2009

ARCH 510 GRADUATE SEMINAR
DESIGNING FOR SUSTAINABILITY

STUDENT EDITORIALS

FALL 2009

This beautiful land was given to us in 1846 with the Oregon Purchase. Since then....

Thanks to the graduate students in Arch 510 who wrote, peer edited, rewrote, peer edited, rewrote, ... these editorials.

COMMUTE IN THE SUBURBAN PERIPHERY

...THE TROUBLE WITH OUR TRANSIT SYSTEMS

Everyday the industrialized working population of the world takes off to head from home to the workplace; some 1 billion people making commutes of various kinds, to satisfy their 9–5 commitments, their swing, or graveyard shift. Whatever the case may be, this flow of 1 billion people occurs twice a day, at least 5 days a week. In the United States, in 2005, 90% of Americans said to get where they go, they usually use their car. The average work commute in the U.S. is 26 minutes. Many of the dense urban city-scapes (San Francisco, Portland, Chicago, New York, Washington) have a number of public transportation systems in place. While the trends show that our US population is urbanizing as we move into the future, the problem still exists that the bulk of the US population resides in the suburban periphery. These 'suburban anywhere' cities are ruled by the automobile. In pursuit of the American dream, detached single-family homes lead to sub-divisions, sub-divisions lead to multi-lane boulevards, multi-lane boulevards lead to retail centers, and retail centers berth miles of impermeable paradise and parking garage structures to house more and more automobiles.

"We like our cars so much that the most obvious problems associated with them—traffic congestion and the need for parking—have utterly changed the urban and suburban landscape," says Stefan Jones, a Portland resident and free-lance writer. This is the great American dilemma of the 21st century…how do we break not just our dependence on our automobiles, but our love and attachment to them? How can public transportation become integrated with the sprawling suburban landscape that we have so mistakenly proliferated? Very simply, we must discover how we can best work with what we already have (this sprawling suburban mess) to live and commute more sustainably. Certainly future developers will know better, but we can't simply bulldoze the landscape we live in now to clear a path for a more sustainable, smarter urban environment. That would be a waste of vast amounts of embodied energy. Beyond just making transportation available to people, we need to look at ways in which we might be able to further transform public transportation itself. How can we increase ridership and comfort to users? Can we anticipate the future needs of those riding transit and plan trains and tram cars that are suited to these needs? How do we increase choice ridership, making public transit not just convenient, but the preferred, and maybe even 'cool' method of moving place to place?

Focusing on effective transportation implementation now could very well reduce the footprint of Americans across the US. Beyond lower carbon emissions, a new transportation could help solve some of the greater urban planning and development issues we are facing as well. Smarter transit would in turn lead to cityscapes that would be walkable again, walking more would lead to people sharing in something less isolated, more interaction would help create a greater sense of community, and with a strong community stresses and worries stemmed in congestion and road rage would be a thing of the past.

How might we approach such a large problem? There are some cities in not just our nation, but around the world that have planned and implemented working transportation solutions. Curitiba Brazil is one of these examples, not just for effective transportation planning, but successful urban planning as a whole. Jamie Lerner, past Mayor of the city offers the following thoughts looking toward success in public transit… "Even cities that have a few subway lines need an effective surface system. The future of mobility has to be considered in terms of integrated systems, where each piece – bikes, cars, taxis, subways, buses – never competes in the space of another." It's this level of integration and thought towards multiple modes and methods of transportation that will guarantee success in a sustainable future concerning the movement of people. There is no silver bullet in successful transportation. Even light rail in all of its bright light and high hopes is not the only answer. But a system such as light rail, in coordination with a bus, train, and even pedestrian and bicycle systems begins to more holistically and effectively solve the problem.

—Tyler Ashworth
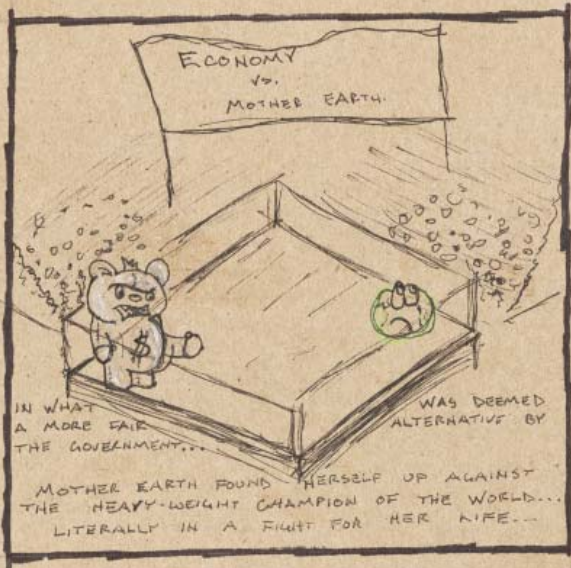
UNITING WISDOM, NATURE, & THE SCIENCE OF BUILDING TECHNOLOGY

Mankind is currently facing the greatest environmental challenge ever posed during our existence on Earth. Environmental instability and global warming are threatening Earth's inhabitants of complete extinction, and the built environment is largely to blame. The building industry consumes 76% of produced energy, most of which is derived from the combustion of fossil fuel. Fossil fuel combustion releases greenhouse gases into the atmosphere, and these gases trap heat that would otherwise dissipate.

This threat has lead to the green building revolution, which aims to reduce building related energy consumption and greenhouse gas emissions, as well as reducing other negative environmental impacts. If done correctly, we might curtail global warming and the extinction of all Earth's creatures. If done incorrectly, we might worsen the situation.

It is therefore imperative that architects increase their knowledge and awareness of design practices and principles that ACTUALLY reduce building energy use. Simply bolting on the latest green products will not prevent our extinction. This is a serious issue and requires serious and immediate attention.

We must understand which strategies are truly effective and we must apply them only where they are effective. In an effort to better understand what is effective and appropriate, I propose that designers bring together an understanding of native species, pre-technology vernacular architecture, and the science of building technology. Studying native species allows us to learn from the creatures most vulnerable to their surroundings. Studying vernacular architecture allows us to understand how our ancestors survived well before the technological age. The science of building technology allows us to assess and document for others the effects of our designs prior to construction, and after.

