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Journal of the City and Regional Planning Department  
College of Architecture and Environmental Design, California Polytechnic State University

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This is volume VI in what has turned out to be a very successful project for the City and Regional Planning Department. More people are reading FOCUS and the content quality continues to be informative and relevant. We strive for FOCUS to have nationally significance and regional relevance. This year is no different, and we hope you enjoy reading all the articles and giving us feedback on the work.

This issue brings to a close a special year for City and Regional Planning. It is our 40th anniversary, when the first class of students began in 1969 and we have been holding a series of events in 2008-2009 to celebrate. In October 2008 nearly 100 alumni came back to San Luis Obispo to share memories with each other and to talk to present students about getting the first job and being a planning professional. We thank the alumni steering committee for all the effort and support they put in to make this event happen. The alumni also helped us to put together more of the CRP Cal Poly story from Ken Schwartz (1968) to Bill Siembieda (2008).

As part of this celebration year, we are making a video featuring faculty and students who share experiences of the program, and it will serve as a means to memorialize the past. This year we lost a famous and valued alumni and adjunct faculty member with the passing of Paul Crawford, one of the leaders in the Form-Based Codes movement. We all do miss him. Throughout its history CRP has educated many people who have become planning directors of major cities (San Francisco, San Jose and Las Vegas, for example), many counties in California (Ventura, San Luis Obispo, for example) and even city managers (Fort Collins, CO, for example).

In 2007, I wrote about our Masters program (MCRP) being ranked in the top 20 nationally by practitioners the Planetizen.com ranking process. In 2009, we moved up to 15th nationally for all universities, and were ranked #1 for master’s program without a PhD program. This is a simply wonderful ranking given that we are a publicly partially assisted university and not located in a large city. We owe all of this to the great students, the alumni, and the excellent faculty; all of who work hard at creating a wonderful educational experience. This high ranking has resulted in receiving 110 applications for the fall 2009 entering MCRP class, a departmental record for quantity and quality.

This is also moving year for us. We have left Dexter Hall and returned to Engineering West where faculty now enjoy offices with windows and new furnishings, and the students have much better studios and equipment to work with. We do owe much of this to generosity of the Errett-Fisher Foundation who has supported equipment and student fellowships for the department.

The Department continues to partner with cities and towns to provide needed planning projects that are completed in our studio and lab courses. This year we worked with local agencies in San Francisco, Ventura, Grover Beach, Delano, and Benicia, CA. Handled through CRP 410/411 by instructors Zeljka Howard and Adrienne Greve, the work in Benicia is especially exciting as we are doing a Climate Action Plan for the city. This work will provide a model for such plans in small towns throughout California. In support of these efforts, CRP faculty Umut Toker organized a Community Based Design symposium in spring 2008 where nationally known professionals and CRP students presented their work on how to design affordable housing using extensive user input in the process. And since CRP always likes to
have practitioners teaching in the program, this year we were fortunate to have Alex Hinds (former planning director of Marin County) and Scott Bruce (former community development director of Coweta, Oklahoma) teach with us.

CRP’s “international component” continues to expand and enrich our lives. This year we have added a fifth university exchange program in partnering with the urbanism program of the Universidade Lusofona in Lisbon, Portugal. We have also hosted two Brazilian academics that came to do post-doc research on California urbanism. Douglas Aguiar, from the Federal University of Rio Grande do Sul, and Paulo Afonso Rheingantz, from the Federal University of Rio de Janeiro. Both gave lectures and participated in studio reviews; it was great having them with us.

In 2009, in collaboration with the Architecture Department, CRP will be sponsoring the visit of Geoffrey Payne, an international expert in housing and land development for the World Bank, UN-Habitat, and the British Government, and formerly a lecturer at Oxford Brookes University and DPU-University College, London. Geoffrey will spend a week with us in April lecturing and conducting a one-day workshop. To deepen this mix of international experiences I spent five weeks as a research professor at Kyoto University in Japan, studying the Japanese disaster recovery and disaster mitigation planning systems. This work will feed into a four-year project by a CRP faculty team that is beginning to support the State of California’s disaster mitigation programs through the newly formed Emergency Management Agency

In closing, I want you to know that FOCUS is produced with a volunteer staff of faculty and students under the watchful eye of Vicente del Rio, the Managing Editor. There would be no FOCUS without Vicente.

William Siembieda, Ph.D. AICP
Department Head
City and Regional Planning Department
At CRP we all finished last year with mixed feelings. On one level, the presidential elections gave us hope of better days to come and enough reasons to celebrate, but we were soon stunned by the devastating effects of the raising economic crisis. On another level, CRP was preparing to celebrate its 40th anniversary and the publication of my new book with department head William Siembieda, Contemporary Urbanism in Brazil: Beyond Brasilia (University Press of Florida) (see page 36). On this level too, our feelings were bittersweet since early last year we had lost one of our most celebrated teachers, Paul Crawford, after a long fight with cancer. Paul taught for a number of years in CRP, gravitating around Introduction to City and Regional Planning, Public Sector Planning Practice, and Planning Agency Management. So this issue is marked by mixed feelings of a year that will be difficult to forget.

As a Tribute to Paul Crawford, FOCUS shares with you stories about his life and his professional career by Kaizer Rangwala, associate community development director for the City of Ventura, and by Mike Multari and Chris Clark, former associates of Paul in the successful San Luis Obispo planning firm Crawford Multari Clark. The reader will also enjoy learning about Paul’s talent for photography through a collage of some of his thousands of photos that reveal his sensibility for the quality of places and for the human drama that is expressed in cities.

The Essay section starts with an article by Dan Levi and Sara Kocher on the impact of cultural and particularly religious tourism on places. Their recent comparative study of Thailand’s historic Waks (religious places) and California Missions shows the importance of providing opportunities for authentic experiences of sacred places, and that the spiritual culture of a region can promote sustainable tourism that benefits both the tourist and the community. Next, Alex Hinds –former planning director of Marin County who taught at CRP during the fall of 2008–gives us a brief account of his presentation for the college’s Hearst Lecture series on the 2007 update of the Marin Countywide Plan and its theme of “planning sustainable communities.” In this section’s last article, Paulo Afonso Rheigantz –CRP’s visiting scholar from May 2008 to January 2009– and Denise de Alcantara, both faculty at the Federal University of Rio de Janeiro, discuss their research project on place quality and study of the attributes of a residential street in Rio de Janeiro from the phenomenological and morphological perspectives.

Opening the Faculty and Student Work section, my article discusses sustainability in contemporary Brazilian urbanism, as a spin off paper from the research for my book Contemporary Urbanism in Brazil. I note the difficulties in integrating urban planning and environmental issues at the policy and systemic levels in Brazil, despite the recent successes in both areas, and particularly, in sustainable urbanism. Next, Umut Toker discusses his work for the Delano city’s downtown area, which started with a participatory concept plan and continued with his second-year urban design lab developing urban design proposals. BCRP student Karl Eckert’s article explores the garden city model and its impact in Germany. Eckert had the opportunity to make a study trip to Seimensstadt and Britz garden cities next to Berlin. Finally, graduate student Miriam Thompson writes about her learning experience during a summer internship with the City of Los Angeles’s Planning Department.
The International Exchanges section brings three interesting articles by students who spent time studying abroad in 2008. Ryan Brough spent the summer with family in Valencia, Spain, where he learned about Spanish culture, planning, and urban development; he interned in a real estate development company and worked in two multi-family residential projects in the nearby city of Moncofa. Nancy Cole writes about her experience as one of six Cal Poly students from different disciplines chosen by the National Science Foundation in 2008 for a study trip to Chongming, an island off the coast of Shanghai, China. The trip was to investigate the potential for research projects, and Nancy comments on some of China's conflicting realities and on the conflict between development needs and sustainability. Erin Cooper, CRP's first graduate student to participate in the exchange program with the Federal University of Rio de Janeiro, writes about her two-month experience there, her old myths, and the new realities that she learned from.

The Spotlight section opens with an article by alumnus Nicole Smith on CRP's 40th anniversary two-day celebration when alumni, former and present teachers met to discuss planning education in the first day, and to enjoy a barbecue followed by dinner at the San Luis Obispo Arts Center with great food, wine, and a jazz band. In an article by “Buzz” Kalkowski, from the MCRP class of 1995, we learn about his experience as a volunteer planner in the Kingdom of Bhutan, in the Himalayas, and the importance of contributing our time to important causes such as the expansion of the planning culture at an international level.

I hope you enjoy this issue, and the many stories offered by our authors. We also hope that you join FOCUS in celebrating Paul Crawford's life and his important contribution to the planning field, and that you keep him close to your heart and to your planning practice. On that note, I would like to remind you that Paul’s family and friends have established the Paul Crawford Scholarship Fund at Cal Poly for City and Regional Planning students (see page 12). In 2009, thanks to professor Paul Wack's efforts, CRP will be hosting the inauguration event in the Paul Crawford Lecture Series on April 16, the advanced seminar “The Liveable City: Form-Based Coding for Sustainable Urbanism” (see page 6 for more details).

Finally, as always, I would like to encourage you to keep supporting FOCUS by sending us contributions, news, articles, essays, and ideas. Until next year….

Vicente del Rio, Ph.D.
Managing Editor
Professor, City and Regional Planning Department
Form-based codes are an important tool for regulating development to achieve a specific urban form. Form-based codes address the relationship between building facades and the public realm, the form and mass of buildings in relation to one another, and the scale and types of streets and blocks. Not to be confused with design guidelines, form-based codes are regulatory, not advisory.

Two national experts from the Form-Based Codes Institute will explore the essential ingredients in developing and implementing effective and professionally useful codes. They will describe typical organizing principles used in form-based codes and how they are integrated with conventional land development regulations. Codes being written today in California both resemble and stand apart from those elsewhere in the nation; learn about these differences as well the role that form-based codes play in combating climate change and creating truly sustainable urbanism.

