and define spaces that exhibit different qualities to those created by conventional building materials.

Architectural education has a perhaps equally tenuous relationship to issues of legality and historic preservation. Although historic preservation is an issue that is ostensibly straightforward in its pervasiveness, upon closer examination, it appears to yield some paradoxes. In other studio environments where neither sustainability nor historic preservation are considered an active priority in the course's brief, stretching the limits of state's regulations in non-historic sites is generally regarded as a useful

exercise in creativity. While devising strategies and developing solutions, participants of those studio courses are often advised to disregard general legal restrictions such as plot setback or maximum building height, because such bureaucratic limitations are often perceived as a hindrance to the creative process. Studio instructors allow a somewhat relaxed interpretation of building and planning regulations in the interest of innovation and form-finding explorations. However, when the project's site is of decidedly historic significance and is listed under the state's law of preservation, both instructor and participant are more cautious in their approach.

However, when the studio's thematic aims to delve deeply into matters of sustainable design, then challenging the guidelines of historic preservation is somehow not as prevalent. Indeed, when faced with issues of sustainability, participants become more accepting and even subdued, to matters of legality in sites of historic preservation or cultural significance. Thus strategies of adaptive reuse appear almost instinctively (Postekkis, 2011; Kyriakou, 2013; Apserou, 2013) and the search for appropriate case studies begins. Participants research methods and technics for energy efficiency with minimal intervention, but rarely challenge the premise of historic or cultural heritage.

When asked to probe into the possible criteria for sites being regarded as worthy of preservation, the honest student does not offer a theory or an assumption (Theokli, 2015). The honest student simply says, 'I don't know.' Still, participants profess an undeniably complex relationship with issues of legality where some even regard them as a welcome injection of realism in their design development (Theokli, 2015). This unchallenged acceptance of the state authorities' guidelines and limitations of historic preservation as an objective truth highlights another issue. It has been observed that participants are keener to challenge themselves in exploring strategies of adaptive reuse because they are conditioned to regard embodied energy and raw materials worth preserving when linked to historic preservation and cultural heritage. All too often, when the project's site does not evoke what is perceived as being of architectural interest, participants are less prone to consider of adaptive reuse.

Another paradox occurs when regarding the conditional acceptance of the state's objective authority in matters of listed buildings and areas of preservation. Consider the case of a state-organised, international architectural competition for the redesign of a historic square adjacent to the city's Venetian Walls, which in recent decades had served as a city landmark. The winning entry was one by a high-profile international firm and the design is one that will introduce new form and materials that are foreign and largely disproportionate to existing surroundings. The vehemence with which participants rejected this design direction (Kyriakou, 2013) that state and jury clearly regard as progressive and appropriate, indicates that intuitive feelings of cultural heritage supersede any narrow acceptance of state authority and objectivity.

It may therefore be assumed that inspiration, creativity and individual thought are valued above legislation. There seems to be an unspoken understanding that building and planning regulations are not flexible enough to accommodate the complexity of human use (Theokli, 2015). Thus community engagement as a tool that energises adaptive reuse appears to be a central concern in most participant projects discussed in this paper. Notions of spatial democracy are quite dominant in project pursuits, although participants do not readily make the connection between social equity and its role as the underpinning of social sustainability. Nevertheless, there is a clear intension to provide access, incentive and opportunities so that community as a whole can benefit from architectural artefacts of cultural significance.

These noble intensions are coloured and indeed prejudiced by the participants' young age and insulated academic environment. In the case of the adaptive reuse of an abandoned hotel in a mountainous village which in its heyday was imposing in its prominent scale, pronounced masonry walls, high ceilings and stunning physical setting, the participant exhibited both wisdom and sensitivity in her adaptive strategy by considering the village in its entirety when synthesizing her site analysis. Wanting to design 'a place for all' (Apserou, 2013), she decided to focus her efforts on facilities for specialized programmes of higher education. The infrastructure proposed addressed

issues of providing employment opportunities for the dwindling local population and the overall proposed scheme is diverse enough to favour more social inclusivity than the building's previous status as the 'hotel of Kings,' as it was marketed in its days of operation (Fig. 3).