Our ancestors did not have technologically advanced materials, computer aided drafting, or energy simulation programs to prove or disprove their design choices. They relied on generations of wisdom and vernacular architecture practices to guide their designs. They planted trees in strategic locations to minimize the undesirable effects of wind and solar radiation while allowing beneficial winter sun to heat and daylight the house. They shaded their windows with awnings of specific dimensions to block the summer sun and allow the winter sun. These effective thermal comfort strategies were abandoned in favor of mechanical air conditioning and modern aesthetics. We are attempting to reinvent and replace these simple devices with complex technologically complicated electromechanical climate sensing louvers. These devices are expensive and prone to failure, and personal observations indicate that many are ineffective at best. New technology allows building occupants to be unaware of the relationship between nature and the built environment, leaving the outside world as a place to view from a distance through a window.

Designers can study or learn from studies of the native species of the region and how they naturally evolved to survive in their climate. For example, a team of scientists explored deciduous trees in the northern boreal forests to determine why they tend to have light colored bark. They discovered that the highly reflective light colored bark prevented sunscald injury and reduced the cooling rate under shady conditions (Citation needed). These scientists also suggest that the white bark minimizes night cooling. This implies that dark colors attract heat outward. This is just one example of how nature knows best.

The science of building technology typically evolves through laboratory research of material properties, scientific principals, and seemingly endless modeling of building materials and structures in laboratory settings that attempt to mimic the natural environmental elements: cold, hot, sun, wind, and light.

Combining the study of native species and vernacular architecture with the science of building technology will help architects design buildings that truly work and are effective at reducing and eliminating global warming. Our future is in the architect's hands.

—Keith Bickford

SUSTAINABILITY OR A RECYCLED DISCONNECT?
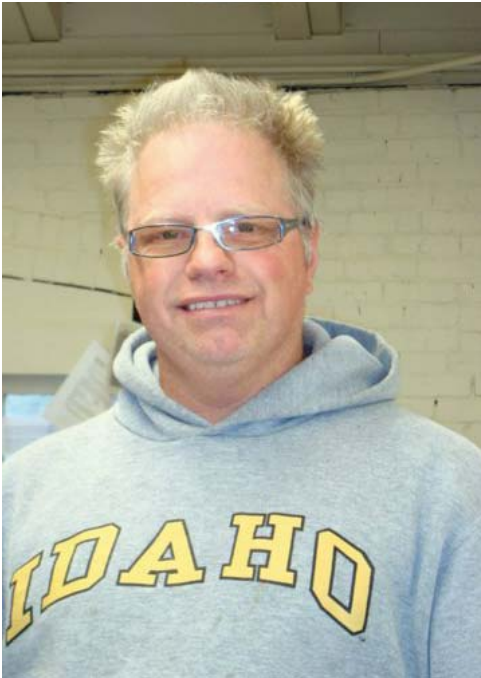
THE CHILDREN ARE OUR FUTURE

The world in many ways is really starting to think about the way we should take care of the planet more than any other time in history; however we have a long way to go before we heal its wounds—the things we have done and continue do to it. With the fast growing demand for energy and what little resources we still have left, there still needs to be a greater sense of awareness and the kind of education the young people need in order to fix our planet.

Our only real hope, is that we take seriously the kind of things we teach our children at an early age. Children are the future of our planet and if we teach them the right ways of taking care of their environment with good responsibility then maybe the future will look a lot healthier for the world.

Television is a powerful tool if used properly, but the problem is that too many times there is no regard for the way it portrays attitudes towards the environment. There must be a return to the ways in which children can grow up understanding how to respect and care for the surroundings that provide so much fun for them. Countless times I have seen how there is a blatant disregard for nature in movies and television shows for the sake of entertainment, a crash-um up, bash-um up; destroy mentality just to give some little excitement to the viewer who watches them. It is no wonder that children show so little respect for other people's property at times and even their own as they grow up. "The average college student produces 640 pounds of solid-waste each year, including 500 disposable cups and 320 pounds of paper. According to the most recent study available at Tufts University, there was a significant spike in the University's solid waste every April and May when students gear up to leave campus. In 1993, The University registered as much as 50 tons more waste than the average 180 tons throughout the year." (Graaf, Boe 1)

I still see a lot good usable stuff thrown into the dumpster on and off campus here at the University that could have been donated so others to get the full use from it. Another problem is that a lot of the stuff that is thrown away did not last long because of lack of care or because it was a target of some drunken college kids. Face it we still believe it is a throw away world. This I believe boils down to the lack of good education in the area of environmental stewardship at the primary and secondary levels of society at an early age. Just take a look around you and you will most likely see garbage just left or thrown about and then there is the graffiti on buildings, bushes, fences, and other places that are on other people's property. In 2008 when I lived near the UI water tower near the campus on the south side of the Administration building I noticed that some small trees were broken off at the fence level. I latter found out that a fraternity on that same side did the damaged and a week later some more tree were destroyed. This is such a sad thing to happen to the property of our fine University because I see it tries hard to educate us on sustainability and stewardship of resources we have left. The right kind of education can go along way if it is backed by proper role models and we desperately need the older folks as "good role models" for our children. I am not talking about kind we tend to see in sports or the movies; what I advocate has nothing to do with them as a entertainment field, although we sure could use some good role models there too because of all the drug use.