Registration is required. AICP/CM and AIA/CES credits available

April 16 2009  12:30 to 5:30pm
Berg Gallery, CAED-Cal Poly (reception to follow)

Speakers
Geoffrey Ferrell
One of the originators of the modern practice of Form-based codes. His work ranges from site specific urban designs to zoning-toolkits to replace Euclidean zones with codes that emphasize clarity for end-users. Before establishing his Washington D.C. firm in 1992, he was a designer/code writer for Duany Plater-Zyberk Architects. He is a Charter Member of the Congress for the New Urbanism and a Charter Board Member of the Form-Based Codes Institute. His work is featured in the books Form-Based Codes by Daniel and Karen Parolek and Paul Crawford, and The New Urbanism by Peter Katz. His firm's Form-Based Code for the Farmers Branch Station Area received the Driehaus Form-Based Code Award.

Bill Spikowski
A veteran advisor to local governments, preparing community plans, redevelopment plans, and codes for cities and counties that aren't willing to settle for today's sprawling development patterns. He was a pioneer in using form-based codes to translate bold visions of the future into an integral part of local regulations. A founding board member of the Form-Based Codes Institute, he is a regular instructor at FBCI workshops across the country. Prior to forming his Fort Myers, FL consulting firm in 1992, he served as growth management director for Lee County, FL. He also serves on the Fort Myers Planning Board and is a co-founder and officer of the Calusa Land Trust & Nature Preserve.

For registration and parking information, go to http://planning.calpoly.edu/

Sponsors City and Regional Planning Department, Cal Poly; Construction Management Department, Cal Poly; College of Architecture & Environmental Design, Cal Poly; Jacobson & Wack Planning Consultants; Form-Based Codes Institute; Central Coast Section, California Chapter, APA; Lisa Wise Consultants, Michael Multari.
TRIBUTE TO PAUL CRAWFORD

Paul C. Crawford, FAICP
1947-2008
Losing Paul Crawford, a delightful person and colleague, and one of the department’s most popular teachers was a strong hit to all of us. He leaves a lasting legacy and received (in memoriam) the 2008 Distinguished Leadership Award for A Planning Pioneer from the American Planning Association California Chapter. Paul was one of FOCUS earliest contributors with the article Planning, Architecture and Politics in our first issue in 2004. For this Tribute, we collected memories from three people who knew Paul well and who help us remember the extraordinary man that he was.

A True American Planning Hero, by Kaizer Rangwala

Sam: It’s like in the great stories Mr. Frodo, the ones that really mattered. Full of darkness and danger they were, and sometimes you didn’t want to know the end because how could the end be happy? How could the world go back to the way it was when so much bad had happened? But in the end it’s only a passing thing this shadow, even darkness must pass. A new day will come, and when the sun shines it’ll shine out the clearer. Those were the stories that stayed with you, that meant something even if you were too small to understand why. But I think Mr. Frodo, I do understand, I know now folk in those stories had lots of chances of turning back, only they didn’t. They kept going because they were holding on to something.

Frodo: What are we holding onto, Sam?
Sam: That there’s some good in the world, Mr. Frodo, and it’s worth fighting for.

- Lord of the Rings: The Two Towers

The planning profession in its search to recapture the pride and glory of being a city planner needs a hero that inspires us to strive for the good in the world – and have a good time while working hard to make a difference. Paul Crawford was one such consummate planning protagonist that exemplified the best attributes of a planner and set an example of a contemporary American planning hero.

Paul Crawford passed away at his home in San Luis Obispo in May. Born in Chicago, Paul moved to California in the 1950s and graduated from the city and regional planning program in 1971 from California Polytechnic State University in San Luis Obispo. At 33, Paul was the youngest county planning director in California. After 10 years in the public sector, Paul co-founded the planning consulting firm Crawford, Multari and Clark Associates.

Paul enjoyed distinctive and livable places and was a true pioneer in crafting policies and over 100 development codes that would facilitate such places. He was generous with his time and offered advice to others who could help make communities better places.

So much of what is happening today in the realm of Form-Based Coding would not be if it were not for Paul laying the groundwork and setting the template. “Few who have rallied around Form-Based Codes have the encyclopedic knowledge of conventional zoning that Paul possessed. That knowledge, and his depth of experience as a planner, enabled Paul to see the true potential of the approach, and create the necessary "conversion kit" to plug form-based codes into the use-based regulatory framework that exists in nearly every US municipality. Years from now, we will look back
and see how Paul’s leadership and insight set the stage for this important advance,” said Peter Katz, president of Form-Based Codes Institute (FBCI).

Paul’s ability to speak and write simply allowed him to connect with everyone. You felt important and valued when you talked to Paul. “His spirit was so generous and infectious that no one could resist responding and joining in whatever task was at hand,” notes Carol Wyant, executive director of FBCI.

“Paul was never flustered, and endured happily in a profession rife with bureaucracy and politics. And I think it was largely Paul’s good nature that allowed him to work so many years on zoning ordinances, a world with few thrills,” said his business partner Chris Clark.

Together with his new urbanist friends, Paul co-founded the FBCI and served as its chairman. With Dan and Karen Parolek he co-authored the recently published seminal textbook on Form-Based Codes.

“Paul embraced life on more fronts than almost anyone I know: photography, spelunking, teaching, good wine and food. Paul had a gift for reducing complex concepts into simple, clear language – this gift combined with his passion for Form-Based Coding enabled FBCI to accomplish much more in its few years of existence than we could have imagined,” notes Carol.

As planners we work under tight deadlines and are often stretched to the limit. Paul was a self-admitted workaholic. “Paul taught us how to work hard and live the good life. Enjoying the sweet life (La Dolce Vita) at times meant squeezing in quality time during evenings and weekends having a good meal with friends, often at client sites, or more recently going off to Italy for a few months,” recalls Geoff Ferrell, vice chairman of FBCI.

Paul was appointed and recognized by numerous state and national planning organizations. The California chapter of the American Planning Association recognized Paul with its Excellence for Distinguished Leadership as a Planning Professional award in 1998. In 2000, Paul served as president of the California Planning Roundtable. A year later, he was elected to the College of Fellows of the American Institute of Certified Planners.

Paul’s memories will live on in the places that will continue to be shaped by people’s lives that he touched and policies and codes he authored. Forever preserved are his wit, presence, knowledge and humility that have left an indelible impression on our psyche for the past 30 years. This is the mark of great technician who fought the good fight and has left the world better than he found it.

An Appreciation: Paul Crawford, by Mike Multari

In May, we lost Paul Crawford, a fine planner, respected teacher and good friend to many. He died at age 60 from brain cancer. Paul hailed from Visalia, and after earning a CRP degree at Cal Poly, returned there shortly to work for Quad Consultants. San Luis Obispo beckoned him back, however. Within a few years of joining the SLO County planning staff, he rose to be the department’s director. During the 1980s, Paul was recognized in a survey by the Telegram Tribune newspaper as the most influential person in the land-use field in SLO. His calm, professorial demeanor served him well during those turbulent times as the SLO County was transitioning from a wide-open attitude about development to a more environmentally aware approach, and planning was the focus of that whirlwind of change. He managed the overhaul of the County’s land use plans and regulations, and combined the general plan land use element with the zoning ordinance – an innovative effort that won a California Chapter APA award.

Mike Multari is a co-founder of the planning consulting firm Crawford Multari & Clark Associates. He is a part-time lecturer at the CRP department and Cal Poly’s Assistant Director of Facilities Planning. His remarks were originally published in the Central Coast Section APA Quarterly Newsletter, “Coastal Connections,” Summer, 2008.
At about this time, I was working at the City of SLO, so we’d regularly meet for coffee and compare notes on our work. Paul was itching for something new, as the County land-use issues had become predictable and repetitious, while ever more contentious. By 1990, we left our public sector jobs to start a consulting business that evolved into Crawford Multari & Clark Associates. You get to know someone pretty well after a traveling around the state trying to drum up clients. Paul generally drove – he was the consummate sneaky speeder and had an uncanny sense of direction – while telling me about his family, his favorite movies and books, his photography and spelunking hobbies, trips taken and planned, and, of course, wine. Once on a trip to Auburn, Paul was his usual charming self, impressing our waitress with his knowledge of wine. She returned late in the meal with a glass of wine, unnamed, recommended by the chef. Paul swirled and sniffed and tasted…declaring it a zinfandel, probably from such and such a place. He was right, and the chef came out himself and joined us, as we spent the rest of the evening talking and tasting wines over dessert. That was pure Paul.

Paul found his professional focus in the nitty-gritty details of development codes, poring over the arcana of zoning and subdivision regulations late into the night. Many evenings after dinner, I’d walk by the office and see his light on. Because he almost always did his work on his own, it is easy to picture him as a cloistered monk, ensconced in his scriptorium, carefully detailing a manuscript. But Paul enjoyed a party. Once at a conference, I was leaving our room to take an early morning swim, only to bump into Paul and other planning revelers just coming in from a long night of wine and conversation.

His list of professional accomplishments is most impressive: Distinguished Leadership and other APA awards, Fellow of the AICP, California Planners’ Roundtable, President of the County Planning Directors’ Association, Congress for New Urbanism, founder of the Form-based Codes Institute, adjunct professor at Cal Poly, architect of development codes for more than 80 cities and counties, and co-author of the book Formed-Based Codes. But his genial personality, love of his family, and his passion for life are even more memorable in a remarkable life — and sad loss for the rest of us.