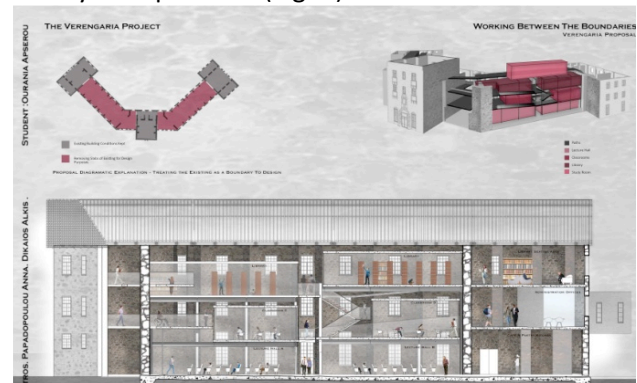


Figure 3: Apserou, O., Working Within the Boundaries: The Verengaria Project, Fourth-year Project, 2013-2014

Although there is precedent in Cyprus where educational infrastructure has invigorated urban areas of decline, its applicability is by no means universal. Studio participants and students of tertiary education, become (justifiably) enamoured with living in the microcosm of academia and do not readily recognise the uniqueness of opportunity that is afforded to them. Even more romanticized than the notion of equal access to tertiary education, is the perception that a proposed programme centred on the arts will create occasions for the entire community to benefit from a cultural or a historic setting.

It is probably safe to assume that Art has had an unequivocal role in every architectural academy worldwide. The integral relation of art to architecture and architectural education is manifested both directly and indirectly so that it requires little or no explanation. Since architecture students are often inundated with notions of art, it becomes reasonable for them to assume that the attraction of art is ubiquitous and universal. 'Art allows everyone to participate,' one participant writes (Adamou, 2013). While this might theoretically be true, art appreciation and participation might not be as accessible among communities of all urban areas alike, especially in low-income, underprivileged inner-city quarters. And although perceptions are markedly shifting, we are still emerging from an era where popular culture suggests that an art lesson in primary and

secondary education is considered a lesser lesson to sciences and mathematics.

Art is strongly associated with cultural and historic environments because of a subconscious understanding within western cultures that art, culture and history can be reduced to artefacts and exhibited in museums and other organised institutions. Thus, studio participants consider it innately safe to relate art to culture and in extension, to architecture of historical significance. In the case of one project set in a declining area in the historic core of the city, the participant appropriated utilizes interstitial spaces to introduce a variety of art and music activities that aim to energise the site at a variety of times during the day. In contrast to other projects that leaned towards an under-design approach, where contemporary architectural motifs were kept to a minimum, this project made brave architectural statements (Fig. 4). Consequently and perhaps not surprisingly, the project was criticised for its choice of architectural language. Academic audiences are sometimes conditioned to show preference to under-design and attempts to over-design are met with occasional scrutiny and in some cases, even rejection.

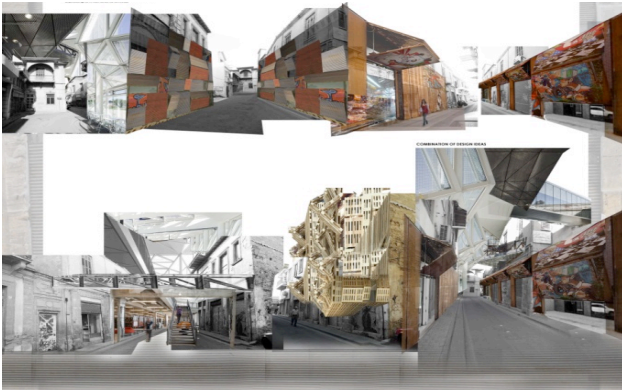


Figure 4: Adamou, G., A Space for the Community, Fourth-year Project, 2013-2014

The participant of the aforementioned project began her semester in a different studio course and transferred after six weeks to the studio of sustainable design. Thus she was challenged on how to apply intensions of sustainability to a design solution that was already set on a different path. Although there is a theoretical understanding among participants that sustainable architecture cannot be reduced to last-minute additions of photovoltaics and geothermal systems (Theokli, 2015), often times sustainability is viewed more as

vehicle rather than an inspiration. If the heart is already committed to a certain design direction, such as in the case of the project in question, then a sustainability angle has to be retroactively introduced, if only to meet studio criteria.

In contrast to the popular clarity of art's connection to culture, a condition that links art and sustainability requires more effort to become established. Whereas a building's age (and style) serves to validate the presence of culture and heritage, sustainability's relation to age is not always as clear. Nevertheless sustainability must be understood as a function of longevity, where architecture that sustains is nothing less than architecture that survives. Architecture that survives, does so through its contribution to social process and through its role in energy conservation.