If there are proper education programs on stewardship and good role models that young kids can see as they are growing up, then we can overcome this lack of concern for the way we treat the environment around us. There has been good success in a number places. Children need to be taught at an early age the concept of "Environmental Responsibility" at all stages of our educational system, not just at certain schools of thought at college level, such as the University Idaho, the School of Sustainability at Arizona State University, and the Center for Alternative technology in the UK. We say it is important in the colleges but do we believe it?   Here are some interesting facts. Recycling collection as infrequent as once a week has diverted about 40% waste at the University of Colorado-Boulder. Campuses offering reusable mugs and drink discounts have seen their disposable waste decrease by as much as 30%." (Graaf, Boe 2) This is good news for us here in Moscow too. Just think of what we can achieve if all the recycling programs were believed in by the populace here in the United States alone not to mention the world. There is a famous saying that I believe has a lot of merit to it and that is "train a child in the ways they should go and when they're old they will never depart from them." (Proverbs)

There are other places that have been at the forefront of teaching good stewardship to young children and this is great, but there needs to be a lot more. "For many years environmental stewardship has been a focus at Millbrook and historically has been based on our strong science program and wildlife conservation work at the Trevor Zoo. In addition, environmental stewardship of the natural world is one of Millbrook's five core values—along with respect, integrity, community service, and curiosity—and has been an important part of Millbrook's outlook and philosophical direction both in and out of classroom." (http://www.millbrook.org)   When I was a small boy in grade school the common attitude was that a person just did not waste things. Even though there was not a lot of education about Global warming, there were environmental issues being taught in school; like taking care of forest, wildlife preservation, and others. At least where I grew up a person paid more attention to care more for their surroundings. Things appear to be different now, because the cost of cheap goods imported from other countries allows us to buy a lot more. Back then manufactured goods were built better, but cost more and my family had to save more in order buy the everyday things taken for granted now. That's not to say we did not have a waste problem when I was growing up but the amount per person was smaller compared to today's consumption.

Today I believe we have come a long way in our efforts to teach better life styles of environmental stewardship and eco-friendly behavior and sound technical ways to improve the world around us, but again, there is still that large disconnect in the attitude that a lot of people have about whose responsible it is. Sad to say in many regards it is still a throwaway society. We must overcome this blithe attitude with better educational programs on television, in the theaters, and at all public schools, including the computer and internet. Most of we all must be better role models for "Sustainable Built Environments." I believe we can create, if we try hard, a sustainable world if we do not give up. Our future depends on doing it, not just thinking about it!

—Dave Burley

Environmental Impact

BROKEN PIECES

HOW ARCHITECTURE AS A VOCATION HAS FRACTURED AND AFFECTED THE BUILT ENVIRONMENT

Architecture in the 20th century may have fallen victim to the cultural context which it entered. Architecture is a powerful profession which has the power to shape conventional ideas and challenge beliefs, but architecture is also a service and eventually ends up producing the values which are demanded by the clientele. In the twentieth century the legacy of the industrial revolution had stratified society into even smaller niches than was experienced at the outset of the industrial revolution in the mid nineteenth century. The effects of economic incentives in present day society are to force people into more specialized roles in the economy. A person ceases to generalize and narrows in on their chosen vocation.

Take as an example, our history of architecture over the past two centuries. Some architectural philosophers such as Le Corbusier in his book Towards an Architecture suggested that architecture as a profession is dying out to be replaced by the field of engineering as a response to witnessing the architect assume a smaller and smaller role in society. This is not the case. Architecture traditionally was the job of designing and overseeing building projects, the master builder. The need for this service has not gone away. However, architecture has splintered into a variety of more narrowly focused careers: civil engineering, mechanical engineering, electrical engineering, construction management, and interior design are all fields that have splintered out of the architecture profession as a result of the growing complexity of the field. Architecture as a profession has mimicked the overall trends in our culture to focus, specialize, and narrow in the interest of producing a product which fully takes advantage of the technological advancements of society.

At no time in history have buildings incorporated the same quantity of systems in their design. Each system requiring its own separate solution from its own separate expert. The failure to incorporate these systems into one simple and eloquent whole is the failure of any one person rising to the challenge of accountability. A project is handed from owner to project manager to architect to engineer to contractor and then back to owner. The owner is left with no lasting relationship with the architect or massive design team and consequently no real knowledge of how his building is maintained or operated until it entropies and is inevitably demolished and replaced by another temporary fix. These issues are recognizable in many fields of building; from commercial to residential to industrial. No single person knows the extent of solutions to all issues expressed in these projects. The natural instinct of any planning official overseeing them is to divide and conquer; to segregate the different construction types into their own independent zones that they may be seen individually. This is the scientific impulse of our information age market: to dissect a whole in order to examine its parts. This strategy has an unfortunate effect of exerting far greater costs on the environment, the economy, and the culture than at first may be anticipated.

A built environment that is responsive to our culture's needs must incorporate a building strategy that aims at integrating various systems and building types into one functional and beautiful whole. This strategy must exceed conventional zoning policies that divide land into parceled pieces of an immense whole and aim at integrating them into smaller, more human, pieces. This strategy must overcome centuries of design assumptions that have treated human commerce as a sterile machine that could be shattered into its various attributes and have rational order imposed with ruthless authoritarianism. This is the central argument between the philosophies of reductivism and phenomenology; reductivism on one side: attempting to splinter our culture and reduce human existence to the sum of its parts and phenomenology on the other: the philosophy of our true comprehension and pleasure of existence.

Communication must flow between fields of design, work and business in our century. Most important of all, people must be treated with humanity and their environments must reflect their unique character and needs. Architecture mimics culture and over the past century this has meant an era of psychological and spiritual repression which prioritizes gross national products over beautiful personal fulfillment. In this century the architect must lead the way in bringing the divisive technologies of our age under the human impulse which commands our efforts and desegregate the built environment.

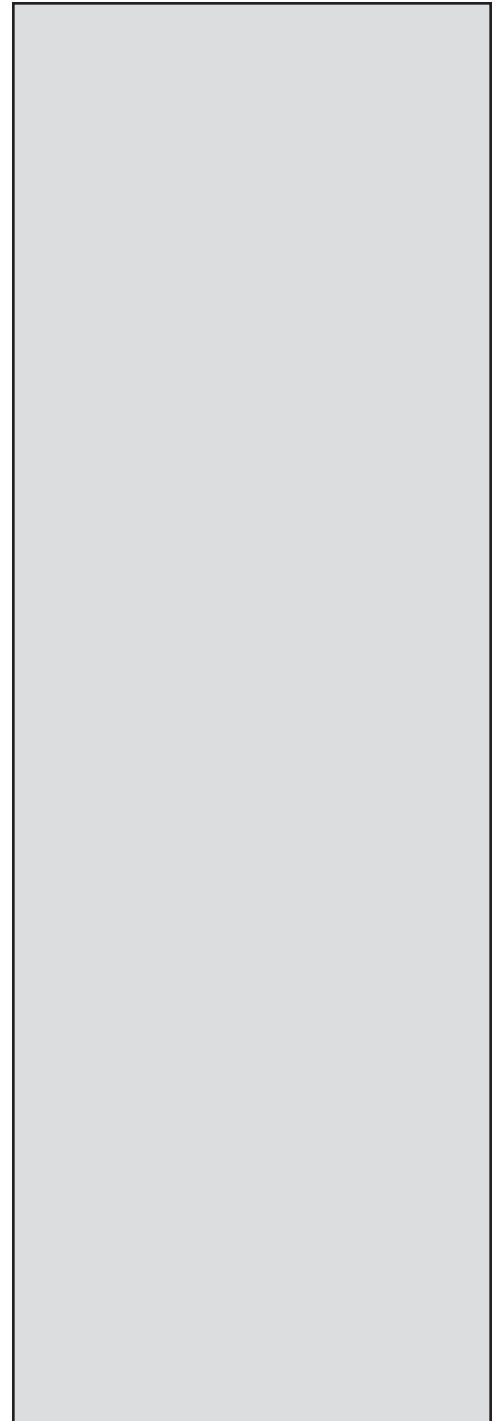The solution: mix-use planning-seems a bit of an understatement