Paul Crawford, by Chris Clark

Paul taught at Cal Poly for many years. When he passed away he had been there longer than anyone still teaching in the City and Regional Planning Department. He was there after a successful career in public service, culminating in directing planning at the County of San Luis Obispo, and following Mike Multari into a respected consulting practice, where he eventually gained a national reputation for his contributions to zoning.

Certainly students enjoyed his stately good looks and deep voice. They appreciated his friendliness. But more importantly his students knew they were in the presence of an experienced and confident mind, a planner at the height of his profession.

For years Paul taught Planning Agency Management and this was a natural extension of his prior vocation. But he also taught the introduction to planning, a survey course attended by students who might just be considering the profession. Paul can take credit for a number of students who entered the field upon the promise he represented.

Paul had started at Cal Poly as an architecture student and did not fare well. The 1960s were a great time to be in college, but not conducive to academics. On the advice of a professor, Paul gravitated to planning. Architecture, like law and medicine, is a well-known profession. For a Visalia kid it made sense within a limited paradigm.
Planning was not so well known, as is still the case. Paul loved it. It melded design, public policy and management. The hybrid qualities requisite of a good planner fit well with his many talents. He excelled and maintained the passion to the very end of his days. Along the way, Cal Poly honored its prodigal student with a distinguished alumni recognition award.

Paul will continue to teach by way of a book he co-authored on Form Based Codes, his redeeming effort for the years of Euclidean zoning he had ministered throughout the state. Paul was a zoning expert. Cities throughout California continue to benefit from the clarity and care he brought to those arcane regulations.

Perhaps the greatest benefit, though, will be in the careers of those planners who attended his Introduction to Urban Planning class. They sat in those desks and listened to an accomplished planner. Somewhere in their minds they would understand that he once occupied their seat. And the distance they would need to traverse in order to achieve his standing was a worthy trek.

The Paul Crawford Scholarship Fund has been established at Cal Poly in his memory; anyone wishing to donate should make checks payable to the Cal Poly Foundation, noting the scholarship, and mail it to:
City and Regional Planning Department, Cal Poly
1 Grand Avenue, San Luis Obispo, CA 93407.
Paul Crawford was an accomplished amateur photographer with a keen eye for architecture, urbanism, and the human aspects of cities. We present a random collection of some of these beautiful images, mostly from Spain, Italy, and France. FOCUS thanks his wife Linda Crawford for making these images available.
MARIN COUNTYWIDE PLAN
ADOPTED NOVEMBER 6, 2007
Based on their recent international comparative research project, the authors discuss the relationship between tourism and religious sites that are considered historical and architectural heritage. Using sites in California and Thailand in their study they show how authentic experiences of sacred places and the spiritual culture of a region can promote sustainable tourism and benefit both the tourist and the community.

Cultural heritage tourism is an important part of the international tourist market. As with any resource, sustainable management practices are required to maintain the long-term value of cultural heritage assets. Sustainable tourism provides quality experiences for the tourists while protecting the environment and improving the quality of life for local residents (Moscardo, 1998). Planning for sustainable tourism requires balancing the requirements of cultural heritage preservation, tourists, and the local community.

Cultural heritage assets include both tangible assets, such as historic places, and intangible assets, such as cultural practices (McKercher & du Cros, 2002). These assets are preserved because of their intrinsic value to the community, rather than for their tourist value (Charoenwongsa, 2004). Tourism provides a powerful political and economic justification for site conservation; however, inappropriate use, increased visitation, and commercialization are threats to the integrity of the site.

Tourists visit cultural heritage sites for a variety of reasons (Ho & McKercher, 2006). They vary from the purposeful tourist who is seeking authentic cultural experiences to the casual tourist who may be visiting a historic site simply because it is part of their tour. The cultural significance of a site is often more important to the local community than to tourists. When an area contains a large number of cultural heritage attractions, tourists tend to visit only the most popular sites.

Cultural heritage tourism has both positive and negative impacts on the local community (UNEP, 2002). Tourism can be a significant part of a local economy, create business and employment opportunities, and thereby encourage support for the preservation of cultural heritage assets. However, tourism costs the host community because of the need for infrastructure development to support the tourist industry. Tourist related commercialization may degrade the environment near heritage sites. Increased use causes wear and deterioration of heritage sites, thereby increasing the cost of maintenance. Appropriate management of cultural sites and the tourist industry can reduce some of these negative impacts and encourage support for tourism by the local community.

Tourism at religious or sacred sites is a special type of cultural heritage tourism (Shackley, 2001). Preserving cultural heritage at religious sites requires allowing the local community to continue using the site; however, religious practices can be disrupted by the presence of tourists. Inappropriate tourist activities and commercial development around a heritage religious site can lead to the trivialization of the site (McKercher & du Cros, 2002). Many
heritage religious sites encourage donations to help compensate for the impacts of tourism, but donations rarely cover the cost of maintenance and preservation (Olsen, 2006).

Preservation of a heritage religious site and its continued use is an important component in the sustainability of cultural values (McKercher & du Cros, 2002). The local community and worshipers have a mixed relationship with the tourists who visit there (Bremer, 2004). Residents often take pride in their culture and religion and want to share their enthusiasm with outsiders. However, tourists disrupt religious practices and increase maintenance problems.

Tourists often view visits to historic religious sites as opportunities for cultural and educational experiences (Olsen, 2006). They are seeking authentic experiences that are tied to a specific historic place, rather than just leisure in a resort that could be anywhere (Macleod, 2006). Interpretation can be used to help provide these experiences, while reducing some of the negative impacts of tourism (Coccossis, 2005). Interpretation can help the tourists better appreciate what they are seeing; reduce congestion and crowding by making tourists aware of alternative sites to visit; and explain appropriate tourist behaviors that minimize impacts on the site and its religious use.

When heritage religious sites and practices are commercialized and changed for easy tourist consumption, the site often loses its authenticity (McKercher & du Cros, 2002). The level of commercialization at the sites to accommodate tourism often conflicts with visitor expectations about what is appropriate at a religious place (Nolan & Nolan, 1992). But management of sites without considering the tourist experience leads to dissatisfaction and lack of support for cultural historic preservation.

**RESEARCH PROJECT**

Our research examined heritage religious sites in California and Thailand from the perspective of the tourists. The methods we used included analysis of existing tourism studies, site visits, behavioral observations, and visitor surveys. The research sites included the Catholic Missions of Central California and the Buddhist Wats (temples) of Chiang Mai, Thailand. In both regions, tourism is a major industry, with cultural tourism an important part of the tourist market. The main historic sites are religious buildings, which are used both as places of worship by the local community and tourist attractions.

The 21 California Missions were built by Spanish Catholic missionaries from 1769 to 1823 (Sunset, 1979). With the exception of two that are state parks, the Missions are owned by the Catholic Church and most conduct regular religious services. They are the most visited historic sites in California and are part of grade school education in the State. The Chiang Mai region of Northern Thailand has over 60 historic Wats, with the earliest Wats constructed in the 14th century (Freeman, 2001). The Buddhist church owns all of the Wats. Most of them have residences for monks and are used for religious, educational, and community services.

To fund the maintenance and preservation of the Missions, the Catholic Church relies on contributions from church members,
tourists, and non-profit organizations (Bremer, 2000). Missions in urban and tourist areas are better equipped to raise preservation funds from the public. In Thailand, funds from church members, tourists, private non-profits, and the government help to preserve the historic Wats. Even though tourism is a major industry in Chiang Mai, the large number of Wats means that only a few of them have a substantial number of tourist visitors (Chifos, 2006).

The historic Wats and Missions are hybrid environments that are both religious and tourist places. At many of the Missions, there are attempts to separate the church services from the tourist activities (Bremer, 2000). Interpretation for the tourists at the Missions focuses on the Mission’s role in the history and culture of California. At the Thai Wats, there are few attempts to separate religious activities from tourism. Many of the tourists are Thais who want to participate in religious activities as part of their tourism (Peleggi, 1996). Interpretation at the Wats focuses on presenting the Buddhist religion to visitors, including international tourists, to participate in religious practices.

RESULTS AND IMPLICATIONS

We found more similarities than differences in the experience of Missions and Wats. In general, the Wats were rated higher than the Missions on overall visitor experience, religious experience, and opportunities for education and participation.

In both types of environments, the perception of these places as being authentic and religious was a positive attribute for the visitors. Experiencing these historic religious sites as sacred places that are used by the local community was an important part of the tourist experience. When the site became crowded or commercialized for tourism, the perceived spirituality of the place was reduced and the tourist experience suffered.

These results have several important implications for the management of heritage religious sites. Whenever possible, religious use of the sites by the local community should be encouraged. Continued use of heritage religious sites is important for both the tourists and local community. Religious use by the local community provides meaning to the site and supports preservation and maintenance. The opportunity to observe and participate in religious activities is an important part of the tourist’s personal and cultural experience.

From a design perspective, there are three main challenges created by tourism at these heritage religious sites: inappropriate tourist behaviors, overcrowding, and commercialization. The sheer numbers of tourists at heritage sites causes physical and social impacts. When there are too many tourists, these places lose their sense of spirituality; they shift from being sacred to secular places.

Inappropriate tourist behaviors can be controlled in several ways. At the Missions, tourists are often not allowed in chapel areas during services to reduce conflicts, but this also limits opportunities for participation and education and may reduce the experience of the Missions as a religious site. In contrast, tourists and worshippers are less likely to be segregated at the Buddhist
Wats. At the frequently visited Wats, it is a common practice to have guides and monks available to answer questions, and areas available for tourists who wish to engage in worship oriented activities. On the other hand, the Missions are more likely to provide written materials and signage with guidelines for visitor behavior. Both Missions and Wats could benefit from incorporating the techniques used by their religious counterparts to encourage appropriate tourist behaviors.