Although these associations become part of many an enthusiastic class discussion, they often fail to reach the deeper enclaves of a young designer's mind. Thus more pedestrian interpretations that link art and sustainability are devised such as the use of recyclable and recycled raw materials in the making of art. The need to make these links as clear as possible becomes so intense that it overshadows other possibilities – ones that serve a more indirect mission such as Nancy Holt's Sun Tunnels or Douglas Hollis' Sound Garden – whose artful purpose is a means to expose natural elements or environmental phenomena in order to broaden ecological awareness and re-establish a connection between man and nature. The didactic dimension of art (Treib, 1990) aims to instil a deep understanding of environmental systems that constitutes the foundation of sustainable architecture.

Although elements of didactic art may not be prominent in aforementioned projects, certain didactic attitudes are manifested in the following project. Sited in a politically challenged area known as the Buffer Zone that separates the militarily occupied and the free part of a historic city, the design proposal explores the possibility of the city's reunification and takes on the challenge of developing a scheme the participant describes as 'social innovation towards sustainable communities' (Margaritova, 2014). Intensions, as stated in the participant's brief, included to confront, provoke, engage, inform and educate,

and methods focused on ‘projection, transparency, reflection and reuse’ (Margaritova, 2014). Ultimately, innovation was not exhibited in the proposed dense and diverse programme *per se*, but in the execution. Existing roads are mirrored onto an elevated path and further inhabited by a system of cubicles whose dimensions are inspired by the building footprint underneath and influenced by an intension for bioclimatic efficiency. Although the participant regarded the educational element of her proposal to center on the actual education spaces she introduced, such as library spaces and workshops, the didactic benefits that set this project apart are slightly more oblique. The shear gesture of elevating the main organizing element of the proposal, invites users to look down on the once-separated parts of the city and to observe the process of reunification from above. Platforms and stairs are strategically located to invite users to climb down, thus shifting from being observers that survey from above, to becoming participants (Fig. 5).



Figure 5: Margaritova, A., The Architecture of Reunification: The Case of Nicosia, Degree Project, 2013-2014

Proposed materials added another dimension to the way this area of particular cultural significance is meant to be experienced. Cubicles exhibit a variety of surface treatments, some transparent, others reflective or opaque. The reflective surfaces are located on the underside of the cubicles so that users on the ground level can potentially look up and benefit from an entire universe of mirrored images of the surrounding environment. Surfaces of varying degrees of opacity are installed on the walls of the cubicles in order to allow the outside user the opportunity to observe activities inside the cubicle, while uses that require privacy are adequately protected. The

public is thus engaged through building materials that provide varying degrees of opacity, transparency and reflection initiating a multiplicity of views and experiences (Fig. 6).

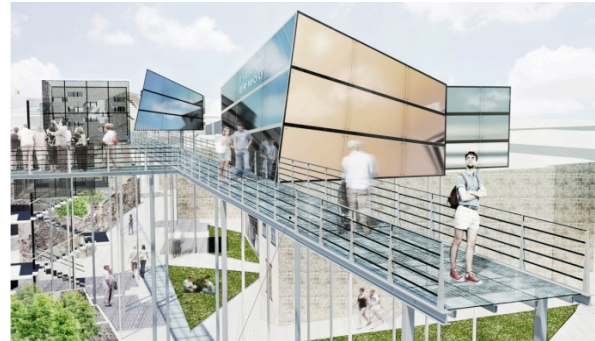


Figure 6: Margaritova, A., The Architecture of Reunification: The Case of Nicosia, Degree Project, 2013-2014

Although the majority of existing buildings in the Buffer Zone would be regarded as listed or protected structures, the participant does not prioritize their rehabilitation. Indeed, materials found onsite that are remnants of the political conflict such as corrugated metals or barrels used to barricade the boundaries are kept on site and reused. The cultural significance of this area extends beyond dated buildings that reflect traditional architecture but includes more recent relics of social and enforced segregation. In contrast to previously mentioned projects, this particular participant’s lack of interest in building restoration is further indicated by her intension to not restore wall elements that have been taken over by nature, so as to allow ecosystems to continue to develop.

It is unclear what initially prompted the participant of the Buffer Zone project and the project set on the abandoned mountain resort to elevate major interventions (fig. 7). It is not unreasonable, however, to assume that participants are impacted by Glenn Murcutt’s dogma of ‘treading the earth lightly.’ Murcutt’s discourse (Letherbarrow & Wesley, 2009) is deeply routed in the principles of ecological sustainability, and although the degree to which participants were actively influenced by his treatise is uncertain, it seems fair to assume that the instinct to preserve nature in the name of sustainability is what compels young designers to employ a form of distance-design. Physical distance offers an intangible protective barrier between nature and

construction that is presented as a comforting solution – an absolution - to studio participants who want to strike a balance between creativity and preservation of nature. Instead of volumes of soil and plant life being removed to accommodate large-scale building foundations, projects such as the two mentioned above opted for smaller units of buildings that balance on columns and stilts.