—Daniel Clift

ALTERNATIVE
ENERGY WILL
COMPROMISE
THE AMERICAN
WAY OF LIFE...

/35

...WHAT A SHAME

FLAWS IN MIND

The separation between the ignorant masses of America and the people that know better has turned urgent cries of doom into faint, shuddering whispers that demand little more effort than a passing thought. For going on more than twenty years I have been aware of global warming and its effects on the climate. As an impressionable fourth grader I was part of "The Global Awareness Brigade," a group of ten or so students responsible for helping with recycling in our school and spreading awareness about issues that affected global health. Looking back it seemed superficial, like preparing for something that would not ever happen. Needless to say, as a nine year old global warming and our effect on the planet was not a concern for me or anyone in my area of influence, and really has only become a serious topic in my realm of thought since I started college. I feel that this was primarily due to an opinion of skepticism and a general belief that our actions could not affect anything beyond our local environment. Luckily, twenty years later public opinion has changed, a little, but still has not fully realized the situation.

The fact is that over time a simple action such as driving to work and back affects the whole world, especially if masses of humanity do it day in and day out. It is hard to see an action as harmful if you are one person in a sea people perpetuating that action. This is ingrained into the psyche of anyone who originates from an affluent society that unconsciously uses energy without the knowledge of what the actual cost of its extraction, refinement, distribution and use is. This has materialized in America as the infatuation with the automobile. For as long as I have had memory there has been cars, and for as long as I could drive I have loved the freedom they provide. Until recent times my finances allowed me to drive to my heart's content, and to be completely honest I still would be driving down that freedom road if I could afford it. The current market and my non-existent income has greatly limited my driving and localized my travels to the greater Moscow area. The notion that the cost of energy largely determines its manner of use, is the greatest determinant for reducing consumption and increasing demand for efficiency.

The proof is not "REAL." The effect on the everyday life from the increase of a few degrees or one more piece of trash in the landfill has little or no immediate effect on me or any other hardworking stiff out there if we are just trying to make it from day to day. If we have to choose between saving a tree or feeding a family there is no doubt in my mind I will feed my family. We need to make sustainability more than just a luxury that spoiled, affluent students can afford. We need somehow to remove the issue of sustainability from the equation of feeding ones family. Our society is based on the acquisition of natural resources. This has been going on for enough time that our society has become reliant on this acquisition to a point where entire cities economies are based on the production of products that are one hundred percent dependant on the input of energy for the manufacture and function of these products. When societies develop around the acquisition of exhaustible recourses it puts families, jobs, traditions, and culture at odds with sustainable practices. This what I believe is Americas greatest obstacle when overcoming our reliance on fossil fuel derived energy. To solve these issues we need to provide innovative ways of conservation and remediation of existing jobs, I is not enough to close automotive factories, mills, and towns because the industry is inefficient and damages our environment, we need to retool our industries and focus on innovative products that are pushed toward efficiency.

I find myself almost selfish, putting the now ahead of the future, but the future is a accumulation of nows.

—Paul Hauer
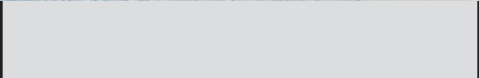
SUSTAINABILITY IS NOT A CHECKLIST

A while ago I had a conversation with a friend who claimed that the most sustainable building built to date is the Frank Gehry Guggenheim museum. I was initially quite skeptical about this claim because this would be one of the last buildings one would typically think of as sustainable. The Guggenheim does not use many or even any of the principles of passive design. It does not have a green roof, and it does not have solar panels. In fact much of the building runs contrary to what I think of as sustainable design. The building wastes structural resources by creating functionless form. And the building is seemingly designed without accounting for the local climate.

My friend, however, was basing his assertion upon the fact that this building had single handedly breathed new life into a depressed and run down city. He was referring to an aspect of sustainability that is often times overlooked, social sustainability. While the building may not save energy all by itself, its revitalization of a floundering port town has saved enormous amounts of embodied energy. The city of Bilbao, rather than continuing down its path towards a run down, abandoned industrial city has reinvented itself into a prosperous cultural center. You may dislike the museums' sculptural forms and you can disagree with how it wastes steel but it is difficult to not recognize its role in turning Bilbao into a major tourist attraction. According to an article from Financial Times, the museum generated 500 million in economic activity for the region during its first three years and 80 percent of tourists who visit Bilbao, say they came explicitly for the Guggenheim.

I do not necessarily buy into this argument fully, and I still feel that the Guggenheim is far from a good example of sustainability, but the discussion did help me take on a broader definition of what sustainability is. People often do not think of a building as being sustainable unless it has a LEED rating and solar panels and a green roof. I feel that many of the "sustainable projects" proposed and built these days are typical projects that have various amounts of green ingredients tacked on. I use the term green ingredient because I believe that this is how many people understand sustainable design: if you just throw enough green ingredients into the mix then you are guaranteed a sustainable project. The LEED program and its well-known shortcomings may be partially responsible for this understanding (or misunderstanding) of sustainable design. Really though, it is more peoples' misunderstanding of LEED that perpetuates this. The LEED checklist is often seen as a formula for a sustainable building. The LEED checklist is not set up to help architects come up with more sustainable solutions. Rather, the LEED program is there to serve as a catalyst for market transformation.