A common approach to reduce overcrowding is for the sites to charge fees to discourage the casual tourist; however, fees can be viewed as inappropriate at religious sites and may create access problems for the local community. In Thailand, one popular Buddhist Wat has a foreigner entrance fee; a practice that is highly resented by international tourists. Some California Missions charge fees to enter their museums and to tour the site, while access to religious services is free, but rigorously controlled. At some sites in both countries, there are places that are considered so sacred or fragile that tourists are not allowed to visit. Tourism can also be limited to certain times to reduce conflicts with local worshippers.

Interpretive materials can also be used to reduce overcrowding by identifying the unique characteristics of less popular sites deserving of tourist visitation. For instance, the rural Missions are more likely to have preserved gardens and grounds characteristic of the settlement period, while the less visited Wats are more likely to incorporate folk art and provide intimate environments for worship reflective of the surrounding neighborhoods. Most tourists visit only the most popular heritage religious site in a region, and as a consequence, these sites are well funded, while less popular sites lack funds for preservation and maintenance. Interpretive materials identifying a wider range of religious sites and the opportunities available could encourage tourists to visit alternative Missions and Wats and help alleviate the issues associated with overcrowding and underfunding.

Although tourists seek authentic experiences, commercialization occurs because the tourist industry tries to make the sites more comfortable for visitors by standardizing the tourist experience. Religious practices may be modified and shortened so that tourists do not lose interest. Gift shops, food, and other tourist commodities and services may be sold at the heritage site and in adjacent areas. Tourists have a mixed view of this commercialization, but often see it as incompatible with the religious experience of cultural heritage sites.

The tourists visiting these sites are most troubled by tourist oriented commercial development located immediately adjacent to the entrance, both inside and outside the site complex. At many of the Missions, visitors enter through the gift shop, an introduction to the site that creates an impression of commercialization that persists throughout the visit. Centuries of design theory recognize the impact of the entry on overall perception of landscape and architectural monuments, and these non-expert evaluators were sensitive to it as well. Minimizing commercial development at the entrance to the site by creating a buffered entry corridor would help preserve the impression of historic and cultural integrity.
The nature of the goods and services offered also makes a difference to visitors. At the Wats, visitors are often pleased that vendors offer cold drinks, while gift shops and kiosks offer a preponderance of generic tourist items with no relation to the site are thought to be a distraction. Gift shops at the Missions are filled with a variety of tourist souvenirs and are viewed as less appropriate than shops with primarily historic or religious items.

Tourists are looking for opportunities to experience cultural heritage sites. Providing opportunities for authentic experiences of sacred places and the spiritual culture of a region promotes sustainable tourism that benefits both the tourist and the community.

REFERENCES


Green design, sustainable development and sustainable cities were the themes of Alex Hinds’ talk at Cal Poly’s College of Architecture and Environmental Design Hearst Lecture Series in the fall of 2008. Alex was Marin County’s community development director and coordinated the 2007 general plan update, a pioneer effort in planning for sustainability.

Fossil fuel and resource consumption-related issues such as climate change, water quality and quantity, and a host of socioeconomic concerns have prompted California state and municipal governments to pursue sustainable development strategies. Towards that end, nine cities and Marin County representing more than 8 million California residents banded together in 2006 to form Green Cities California.

While many communities have undertaken a variety of initiatives, this paper will focus on the 2007 update of the Marin Countywide Plan and its theme of “planning sustainable communities”. This paper will also discuss how implementation of the Plan is being monitored through a system of benchmarks, indicators, and targets.

Historically, the Marin Countywide Plan has employed a series of environmental corridors as the basic framework for regulating land use, consisting of: the Coastal Recreation Corridor, Inland Rural Corridor, and City-Centered Corridor. In the latest update of the Countywide Plan, a Baylands Corridor was added to further recognize the importance of historic baylands along the shoreline of San Francisco and San Pablo Bays—especially in light of climate change and potential sea level rise.

What is Sustainability?

According to the Plan (Marin County Community Development Agency, 2007), “Sustainability is defined as aligning our built environment and socioeconomic activities with the natural systems that support life. In the long run, sustainability means adapting human activities to the constraints and opportunities of nature. Central to this definition is meeting the needs of both the present and the future.”

An important measure of sustainability is the calculation of an area or population’s ecological footprint. Today, over 24 global acres are needed to support the consumption of the average United State’s resident - if everyone on the globe consumed at this level, five planets would be required (Global Footprint Network, 2006). In 2001 Marin County became the first United States municipality to calculate its ecological footprint, at 27.5 global acres per person, more than double that of many European countries; slightly higher than that of the average American - and other San Francisco Bay area counties (Fig. 2).

The economist Herman Daly (1989) designed a conceptual framework that integrates natural systems, social systems and human aspirations.
Figure 3 represents a modified version of Daly’s conceptual scheme, to more closely correlate to the organization of the Marin Countywide Plan, the base of this triangle consists of natural systems, such as water, air, soil, and natural habitats that support life. The illustration depicts the mutually supportive relationship of natural and built environments as the foundation of economic and social well-being.

**How is the Countywide Plan Organized?**

The updated Countywide Plan is reorganized into three sections as follows:

The **Natural Systems Element** focuses on “Nature, agriculture, and life support systems including:

- biological resources
- water resources
- environmental hazards
- atmosphere and climate
- open space
- trails
- agriculture and food

The **Built Environment Element** addresses villages, towns and construction-related activities including:

- community development
- community design
- energy and green building
- mineral resources
- housing
- transportation
- community facilities
The Socioeconomic Element focuses on people and what they do for each other including:

- the economy
- childcare
- public safety
- community participation
- diversity
- education
- environmental justice
- public health
- arts and culture
- historical and archaeological resources
- parks and recreation

Most legally mandated general plan topics are included in the first two elements. Each element of the Plan is also organized to answer the following questions:

- What are the desired outcomes?
- Why is it important?
- How will results be achieved?
- How will success be measured?

Furthermore, each goal in the Plan is evaluated in terms of its potential environmental, economic, and (social) equity benefits.

**How is Implementation Monitored?**

Implementation of the Countywide Plan is being monitored through a system of approximately 70 benchmarks, indicators, and targets. Toward this end, the Plan set a nonbinding target of 250 certified green businesses by 2010, and 15 MW of installed solar photovoltaic electricity by 2015. By visiting the Marin Countywide Plan website at www.future-marin.org and clicking on the NewSee -it viewer, interested parties can review the status of individual targets contained in the Plan. For example, according to the website, as of December 2008, there were already slightly more than 250 certified green businesses and around 7.5 MW of installed solar photovoltaic electricity countywide. Nevertheless, progress towards achieving many of the targets listed in the Plan will inevitably vary and this monitoring system is intended to provide a forum for reviewing and adjusting targets and implementation strategies as appropriate.

**References**

Daly, Herman and Cobb, John. 1989. *For the Common Good: Redirecting the Economy toward Community, the Environment, and a Sustainable Future.* Boston, MA; Beacon Press.


Based on their research project on the quality of places, Paulo Rheingantz and Denise de Alcantara, discuss the attributes and qualities of a residential street in Rio de Janeiro which is very cherished by the community. Their approach uses a mix of methods - including experiential and morphological - which help to understand the built environment from different perspectives and capture the “soul” of the street.

“For them (dictionaries and encyclopedias) the street was just aligned façades where one walks through in villages... Oh, the street is much more than that; the street is the meaning of city life; the street has soul! ... The street shelters misery. ... It is generous. It does not reveal the crime, the daydream, the misery. ... The street reveals for the civilized animal all the human comfort.” 1

In this article we discuss a study on the quality of place, and specifically the quality of the street, a fundamental component in defining a place. Our case-study is Rua Pires de Almeida, one of Rio de Janeiro’s streets that best represent the sentiment expressed in João do Rio’s manifest The Enchanted Soul of Streets (Rio, 1995).

This article presents part of a research carried out in Rio de Janeiro during 2006-2007, which was developed in two stages, and was the first attempt to apply the experiential approach in an urban setting. The experiential approach was developed by our research group based on the works of Maturana (2001) and Varela et al (2003). We published on the development of this approach elsewhere (Rheingantz & Alcantara, 2007). The experiential approach characterizes the human experience in the place, since it considers how each place at each moment influences human actions, and how human presence provides sense and meaning to each place. Human sensorial and motor abilities constitute a fundamental part in the cognitive process and include verbal and non-verbal language. On one hand in a broader biological, psychological and cultural context, these abilities do not exist if there is no interaction with the environment that is experienced. On the other hand, the environment cannot exist without the human existence to experience it; both are inseparable aspects of the experiential approach.

The first phase of our research, concentrated on applying the experiential approach itself and in analyzing how residents, users and visitors interacted with the space: using, appropriating, and feeling the space as a place. Interviews, informal conversations and embodied observations were carried out according to this approach and focused on the subjective (socio-cultural) aspects of the place (Alcantara, 2006).

The emphasis in the present article is on the second phase of the research, which focused on the object, or on the physical and morphological aspects of this unique urban setting, Rua Pires de Almeida as a place. Our urban design references were based on Lynch (1960), Tuan (1974), Alexander et al (1977) and Ashihara (1983). These attributes were evaluated and re-signified according to the attitude of the observer and his/her experiential perspective. In the analysis of streets, sidewalks and public spaces,
we’re also inspired by the anti-modernist insights of Jacobs (1961), her poetic analogy of the windows as ‘the eyes of the streets’, and the recognition of the richness of meanings, safety and quality of life provided by the combined diversity of uses and non-ordered density of the traditional city.