Figure 7: Apserou, O., Working Within the Boundaries: The Verengaria Project, Fourth-year Project, 2013-2014

The solution of distance-design is likely prompted by class discussions on the significance of soil in the synergy of fauna and flora. Here a marked contrast is observed between studio participants who have been exposed to deeper conversations on ecology and participants of other studios who may be interested in sustainable practices but who have not experienced a strong theoretical discourse in sustainability: the former are more likely to opt for distance-design and the latter, in a somewhat misguided attempt to not interfere with the natural elements and to provide thermal insulation, all too often sink their buildings under considerable mounds of earth.

As evidenced by the project set in the Buffer Zone, distance-design lends itself not only as a means to be ostensibly less intrusive to environmental processes, but as a means to preserve areas of cultural importance. This again falls in line with Murcutt who intrinsically links people's understanding of the cultural component of the built environment to the ecological context thus effectively leveling the argument of prioritizing nature over architectural heritage. But should structural acrobatics become the remedy for the unchallenged preservation of ecological and cultural environments? To what extent should

academics, practitioners and design students apply a literal interpretation to the notion of minimizing the ecological footprint? This line of inquiry uncovers the prevalence of an arbitrary understanding of the limits of architecture when it comes to sustainable practices and architectural heritage.

How does one determine the optimal balance between over-design, under-design and distance-design? Austin Williams, a longtime critic of sustainable architecture whose discourse is debated in class, posits that operating within the unsubstantiated boundaries of sustainability is not only against architectural creativity but is downright misanthropic (2008). Williams further suggests that creativity's retreat in favour of ecological systems extends to shying away from design decisions in areas of cultural heritage. He cites what he described as a hesitant architectural community in the rebuilding of New Orleans in the aftermath of Hurricane Katrina, and contrasts this feebleness to some of the most spectacular architectural and engineering innovations that occurred when human agency decisively defended itself by confronting, instead of avoiding, natural elements.

Staying ahead in the innovation game while remaining faithful to the parameters of sustainability is a challenge fundamentally because of the all-inclusive nature of the term sustainability. At the commencement of each project, studio participants are required to be able to deliver a clear explanation of what sustainability means to them in order to avoid design afterthoughts and last-minute add-ons. The practice of personalizing sustainability aspires to clear thought in subsequent design intentions. To further promote freedom from clichés and post-design metaphors, participants are often prompted to describe their sustainable intentions without resorting to greenwashing or to commonly used words and phrases such as *environmentally friendly*, *green systems* etc. To this end, even the use of the word sustainability is often temporarily suspended.

Another useful exercise is a reversal of the previous approach where participants are urged to identify sustainable practices and features in built or proposed architecture that is not popularly labeled as sustainable. 'Our poetry is our mutation,

our life,' Philippe Starck spouts in a TED Talk keenly discussed in class for the purpose of this exercise. He tells a brief history of mankind beginning with the primordial soup and ending with the mutations that he claims have brought about contemporary civilization. The 'romanticism' of mankind comes from the knowledge that we are part of a continuum and where we choose to focus our sights will determine our survival and will minimize our outpourings of selfishness. If we move through time while looking only at the sky and loose sight of what has come before us, we will stumble and we will fall. 'Nobody is obliged to be a genius, but everybody is obliged to participate,' Starck suggests. In an animated, often self-deprecating way, Starck, declares all life is a product of mutations, thus unequivocally equating the origin of man to the origin of nature. Like Murcutt, he does not pass judgment on the value of the artifacts civilization leaves behind.

3. Concluding Thoughts

In class, we often speak of integrated solutions that incorporate sustainability with good design without realizing that the mere suggestion of integration reveals a current condition of disjuncture. By the same token, attempts to explore what is often referred to in class discussions as the 'social component' of sustainability in order to instill cultural sensibilities already supports the assumption that sustainability maintains a predominantly ecological persona within architectural academies. As academics, we inadvertently fall into these traps because we ourselves come from an educational culture that is deeply influenced by Modernism's anthropocentric hue and technological enthusiasm.

Pessimistic memes and admonitions of apocalyptic disasters aside, the millennial generation is determined to change the world. The true gamble lies in how a young architect positions him or herself as a creator with respect to his or her creation. How embossed should his or her design signature be? How does one strike a balance between under-, over- and distance-design, as those are codified and described throughout this paper's narrative? Although idiosyncrasy is a significant component in this equation, qualitative sensitivities absorbed from a vibrant and diverse class environment must be

constantly applied in order to achieve much-needed sensible balances.

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