There are of course better, more complete checklists when it comes to sustainability. Malcolm Wells' Regeneration-Based Checklist for Design and Construction begins to take a lot more into consideration but it still falls short of accounting for the cultural and social factors of sustainability. The updated, carbon sensitive version of this checklist, however, does include a cultural section as well as other factors to give designers a fuller evaluation of how sustainable a project is. Even this checklist should not be regarded as a formula for sustainable design, though, and it would fall short if it were. (Actually, it seems that these two checklists were developed to be very subjective so that they would not be taken as formulas.) My point here is not to discount any of these checklists. They are all useful tools (some more useful than others) for evaluating the sustainability of a project. The problems arise when they are misused as a recipe for designing. Sustainability is a complex issue and does not result from combining the right ingredients taken from a checklist.`

—Tom Joyce

It's probably the greenest, most sustainable building around. It's certified LEED Platinum. It has solar power. It has wind power. It has shading devices. It has green walls. It has composting toilests. It has a living roof. The cladding is recycled. The paints used are low VOC. Just to name a few of the eco-features.

Is that a coal-fired power plant poking out of the back?

Oh that lil' guy? I wouldn't worry about that lil' guy.
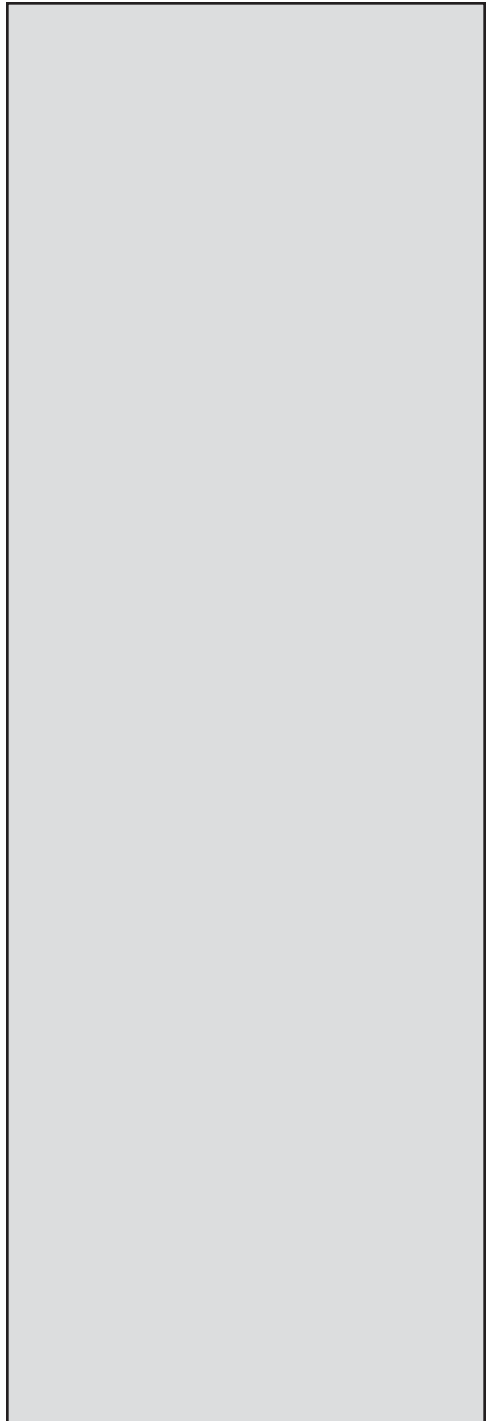
APPROPRIATE ARCHITECTURE

In this day of convenience and easy-living for most Americans, it is disturbing that there are still millions of individuals living in impoverished conditions. This gap in the wealth distribution forces us to reconsider what we value in life, and forget about those material things we think we need. Rather than look down on "lower" classes, let us lend a hand and help make their lives just a little better.

The built environment is a fundamental part of life, and therefore architecture has deep-seated influences on the quality and happiness of our lives. As long as we surround ourselves with good, appropriate environments, I don't believe there is such thing as "poverty". Poverty rates are determined by income levels, putting a direct connection between money and happiness. Most college students at the University of Idaho are considered to be living below the poverty level. Yet most are happy and healthy. Why? Because they have friends, a safe home, and a hope for something better after graduation. This hope for something better is what motivates us to get up in the morning. As architects we try to design new and better ways to live, yet we cannot design a utopia, for it does not exist. However, as philosopher Ernst Simon Bloch alludes to, as long as we are striving for that utopia, that is a sort of utopia in itself.

I feel that our nation lives in a state of apathy towards the world, in which the only things we care about are our own individual needs, predominated by financial and material wants. There is more out there; we must only search and act towards it in order to lead happy lives.

So what does this search look like? I think it begins with looking beyond ourselves and thinking of the population as a whole. How do you contribute to society? What are you doing to progress and preserve our world? These are questions to ask yourself occasionally. Take a step back and analyze your daily actions, your work, your life, and how these affect you and the people around you.

As future architects our actions will impact many lives for many years. The populaces that can benefit the most from appropriate architecture are those that can appreciate the simple things in life. I'm not saying you should only design for poor and impoverished, because they aren't necessarily any worse off than successful millionaires. To quote the great music legend Johnny Cash "It's so hard to find one rich man in ten...with a satisfied mind." One rich with money and goods isn't always rich in happiness and satisfaction with life.

What I am saying is to design as a humanist. A designer for people, for the basic primal instincts people need, both individually and as a whole. Sometimes what the general population needs is pro-bono design/build of homes for third-world countries. Sometimes we need millionaires to pay for a zero carbon emission super-structure. In all cases, we need to design for the preservation of our world, our lives, our history, and our future.

I don't like to categorize architecture as 'good' or 'bad', but rather as appropriate. Appropriate for that time, that place, for that client. If a designer keeps in mind the human as an individual and as part of something larger, than he or she is setting themselves up for appropriate architecture. But this is no small task. There are many social, economic, and environmental elements to consider in order to design for the populace holistically. What we need today is a radical shift in social attitude toward what we value in life. If we have that, architects will then have the opportunity to design appropriate architecture for our contemporary society.