Based on the experiential approach and on the understanding that knowledge is a net of “socio-technical interfaces” (Latour, 1999), each object or event is conceived as a mix or a “collective” composed of men, things, and techniques, where border lines between the subject and the object are erased. For us, the term “collective” reflects an adequate notion that refers to the association and mediation processes between humans, nature and technology, much like a built environment being used. The notion of collective reinforces this study’s premise that our world is built with the others based on our experience in the environment and our topophilia – love of place.2

When we experience a “good” environment, this evaluation is based on our own perspective as observers; an evaluation that does not simply rely on objective aspects but is dependent of our own experience. According to Antônio Lobo Antunes3, an urban environment only works when it becomes a “living organism” that changes and moves out of the control of its designer. In the same sense, to gather the knowledge resulted from a place – where the place’s own life and emotions escape from the control of the observer – is only possible with the intertwining of technology, nature and society (in this case, the users), the architectural and urban elements, and the subjective aspects emerging from their interactions.

The understanding of place as a “cultural enclosure”4 transcends its physical-social aspects and suggests that the reality that one experiences is different from that which results from the concepts used to interpret the place. These concepts “may be too rigid or too limited to express the dynamic nature of the mind and body senses” (Tulku, 1995: 229). Notions of agreeability, imageability, place belonging, human behavior to environmental conditions and body signs, are influenced by cultural heritage (Rheingantz et al 2002).

The materiality and characteristics of the morphological attributes of Rua Pires de Almeida were analyzed and we could verify how their results matched those found by Alcantara et al (2006). Our objective was to investigate the nature of Latour’s notion of the “collective” dimension and the contribution of this dimension to the character of the place.

**Pires de Almeida: The place**

Local and neighborhood newspaper articles agree on the positive image of Rua Pires de Almeida as a place, and its high value in all levels: material, immaterial, sentimental and subjective. This sentiment is expressed in the words of one of its young residents:

“*The tranquility and safety of this neighborhood allow children and youngsters to play and talk until late at night in the square, elected the place’s best spot. All my friends are here. Everyone knows each other and I feel safe to stay until one, two in the morning in the square. It is very calm here*”.5

The assertion “I love the street” (Rio, 1995) states the residents’ feelings that, generation after generation, inhabit this small residential area. Its historical importance is not only related to the quality of its architectural design. Through the years this neighborhood had several artists and personalities and served as a refuge to critics of the military regime during the dictatorship in Brazil.

While Pires de Almeida is the name of a street, for years it has been used in reference to the complex of residential buildings that define it and its small park. It is located off Rua das Laranjeiras, a major

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2 Topophilia is the affective connection between a person and a place or physical environment, concept originally developed by environmental geographer Yi-Fu Tuan (1974).


4 Culture is a set of representative, directive and affective systems of meanings shared by social-cultural groups (Rheingantz, del Rio & Duarte, 2002). The constituents of these groups recognize themselves as members of an interactive community and communicate and articulate between themselves through behaviors, expectations and beliefs. In adapting to an urban setting, a human group shapes its environment and consequently provokes changes to the relational logics of the group in a circular, dynamic and recurrent process.

5 “Vila Pires de Almeida: Marselha é aqui”. In Folha da Laranjeira, July 2001, p. 8
After its total closure in 1938, the remnants of Fabrica Aliança were replaced by a much larger residential development. Located only two blocks away from Pires de Almeida, in a small valley, the Jardim Laranjeiras (Laranjeiras Garden) has twelve 12-story residential buildings with retail on the ground floor along a beautifully landscaped street, and single family and walk-ups apartments up surrounding hills. See del Rio et al., 2001.

By the late 19th century, the textile factory Fabrica Aliança and its mills occupied a large area including what now is Rua Pires de Almeida. In 1927, an area of 150,000 square-feet containing a mill and the workers’ housing were sold out to an insurance company who replaced it with a residential complex rented out to the company’s employees and to executives of the old factory. Named Jardim Sul America (South American Garden), the project included 23 buildings with 158 residential units of 1 to 4 bedrooms, and a small park. All buildings were built to the front and side lot lines, their layouts corresponded to the hierarchy of the employees in the company (the higher up the better the apartment), and the best apartments had allocated garages built in the back of the buildings. By 1956, all units were sold out and many of them still belong to their first owners or descendents.

The project is defined by three distinct sectors, ordered according to the types of apartments and the residents’ hierarchy in the company (Figs. 1 and 2). Sector A holds four 6 storey-buildings with 1,800 square feet four-bedroom apartments. Two of these buildings are placed at the entrance of the development at Rua das Laranjeiras (Fig. 3). As these buildings were meant to higher-level employees, their lobbies, staircases and hallways were finished with imported marble, two segregated elevators and stairways served “social” and “service” uses, they had small street setbacks and balconies with decorated iron rails.

Sector B holds six four-story walk-ups with 1,000 sqf three-bedroom apartments surrounding and demarcating the small park Praça Múcio Leitão. Their parking spaces were located behind the buildings and were later incorporated to the deeds of the apartments when the units were sold out (Fig. 4). Sector C lays along the street that at this point is narrower and follows a gentle slope up and a subtle bend to the right (Fig. 5). The sector holds thirteen four-story walk-ups with one, two and...
three-bedroom apartments built right at the sidewalk form continuous rows on each of the narrow street, accentuating its curvilinear design almost into a “crescent”. Here the architecture is simpler but keeps the overall project identity. At the top, the street ends at a cul-de-sac with three of its sides defined by high containing walls made of heavy stone (Fig. 6). The cul-de-sac doubles as a parking lot and an informal recreation space for residents, and it provides a beautiful view back over the street and the buildings towards Corcovado Mountain and the Statue of Christ the Redeemer, one of Rio’s most famous landmarks.

The buildings and the apartments’ floor plans reflect the strong social hierarchy of the development, and all had small studios in the attic for maids and servants. In the art deco façades, doors and windows are framed with geometric designs and balconies overhang over the small street setback, giving the buildings an interesting dynamic visual aspect due to the shadows created by those elements. The entries to all buildings are clearly marked by an overhang and decorative elements emphasizing height and verticality. Due to this study’s focus on public spaces, the architecture of the building and the apartments we will not discuss it here.

Because of Rua Pires de Almeida’s historical and architectural values, it has been used as a set for movies and TV shows; the street and the square are usually used as the background. Recently, one of these productions paid for the renovation of the public spaces and building façades as a counterpart for the community.

Urban Quality

We started our study by analyzing the physical and spatial attributes of Rua Pires de Almeida’s as an urban setting, in order to complement the information revealed by the survey. Next, we will discuss the general findings of the visual analysis that was performed, and the details and aspects that add meaning to the building façades.

As a theoretical backdrop for the qualities of a place, we used Alexander et al.’s (1977) pattern language, particularly the patterns “identifiable neighborhood”, “small public plazas”, “buildings” and “complexes of buildings”. We also associated architectonic types to the distinctions between prose and poetry proposed by Alexander et al (1977: xii): “The differences between prose and poetry is not that different languages are used, but that the same language is used differently”. The visual language allows the conception of prosaic or poetic environments.

Figure 3
Study Sector A looking out to Rua das Laranjeiras; these are the buildings originally built for the highest income families.

Figure 4
Sector B consists of the small square Praça Múcio Leitão and the buildings around it. (Photo by Alexandre Barbosa)
Figure 5  
In Sector C the street curves and slopes up. The trees in the small square and the Corcovado Mountain can also be seen in the background.

Figure 6  
The cul-de-sac at the top is used by the residents for informal parking, recreation, and public events.

We also applied concepts for the composition of external spaces by Ashihara (1983), particularly regarding scale, texture, positive/negative space and hierarchy, and the relationship between the dimensions of a local square and the visual acuity. Jane Jacob’s anti-modernist manifest *Death and Life of Great American Cities* helped us to analyze the street, its sidewalks and public spaces. Jacob’s poetic analogy of windows as the eyes of the street alerted us on the richness of meanings, security and quality of life provided by the combined diversity of uses and non-rigid densification of the traditional city. Finally, from the Greater London Council (1978), we applied the concepts of external and surrounding areas, integrative factors, organization and spatial enclosure types, scale and proportion, contrasts, building identity, details and territoriality.

**Identifiable Neighborhood**

According to Alexander et al (1981), in an identifiable neighborhood small human groups create synergy and character that give vitality to settlements. When residents identify with their neighborhood and perceive it as distinct to others they enjoy a sense of territoriality and appropriation, which can be clearly observed in Rua Pires de Almeida. The setting, despite its strong identity, integrates well with the surrounding district, and the main element of this integration is the small square, heavily used both by residents and the community living around the project.

A neighborhood with 500 residents should not have more than three blocks and its area should fit within a 900 feet circle. This attribute guarantees a sense of personal pride to the residents and adds value to their individuality through the territory’s personalization. Also, considering that streets with intense and heavy vehicular circulation destroy the sense of community, it is important to prioritize walkability (Appleyard *apud* Alexander et al, 1981: 97). Both of these attributes are also present in Pires de Almeida Street.

Different scales of spatial appropriation are easy perceived, and distinctions between public (street and square), semi-public (garages and backyards) and private (units) spaces are clear. The cul-de-sac may be considered as a semi-public space since it is used and controlled by the residents. In the street and square, the feeling of being watched all the time is reinforced by the many windows of the surrounding apartments – including those on the ground level, where privacy is guaranteed by the level difference between the interior of the apartments and the sidewalk. There is a strong sense of belonging to the place even in the small details, as in the decorative plant pots that the residents placed on the sidewalks: they create buffers for pedestrian circulation between the buildings and the curb while discouraging irregular parking.
Small Public Squares

Small public squares (pattern # 61; Alexander et al, 1981) are usually generated by the widening of the main pedestrian routes that constitute activity and movement nodes. While large modern plazas are usually devoid of any human scale and use, when well-dimensioned small public squares encourage vitality, intense use and easy appropriation by the community. An average of 300 sq. feet per person is a good design parameter for a small square, and tends to generate attractive and comfortable environments, in an atmosphere that favors use and permanence.

Ashihara (1982) and Alexander et al (1981) recommends a limit of about 60 feet for visual identification of a person’s face and voice, what relates to the sensation of safety. Ashihara (1982) also notes that the maximum distance for visual acuity with enclosure, safety and intimacy sensation in a small exterior space is of 22 to 27 meters x 22 to 27 meters; people easily recognize each other faces, and the space is compact and provides intimacy. The small public square at Pires de Almeida fits within the recommendations, being 42-54 feet wide and 63 long.

The perception of buildings heights also depends on the human angle of vision at the street level. Approximately 20° of a person’s 60° visual cones correspond to the perception of the lower level (below the horizontal line of vision) and 40° to the higher level (above the horizontal line of vision). In order to guarantee the integration of the setting with the landscape in the background and with the sky, Ashihara (1982) recommends that the building height should not exceed 2/3 of the superior visual line (approximately 27°). Again, the public square at Pires de Almeida has these attributes (Fig. 7).

The square in our case study also contributes to the neighborhood’s identifiable pattern and is a reference of use to residents and the surrounding community. As such, it can be considered both as a node and a landmark for its central position, besides the fact of being the daily route of most residents (Lynch, 1960). Users change in different times of the day: children and their playful activities, elderly people that talk, rest or contemplate the place; teenagers and youngsters that, late afternoons or at night, flirt and date in low light. The scale and shape of the square generate a nice atmosphere where the sensation of enclosure and sheltering is provided by the buildings framing it. The tall tree canopies are like a “green roof” and create a pleasant microclimate and a refreshing and protective feeling.

The built environment must be comfortable and protective to support exterior activities that are complementary to the residences (GLC, 1985). A place’s spatial organization is fundamental for it to be integrated to the existing urban fabric, to have agreeable and sheltering spaces, and to ensure that the relationship between people and spaces will contribute to the sense of place.

If analyzed against the various types of enclosure defined by a group of buildings, the square at Pires de Almeida may be considered a less rigid variation of a community square or a large housing patio, representing a visually static resting place (Fig. 8). The square’s configuration favors the social interaction between neighbors while providing a feeling of privacy. Having the through street on one of its sides also helps protecting the square from vehicular traffic while keeping it close enough to the action that happens along all the sidewalks. Pires de Almeida Street provides an environment that is calm and conductive to the feeling of visual and physical protection.

Building Complex

In their pattern #95, Alexander et al (1981) note that a building complex
must contain identifiable parts, especially in multi-family housing, in order to humanize it and to express the social relationships of residents. Among the recommended design attributes for an ideal housing project are: low-density per building, 3 to 4 stories to keep the human scale, buildings should be narrow, aligned to the street line, and have independent accesses. All of these attributes are present in the building complex at Pires de Almeida Street.

These authors also observe that to better create positive pedestrian routes and social spaces building façades should be located at the front of the lot. Generally, setbacks fail to add value to the public space and damage the character of the street. The smooth angles, the absence of setbacks, and openings in the ground floor are aspects of the traditional city that provide well-being and comfort to users of the public space. Façades that are visually enriched with niches, small entrances, and a rhythmic composition of elements generate a visually interesting dynamic set. Those relations are present and reinforce the identity and meaning of the complex, favoring human contact among its users (Alexander et al. 1981).

The literature also suggests that proper natural light and ventilation are guaranteed through the correct relation between building height and street width. In Pires de Almeida, despite the relationships being below the recommended number, one still feels a pleasing visual effect in the configuration of the street space. While Alexander et al. (1981) indicate $2.5 < L/H > 1$ as the ideal formula, the $L/H$ relationship in Sector “A” is 0.65 (enclosure minimized by the distance between the buildings), in Sector “C” it is 0.7, and at the square (Sector “B”) it is 1.93 in the short direction and 4.6 in the long direction –both minimized by the roof effect of the tree canopies (Figs. 9 and 10).

Regarding the overall composition the architectural consistency and the aligned buildings make the complex very harmonic in scale and proportion, the enclosure reinforces the spatial and visual qualities of the setting, way finding is very easy, and pedestrian circulation is clearly defined (despite the vehicles that park on part of the sidewalks because of the lack of designated parking places). The lack of contrast in the public space corridor along Pires de Almeida Street results in a strong spatial homogeneity, which is by the scale, the color of the buildings, the upper floor setback, and the large tree canopies. On the other hand, these secondary architectural elements, such as the decoration, planters, and quantity and sizing of doors and windows, tend to reduce the perception of scale and humanize the space.
Spaces between buildings (spatial enclosure) stimulate human senses through the quality and characteristics of each place, from which emotions and human reactions emerge. At Pires de Almeida, the sheltering and protective enclosure of this unique place complement the privacy and feeling of security provided by the square's shape. It enhances the sense of place, discourages vandalism, and generates the residents' willingness to preserve the place, as opposed to what happens in most large cities. The overall urban design and the square's centrality also favor social contact among residents and other users from the surrounding community.

In places with distinct environments and spatial shapes, the continuity and contrast incite and induce users to naturally follow ahead. Walking by Pires de Almeida Street is always pleasant and the contrast is guaranteed by the changes in spatial types identified (sectors A, B and C); by the variation in size and scale of buildings and places; by variation in the enclosure levels and the elements that shape them (balconies, banks, entrance doors etc); and by the building heights, which in sector C is enhanced by the smooth slope (Fig. 11).

Acesses and Entrances

According to Alexander et al's pattern #110, the main gateway to a place is what defines and controls the character of buildings and the in and out movements. When well-located it will define the entry way simply and naturally; and if poorly located, it will reflect negatively in the whole setting. The main entrance should be clearly visible, easily identified, and provide orientation to approaching users. Walking towards a clearly visible main entrance should be a natural and thoughtless decision, freeing one's attention to perceive other interesting elements along the route. The shape of an entrance should make it clear and easy to identify; elements such as color, frames and ornaments, and light and shadows, contribute to distinguish an entrance.

The area's single point of entry alone serves as a natural defensible space. This is intensified by the narrow street section that makes it impossible for more than one vehicle to enter/exit at the same time, reducing traffic, and facilitating the visual control of people driving or walking in and out of the complex.

A sequence of entryways in a side-by-side collection of buildings is defined as a Family of Entrances in Alexander et al's pattern #102. In Pires de Almeida Street, the buildings' main entries are placed in their front facades, directly onto the sidewalks, contributing to street life and movement. These entryways are clearly identifiable and share similar design, although decoration and small variations ensure each building its own visual identity. Entryways are marked by vertical lines in stucco, geometric framings, and iron doors mostly painted in dark colors and contrasting with the pastel colors of the facades. In the four buildings of sector A, the overhang placed over the entryway, and the designs of the balconies reinforce the facades' vertical lines and strongly emphasize the point of entrance to the main lobby and the building.

Figure 11
A section along the street shows the gentle slope (8°) upwards from Mucio Leitão Square. (Drawing by Alexandre Barbosa)
There is a symmetry and homogeneity of volumes, rhythms, openings, dimensions of windows, and decorative elements, despite the subtle variation in constructive details and ornaments. Sidewalks present stone mosaics that vary in textures and colors, are not ramped and have a level variation—one step up towards the buildings and away from the curb—contrary to today’s accessibility criteria. There are no ramps to overcome these problems in any of the sidewalks except a ramp in the cul-de-sac at the top of the street to facilitate vehicular access to the temporary parking lot.

Finally, the strong unity of the setting is guaranteed by a coherent sequence of spaces, the controlled variation of the architecture, and a variety of connections between the spaces. The result is a dramatic visual effect that adds to the place’s inviting and protective atmosphere.

Not Everything is Perfect…

Despite its charm, Pires de Almeida Street also has problems and negative aspects related to the design of the buildings, the overall maintenance, and to subjective aspects of the sense of collectivity. Some interventions and remodeling in the buildings has occurred with no criteria or planning. For example, the four buildings in sector A had collective laundry rooms located in the top story together with rooms for servants but in the 1950s and 1960s small laundry spaces were added to the apartment adjacent to the kitchen and service area, altering the back facades of all buildings with only one exception. One’s attention is also drawn to the top of buildings in sectors B and C where the roof and the rooms for servants were originally recessed resulting on a terrace running along the whole front facade. The residents decided to increase their useable space by covering up the area that corresponded to their apartment, using different designs and materials. This resulted in significant changes in the buildings’ original bulk and front façades that are visible from the street level.

Although less evident, other interventions in the façades show the lack of concern with the original design and identity of the original architecture, particularly in sector B where several of original window frames have been substituted for different models and materials. A grave problem in sector A is the random installation of individual air conditioning units in the façades, whose location is not consistent with the exterior design. Nevertheless, because of the city’s historic preservation regulations, most of the original architecture of the four first buildings —sector A— are kept original and well maintained.

The conflict between pedestrian circulation and car parking is a difficult solution; since it reflects a huge demand that is city wide. Since the number of parking spaces in Pires de Almeida is very restricted by today’s standards and limited to the buildings of sector B, residents park their cars on the street, parallel to the curbs and even on sidewalks in sector A—the only ones in the complex that wide enough. Nearby commercial uses along Laranjeiras Street add to the problem since their employees and patrons also park there during the day. To discourage (but not prohibit) non-residents from parking in the complex, the residents installed a small booth at the corner of Pires de Almeida and Laranjeiras streets were a community-hired employee operates a lift bar.

Garbage disposal is another problematic issue, since the buildings have not been provided with enough spaces for containers and the pick-up truck comes only three times a week. In collection days, the garbage bins are placed in the corner of the square corner where they remain for a couple of hours causing bad smells and attracting bugs and insects. Kids and other users of the square have to stand it until the garbage truck shows up and the containers are removed.