—*Tyler Macy*
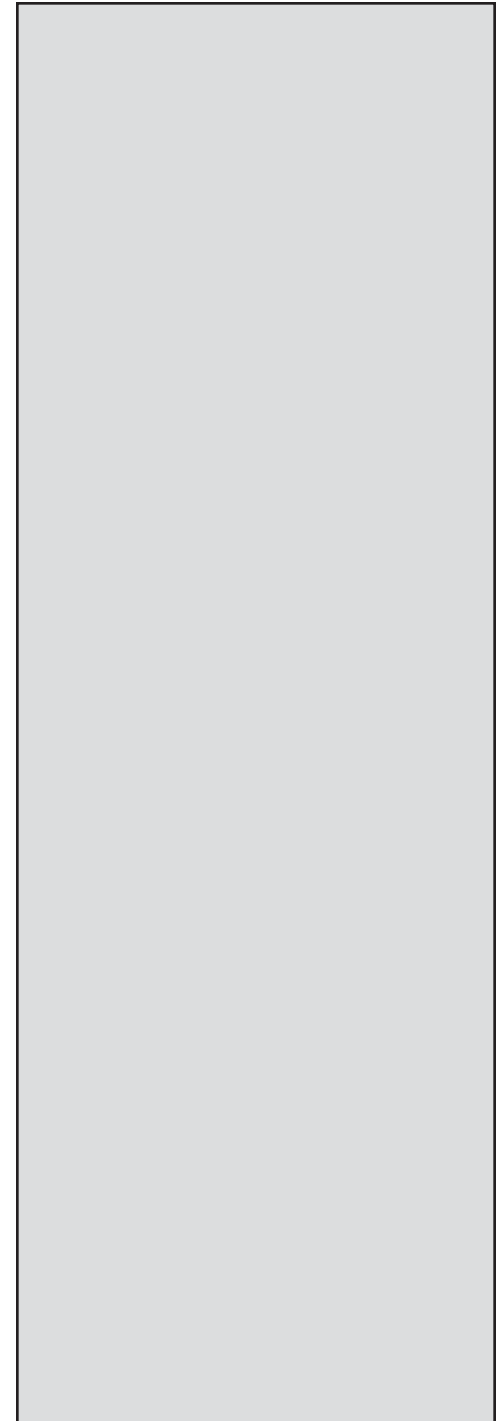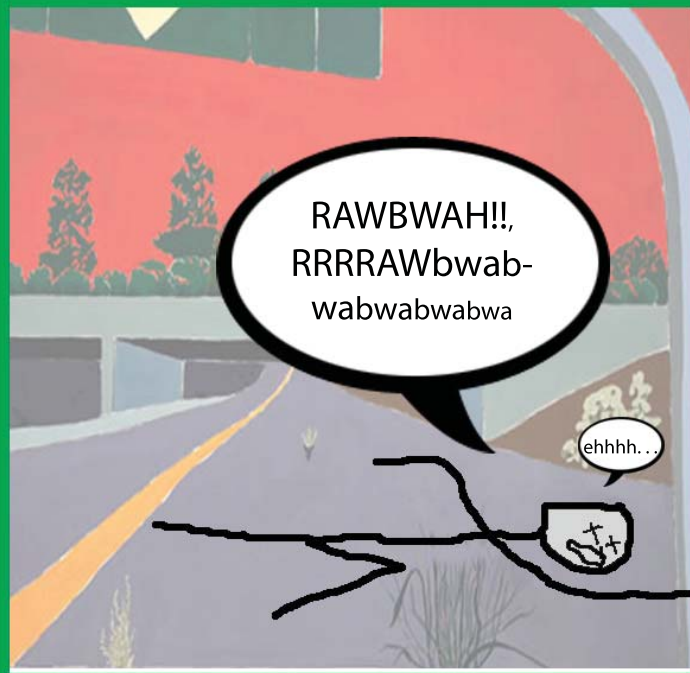
C: SYSTEM RESTORE-VALLEY OF HEART'S DELIGHT

Silicon Valley refers to Santa Clara Valley California, located at the southern end of the San Francisco Bay. The term Silicon Valley referred to the region's development of the silicon chip. The term replaced the Valleys original name, Valley of the Heart's Delight that described the idyllic orchards filling the valley. Now Silicon valley' refers to the large number of high-tech businesses located throughout the Valley.

Silicon Valley has been the site of electronic innovation for over four decades the integrated circuit, the microprocessor, and the micro-computer are a few examples of the world changing technological advances that stemmed from Silicon Valley. Silicon Valley represents the epicenter of the technological revolution and yet the urban fabric lacks smart design. Housing in the bay area is unaffordable for an average family let alone the disadvantaged.

The Bay Area's Silicon Valley has the highest concentration of high-tech workers of any metropolitan area in the world, over a quarter of a million. The average salary of these individuals is also the highest average high-tech salary in the United States at $144,800. This highly paid demographic make up over 30% of the population in the valley, this brings up the question who are the left over majority, the other 70%

Currently, to accommodate the service workforce in the area older apartment complexes have transformed into low income housing pockets filled over capacity with the Valley's low income workforce. This concentration of low income housing has lead to a rise in gang activity and crime. Along with a under availability of affordable housing within the bay area the economic crisis has caused an enormous amount of commercial real-estate to be dumped on the market.

Due to the recent economic crisis town centers within the area have become revitalized and the outlying business parks have become deserted. Having grown up within the heart of the Bay Area's Silicon Valley I feel that the abandoned business park districts provide an excellent opportunity for carbon neutral urban renewal. By densifying existing industrial sections of Silicon Valley with affordable market rate housing I hope to stimulate industrial activity in the area as well as create an urban planning model for the future.

By integrating industrial development within certain city blocks that are wrapped in residential development there is an opportunity to create high end residential units and low income housing that look similar and are zoned by block rather than by neighborhood. By incorporating a sliding scale of residential redeployment I hope to create social equity. My planning model will hopefully also be used to further the concept of planning diversity in an urban context.