There are problems related to the behavior of both residents and users from the surroundings. One is due to the large amount of people who own dogs and usually do not clean after them; the sidewalks and the small square are as mine fields. The dogs’ loud yelps also disturb the peace, what at times
can get very annoying at night. But not only noisy dogs disturb the peace but also domesticated birds: a resident finally donated his parrot after receiving several complaints from angry neighbors...

Noise caused by teenagers in the square at night is also common, leading to a picturesque story from the early 1970s: an old resident whose bedroom faced the square used to open his window every thirty minutes at night to, calmly and well-mannered, announce the hour in loud voices, thus getting the nickname “the cucco”… However, some of the annoying noises of the neighborhood also serve as indicators of the place’s vitality and its use by residents and the surrounding community. Like the noise produced by children playing in the square’s playground, these little inconveniences are inherent to urban residential collectivities.

However, out of the control of Pires de Almeida’s residents are the disturbing noise levels caused by some of the land uses in the surroundings: a social club with its Friday night dancing, a children party house with its loud music in weekend afternoons, and a health club next to the complex with its aerobics music and open-air swimming pool with hydro-gymnastics classes in the early morning.

And finally, not uncommon to large cities, appropriate maintenance of the public spaces in Pires de Almeida is a recurrent problem. The city does not keep up with landscaping, cleaning, and with the maintenance of sidewalks and street furniture including the square’s playground.

Final Remarks

In our individual-oriented, privatized, globalized world and faceless cities, the enchanted soul of the street still prevails at Pires de Almeida. This soul is also expressed through the community appropriation of public spaces; street and square become a natural stage for social events. Neighbors know one another, socialize in the public space, and promote street events. For example, once or twice a month on Saturdays afternoons, a local resident organizes high-spirited rodas de choro which sometimes break into the night. Every June, residents decorate the street for the traditional Saint Peter-Saint Paul festivities, which in 2005, lasted for 3 days and 3 nights (Fig. 12). During soccer world cups, the community share dreams and commemorate every victory of the Brazilian team. Residents also unite against governmental decisions that affect the local or to demand such actions to solve daily issues and problems –as happened recently during a dengue fever outbreak. These social manifestations reinforce the spirit of the collective and the topophylia in this small robust container of the city memories.

The first stage of our research, its experiential approach and the embodied observations, we analyzed the social, cognitive, and physical aspects of Pires de Almeida, this helped us identify a very positive assessment of the complex as a place (Alcantara et al 2006). In the final stage, we could verify the subjective and objective attributes that intertwine and result in the quality of the place perceived by both residents and users. Our methodology permitted us to investigate the “world” Pires de Almeida as a collective reality that results from the urban design, the architecture, and the actions of residents, users, and admirers, who contribute in the creation of a harmonic and well-balanced environment.

The small inconveniences, the interactions, and environmental stimuli engender a significant and original place of resistance that results in a strong city culture that is deeply engraved in the life of its inhabitants, in contrast to the privatized condominiums and gated communities that now dominate cities and suburbs. The lessons learned from Pires de Almeida are clearly evidenced in its architectural and

12 Choro or chorinho is a traditional urban instrumental music genre typical of Rio which first appeared in the 1870s. Based on virtuosity and improvisation, players sit around a circle and keep challenging each other.

13 The dengue fever is an infectious disease caused by a virus transmitted by the aedes aegypti mosquito who feeds from stagnant waters.
urban elements as well as in the subjective aspects of community life, and they clearly point towards the excellence of the place’s original design. These qualities must be rescued, preserved, and serve us in the teaching of urban design and planning so that they can inspire good city form.

“Oh! Yes. Streets have soul! There are honest streets, ambiguous streets, scaring, noble, delicate, tragic, depraved, pure streets, streets with no history, streets so old that they are enough to tell the evolution of the whole city, warrior streets, revolted, frightened, splenetic (sic), snob, aristocratic, loving, coward streets, that end up with no blood at all ...“


References


Contemporary Urbanism in Brazil: Beyond Brasilia

A new book edited by

Vicente del Rio & William Siembieda

(University Press of Florida, 2009)

For decades, a succession of military regimes and democratic governments in Brazil sought to shape the future of their society through the manipulation of urban spaces. Cities that reflected the ideals of modernism were built until the post-military period of redemocratization in the mid 1980s. From then, enormous efforts aimed at forging a more responsive urbanism in order to overcome historically determined social and spatial urban inequalities, such as rampant sprawl and the infamous slums known as favelas.

In this collection of 14 essays, architects, urban planners, and scholars assess the legacy of the major trends of contemporary urbanism in Brazil: late-modernism, revitalization, and social inclusion. They examine how cities are regenerating themselves within a democratic political framework that meets market and social demands, and respects place, culture, and history.

"Easily the best book on Brazilian urbanism... (it) opens a door and invites us to enter a magical environment" (Javier de Mesones, founder and honorary president of ISOCARP and of the Spanish Planning Association).

"A landmark study for those interested in contemporary urbanism in developing countries." (Peter Ward, Professor of Public Affairs and Sociology, University Texas at Austin)

"Radically alters our understanding just when Brazil is taking its place on the world global stage. Its focus on urban form, inequality planning, and democracy will interest urban scholar, professionals, and politicians." (Michael Dear, Professor of Geography, University of Southern California)

"An invaluable resource in better understanding this country’s exciting urban experience." (Jaime Lerner, three-time Mayor of Curitiba and two-time governor of Parana, Brazil)

"An updated discussion of the city-planning evolution in a country that has exercised leadership in applying state-of-the-art approaches to urban development" (Eduardo Rojas, Principal Urban Development Specialist, Inter-American Development Bank).

"... highly original and outstanding set of detailed case studies... makes a strong case for Brazilian urbanism as a cutting edge laboratory for urban change not only in other Latin American and developing regions of the world, but across all cities." (Lawrence A. Herzog, Professor of City Planning, San Diego State University)

Available from the University Press of Florida, Amazon, and your local bookstore
This article is a discussion of sustainability and contemporary Brazilian urbanism. Moving away from the modernist approach which was very destructive of existing contexts, urbanism in Brazil is now pluralistic, participatory, and contextual. This paper reflects in part the contents of Vicente del Río’s and William Siembieda’s new book Contemporary Urbanism in Brazil: Beyond Brasilia.

Sustainability is a subjective and complex concept, which has been amply utilized, but rarely, without a clear definition. On the one hand, definitions are not usually dependent on environmental performance, which has typically been the case when reflecting (not sure if reflecting” is the best word choice) desired levels of environmental quality such as air and water quality. On the other hand, the idea of sustainability seems to be suffering from having become fashionable and popular; although constantly used in many contexts, sustainability means different things to different people –and these meanings are deeply engraved in the political objectives of discourses. When we try to understand sustainability as a holistic concept, and particularly when we try to apply such a concept on an urban setting and relate it to development and urbanism, things get much more complicated.

This is certainly the case in Brazil where for a long time economic growth has been a national priority and where, historically, the environment has been looked upon from a traditional ecological perspective. Despite the expansion of democracy and the political advances of the last decade that have been fundamental to a move towards more socially equitable cities, environmental policies are still disconnected from other urban development policies –what is particularly true at the national and state level. While at the local municipal level, new visions of the role of urbanism, the recent master planning processes and wider political participation are helping to advance an urban development that is certainly much more sustainable in political, social, economic, and cultural terms. I am being specific about the types of sustainability here, because of the unfortunate disconnect between physical-land use and environmental planning processes.

According to Curwell et al (2005), many of the intentions of sustainable urban development are released through design and urbanism, and we have chosen some contemporary projects to illustrate this relationship in Brazil. After a brief discussion on sustainability and recent advances in urban planning and policies, this paper will identify the current trends in urbanism and describe some of the most visible and exemplary urban projects. Although these trends and projects reflect Brazil’s ties with its post-colonial past, they also reveal the efforts towards building more socially just and sustainable city.

Sustainability and Urbanism in Brazil

The concept of sustainability in Brazil is still intertwined with the environmental question and the conservation of natural resources, such as the Amazon forest. In the late eighties, after the country’s return to democracy, there was strong international and national public opinion against the constant aggressions to the Amazon forest and the perils of climatic change, and this forced the Brazilian government to move towards new environmental policies (Ferreira, 1998). Until then, particularly during the military regime, the needs of “national security” would always be above sustainable development strategies (Ferreira, 1998). In 1986 a federal resolution instituted the need for environmental impact
review and approval for certain types of development; in 1989 the IBAMA (Brazilian Institute for the Environment and Natural Resources) was created, and the Ministry of the Environment in 1990. Another example of Brazil’s efforts to change its international image through the realization of the 1992 United Nations World Conference on Development and the Environment (Earth Summit) in Rio de Janeiro. During this important venture, Brazil was a key participant in a new understanding that policies need to move away from both irresponsible development and conservationism devoid of socio-economic implications. This view was decisive in the creation of Agenda 21—a key document for the implementation of the notion of sustainability. Above all, the Earth Summit was fundamental in popularizing the idea of a sustainable development and in influencing a change in market demands, in strengthening non-governmental agencies, and in encouraging the spontaneous implementation of such ideas by private corporations who wanted to better their images and to meet the new markets.

However, environmental policy in Brazil is far from being considered a social or a developmental policy. It is weakly related—if related at all—to other public policies, and the environmental question is still largely understood from a traditional ecological and conservationist perspective (Ferreira 1998; Magrini 2008). This lack of relationship between environmental and the rest of public policies is particularly strong at the federal and state levels. For instance, although the 1988 National Constitution has chapters dedicated to urban development and to the environment—which express important gains by the social forces behind the new constitution—the fact that they appear in different chapters reveal a lack of understanding of the needed relationship between the two concepts. The creation, in 2003, of a Ministry of the Cities in parallel to the Ministry of the Environment is another evident expression of the lack of integration and of ideological and political conflicts. Plus, there are other ministries and federal agencies’ which policies and programs actions have environmental impacts but are not necessarily congruent to environmental concerns.