—Laura Martin

CORPORATE WASTELAND

THE LANDSCAPE AND MEMORY OF DEINDUSTRIALIZATION

It seems to be an everyday occurrence, to demolish our 'history', in the form of architectural structures. Thus, leaving future generations to never know their past, but only to think that what they see as the built environment today is all that has and will ever be. Standing in contrast to what we consider aesthetically and socially regulated new development space, neglected sites of industrial ruins holding our 'history', which provide a different aesthetic to the over-designed spaces of the city. These ruins evoke an aesthetic of disorder, surprise and sensuality, offering ghostly glimpses into the past and a tactile encounter with space and materiality.

The rusting detritus of our industrial past—the wrecked hulks of factories, abandoned machinery too large to remove, and now-useless infrastructures—has for decades been a part of the North American landscape. Over the past years, these modern ruins have become cultural nuisances, drawing an increasing number of developers and landowners to demolish this 'history' and just build a box chain development in its place. Thus creating a mind-set of 'no harm done, another dollar made', and a built environment lacking in cultural aesthetics. The ritualized demolition of landmark industrial structures serves as dramatic punctuations between changing eras.

Our ever-evolving deindustrialization is not simply an economic process; rather, deindustrialization is a complex process that is uneven in its causes, timing, and consequences. It has potential social and cultural ramifications that we have yet to fully realize. An entire 'system', not only the workers—loggers, truck drivers, suppliers—is affected by the drastic change caused to an area when its industrial livelihood is removed.

It is precisely their fragmentary nature and lack of fixed meaning that render ruins deeply meaningful to all generations. They blur boundaries between rural and urban, past and present, and are intimately tied to memory, desire and a sense of place. The celebration of industrial ruins reveals much about our culture, our past, and ourselves in order to understand the ways in which geographic and emotional proximity to these industrial 'ruins' has affected our remembrance of the past. The more we study, look at, and understand the unknown ramifications of these actions, the more deeply we tap into the vulnerability of ordinary people in our world of merciless economic and technological change.

Making adaptive reuse of vacant industrial buildings needs to be a an integral part of future infill development and affordable housing strategies should be under the rubric of "smart growth." The opportunity to reuse obsolete facilities in the urban core supports sustainability and smart growth initiatives designed to focus redevelopment in inner cities in an effort to decrease urban sprawl. Thus creating an alternative to our ever-increasing throw-away society, offering a sustainable building site with existing infrastructure and materials. These historic buildings help define the character of our communities and culture by providing a tangible link with the past; removing them removes vital information from our future.

—Jessica Shoemaker

SUSTAINING TRAVEL

Travel is about discovery; experience; limitless opportunity. Known as one of the greatest ways to learn, travel is also one of the major contributors to both the economic as well as environmental crisis we are facing today. Global urbanization is growing at an unpredictable rate, scale and density. The cities in the twenty-first century embody extreme complexities of communication and interaction. Large city networks and systems are growing exponentially. As populations become increasingly urbanized, the evolution of cities will largely shape the outcome of our long dependence on natural resources. To create advancement that consists of an urban society in balance with its environment, a compilation of solutions that include sustainable economic systems, enhanced infrastructure, sustainable planning, energy policies and flexible, yet regulated, social systems must be implemented. This project will develop a way in which design systems can control different dynamic and innovative organizations of travel to contribute to the vital revolution in the future of the ecological and economical realm.

Cultural richness and diversity in use, sustainability, and innovation as well as climatic influences in Portland are primary parameters that will lead design. The built environment is now the largest negative factor in the stability of ecosystems and the climate. Action must be taken to integrate realistic economical conditions and innovative technology. By blending sustainable strategies with a new interpretation of future transportation design, a vibrant complexity is found; solutions that address infrastructure in the economic, environmental and social aspirations of a growing world population. The challenge is to improve the quality of travel while substantially lowering carbon emissions and fossil fuel dependency.

Part of this project will look at the drastic sprawled growth of our landscape, paying little attention to the tension between global interests and the environments ecological needs. This rapidly changing parameter can create vast areas which have become economically and socially depressed, congesting space and degrading environments. While cities undergo this inevitable transformation, infrastructure needs to be guided by policies and programs of development; a more enlightened approach to planning, design, and management of humane travel habitats for the future.

Looking for new forms and modes of spatial organizations and infrastructure will challenge the forces of post-modernism, homogenization and standardization of urbanism. Many ancient, historic and contemporary implement transportation techniques that coincide with the complex parameters we deal with today, creating a symbiotic relationship with the built and natural environments. Using these precedent cities as research tools, a firm understanding of the processes involved in accomplishing this relationship will be identified. A proposal for a vital and ambitious national transportation development system will be proposed.

As the model, the city of Portland also must be dissected pragmatically throughout each district, region and overall geographical configuration considered in its means of transport. As a city named after its innovative system of transportation, Portland has great local, national and international infrastructural connection. At a nationwide scale and a local level, planning needs to be creative and backed up through political will, policy, and funding.

Looking at the context and dynamics beyond the city of Portland will impact the project by seeking approaches for objectives to be implemented in the prototype; energy efficiency, sustainable materials and methods as well as architectural, spatial and social values. Potentially, the program will consist of an alternative national, and possibly international, transportation system as a sustainable approach to long-term travel in both urban and rural environments. The intention is to stimulate economic and progressive innovation with sustainable architecture and energy efficiency. The environment can be viewed as natural infrastructure that is an essential input into a wide range of human and natural productive processes.
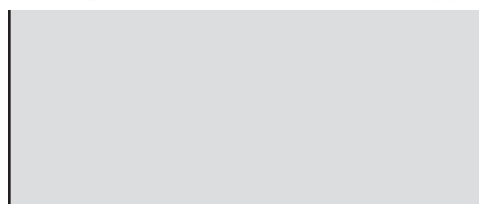
—Anne Zuercher
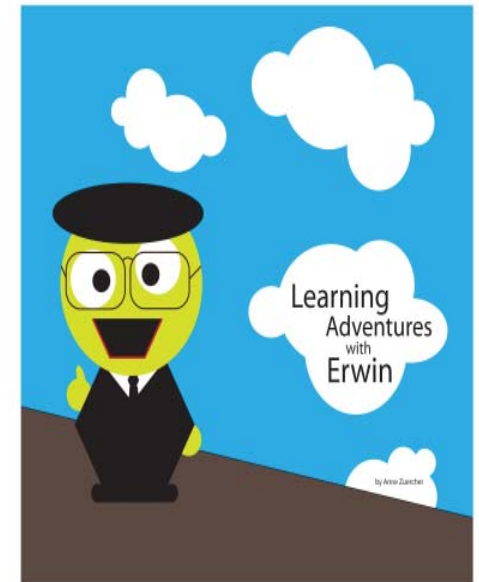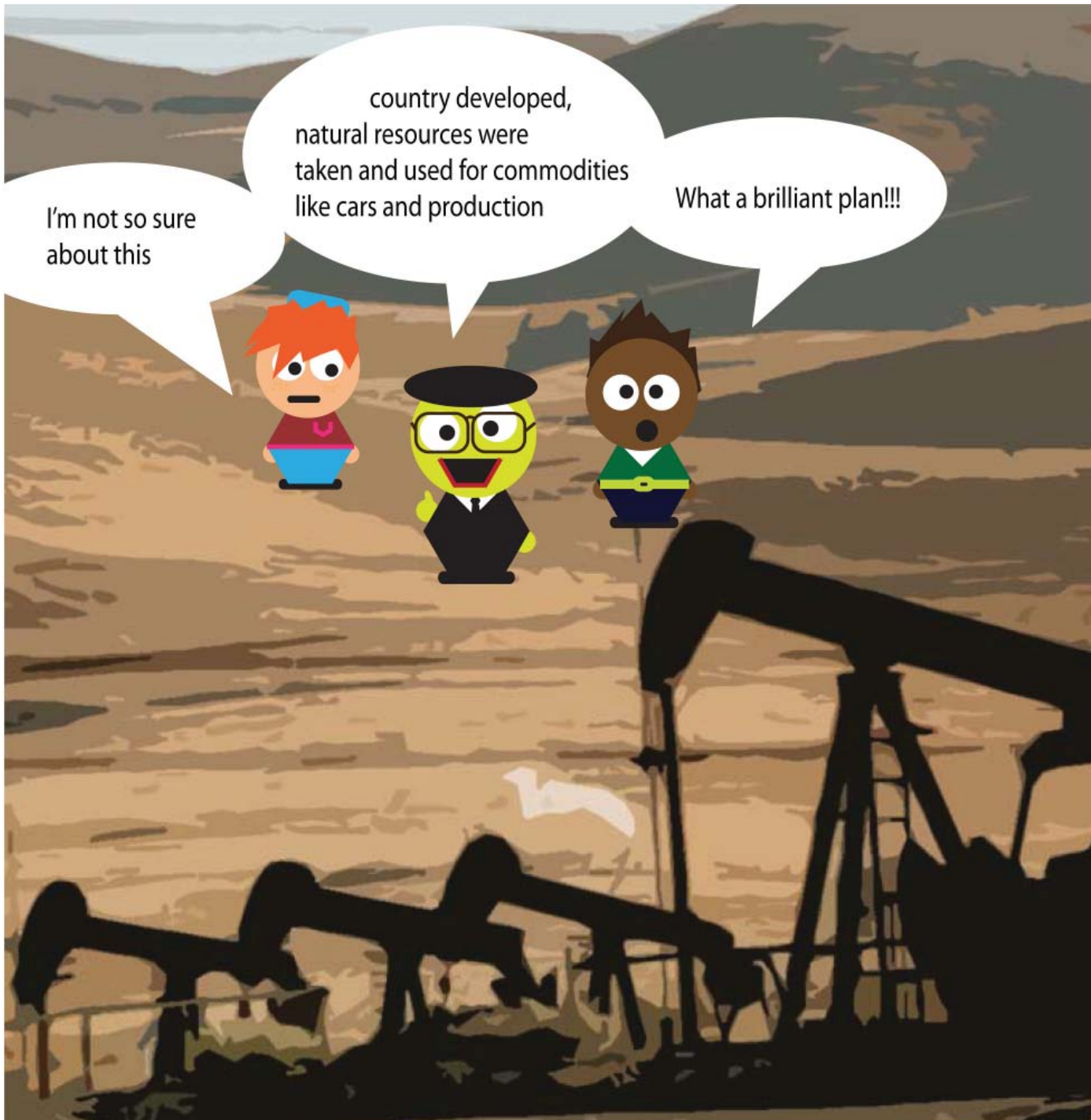
MAKING A CASE FOR ART

Art seeks to engage the mind and provoke thought. It has the ability to be experienced through the physical and mental. No matter how subjective art is it is still objective once it is experienced by someone other than its artist. Art requires skill and knowledge. It has an unavoidably powerful influence on our society through questioning issues, and provoking thought. Time and time again our understanding and perception of the world is shown to benefit from the physical, emotional and mental outlet of art. Art helps ground and unhinge our assumptions of the world around us. Art is one of the most complicated and universal forms of communication that exists. Art, no matter the subject or medium, exists because of human comprehension of existence. How can we deny the significance of something so pedagogical?

In an effort to adhere to the ever-prominent budget cuts to education in the United States, art programs are often the first victims of public education to receive financial cuts. Is this because art is so often not seen as a truly significant and legitimate area of study because it is not seen as professional or profitable monetarily or to society? Or has our society not yet realized art's significance?

A major part of the problem is that we live in capitalist society where the dollar often takes precedence over all other factors. When art is materialized its monetary value is often very difficult to assess. Like art, the environmental movement has had a difficult time establishing a real value in our society. Recently the overwhelming evidence of the dire consequences of abusing the earth's ecosystem has helped in defining the price of environmental sustainability. With art will we ever reach a point where we are faced with serious repercussions due to the neglect of upholding and maintaining evolving practices of art? Censorship, narrow mindedness and pure bias throughout history have resulted in the stifling and suffocation of freedom of expression, ideas and innovation in art. If art is not upheld as a valuable area of thought and exploration we are faced with banality, homogeneity and what we know of as literature, communication and design cease to evolve.

—*Emily L. Thackray*

COMING TO A CONCRETE JUNGLE

NEAR YOU!!!!