Magrini (2008) noted that the only major instrument of national environmental policy that is based on a wide notion of development is the 1997 Water Resources national law. Based on an integrated vision of sustainability, this law defines water basins as units for regional environmental planning and sets regulatory instruments for such. However, such planning and resulting actions depend on the association of the municipalities within the water basins and on the integration of their plans, policies, and actions—still a complex political endeavor. This seems to be an exception to the rule that most policies and environmental instruments in Brazil are non-spatial; they do not relate to any territory in particular, and less to the normal processes of urban and land use planning. However, in the last decades, there have been significant advances in the environmental arena, particularly towards different forms of sustainable urbanism in major cities.

**A Preface for Contemporary Urbanism**

Brazil is the largest country and has the largest population, land area, and the highest economic standing in Latin America. Over 80 percent of Brazil’s population lives in urban areas. From all cities in Latin America, Brazilian cities are those that exhibit the most social and physical innovation and dynamics in designing the urban realm. After the disruption of the modernist paradigm, the de-mythification of the Brasilia experience, and the re-democratization of the country in the 1980’s, Brazil was eager for new models of urban development and urban form making.

On the one side of the spectrum, social movements pushed toward a new social order and to solutions that are closer to the Brazilian social and cultural heritage. On the other side of the spectrum, globalization and market forces dragged society towards an “entrepreneurial” and fragmented city of shopping centers, gated communities, private enclaves, and trendy and irrelevant architectural imagery. Not unlike other Latin American countries, this duality is clearly expressed in the urban
landscape and it reflects a constant tension between opposite realms: global-local, private-public, individual-collective, and poor-wealthy.

After the military left power and the country returned to a democratic state in 1985, Congress passed a new national constitution in 1988. The constitution had a strong impact in regards to urban development, defining the municipality as having political, financial, and economic autonomy—a novelty in Latin America. This “municipalization” of the country’s power structure led states to change their state constitutions and municipalities to elaborate new Leis Orgânicas—the legal body that govern their functioning and organization. The national constitution also introduced the concept of the “social role of urban property and of the city” and recognized the need for a more socially inclusive urban development. It empowers cities to play an active role in land use development control, and ideologically it perceives the city as a locus for the redistribution of wealth and for the re-democratization of society.

One of the constitution’s chapters was dedicated to the environment while another to urban development—which as we observed above reflects an epistemological misunderstanding about their necessary integration. The chapter “urban policy” determines that cities with 20,000 residents or more need to have a master plan. It also determines that the social role of a property is above the owner’s rights of use, that an urban squatter has the right to his or her land after five years of undisputed use, and that cities can mandate the use of vacant land either directly or through the progressive increase of taxes. The chapter on “environmental policy” determines that all people have the right to a balanced environment—which is considered for collective use and fundamental for the quality of life—and lists ways that the public may use its power may to guarantee it. This determines that hostility toward the environment must be penalized, and identifies the country’s major natural habitats as of national interest. Although there is no mention of the expression “sustainable development” in the constitution, it is inherently contained in the identification at the local level as the most important in conducting urban development and control, and in the recognition of the importance of an ecologically balanced development.

Brazil’s most recent significant attempt at institutionalizing urbanism (including urban design) as a social tool and a possible instrument for sustainability occurred in 2001 with the Estatuto da Cidade (Statute of the City). Resulting from years of national debates on the necessity of an urban reform and on how to detail and implement the principles that had been established in the national constitution, the city statute provided municipalities with new powers to control development (instruments such as transfer development rights, taxation flexibility, etc) and to engage in projects that meet local needs, and implement components of the sustainability paradigm. The Statute also introduced the notion of neighborhood impact and the need for neighborhood studies and approval for certain types of projects—a process to be defined by each city, which opens up a debate at the local political arena.

Thus, the political developments in the last twenty years: the strengthening of democracy, the increase of public participation, and the environmental question has experimented with important advances at the local level. Urban policies in several cities—particularly in those with stronger planning and environmental systems—incorporate a wider and more integrated understanding of the environment and an inherent understanding of sustainable development. Both the Constitution and the City Statute have contributed significantly to the environmental “cause” when calling for a better and socially just city since it is a perspective that incorporates the notion of a development that is socially sustainable. These dynamic changes in the political, economic and demographic makeup of Brazil in the last twenty years have resulted in the emergence of an interesting contemporary urbanism.

From the practice of urbanism in the past two decades three major trends may be identified in Brazil. The first is Late Modernism, representing projects that adapt modernist concepts to new realities, although many still tend to reproduce some of the common mistakes of the old modernist model.
Secondly, Revitalization, or the reutilization of the existing city and built environment, in which projects preserve the historic and cultural values while still making way to new practices. And thirdly, Social Inclusion, which represent projects that make use of the public realm as a locus for socialization and social equity. These trends represent a move towards more sustainable cities, if not from a traditional ecological perspective then from social, economical, and political perspectives. Next, I will briefly discuss some of these projects.

**Trend 1: Late Modernism**

Modernism penetrated deep in Brazilian culture, planning and design, and its inherent positivist expectations still dominate most thinking, particularly the notions that urban development is intrinsically good, and that there is a rational order to things (Harvey 1990; Lara 2008). The evolution of urbanism in Brazil helped popularize the modernist notions of urban quality, which today are still important for urban development and public expectations. The late-modernism trend represents how alive and well modernist thinking is in Brazil’s urbanism, and how it is still utilized to control the city’s form and function towards an idealized model.

Fundamentally, plans and projects identified with this trend share a belief that if the government would control the market and the urban development process, the results would guarantee the common public good. Also, as in modernism, late-modernism practices are usually closed to public participation processes as its paradigm is based on governmental control, and in planners paternalistically deciding what is good for the community, overseeing and directing the behavior of the private sector. Like modernism, late-modernism shows an inherent difficulty towards sustainable development, since it is based on a closed notion of progress and on products defined beforehand, not in processes democratically defined that would characterize a holistic vision of sustainability.

Two “new towns” help us understand the impact of late modernism on contemporary cities. The modernist capital of Brasilia, more that any other Brazilian city, follows a dual process of urban development. While its modernist design has several well-known problems that only worsen over time, even the qualities of its design suffer from progressive deterioration albeit the government’s efforts in preserving the original project area (Pilot Plan). The well known classic modernism that made Brasilia such a strong cultural artifact and influenced so many planning efforts throughout Brazil, suffer from strong separation of functions and an automobile-oriented design –both diametrically opposed to any notion of sustainability other than the political and symbolic (Kohlsdorf, Kohlsdorf & Holanda 2008). Although most residents of Brasilia recognize its symbolic and aesthetic qualities, Kohlsdorf, Kohlsdorf & Holanda recognize and experience several difficulties in their use of the city structure, as did Holston in his landmark book on Brasilia’s modernism (Holston, 1989). Late modernism is engraved in the new districts, and planned by the government to receive the growth of Brasilia, which follow the same design mistakes of classic modernism.

The planning and design of Brasilia also reveals a strong duality with the city’s surroundings, where settlements that predate the new capital together with satellite towns and irregular settlements (favelas) have a much large population than Brasilia itself, and show strong social and economic vitality (Fig. 1). As urban places, they are much more self-sustained than the capital, and they certainly permit the region of Brasilia to be socially, economically, and culturally sustainable as a whole.

*Figure 1*

Taguatinga, one of Brasilia’s irregular “satellite towns” from the early 1970s has a life of its own and is not dependent on the capital. (photo Frederico Holanda)
The idea behind the building of Palmas in 1990 as the capital of Tocantins, a new state in central Brazil, was to apply the Brasilia model of regional development (Trindade 2008). In this respect, like Brasilia, Palmas was successful as it generated intense development in a backward region. The town’s population went from 86,116 in 1996 to 160,000 in 2003—almost 15% of the total population in the state of Tocantins. Extensive infrastructure investments including a dam and water reservoir, a regional highway, a railway, and an airport were built to connect Palmas to the rest of the state, and the city fulfilled its mission of integrating the region and creating a new society in the midst of the cerrado (savannah, an arid geography).

The original concept plan urged for an environmentally sensitive and sustainable design that preserved the natural environment. Inspired in modernist Brasilia and Milton Keynes, the design was based on a macro-grid that defined large amounts of open spaces, preservation along bodies of water, and provided the lakefront with abundant recreation and park areas. The road network and infrastructure would define sectors of 105 acres hectares where private developers would be left with great flexibility in deciding the internal land uses and urban design, what in theory, would encourage sustainable development approaches.

Utopia, however, was trampled by reality as the state government acted as land developer and the openness of the original design induced speculative development (Fig. 2). Planning in Palmas was confused with subdividing land and selling lots, which was constrained only by an obsolete Euclidian zoning legislation. Today, dense commercial strips are served by wide roads where large distances and vehicular traffic impede the flow of pedestrians. The amount of paving in the wide streets and sidewalks, barren modernist plazas, and intense development induce much higher temperatures in the summer. The large open areas: parks and artificial beaches along the lakefront are the only elements that make Palmas different from other frontier towns. Once again, like Brasilia, although the resulting urbanism in Palmas cannot be said to be an example of sustainability, particularly due to the rapid and speculative growth process, the town has successfully induced regional sustainability through economic and social development in the interior of the new state.

Trend 2: Revitalization

By the mid 1980s, the majority of the large cities in Brazil had realized they should direct planning and design toward the redevelopment of their downtowns. Vacant, deteriorating or underutilized buildings, “planning blight,” antiquated zoning and regulations, and over ambitious road projects were some of the problems to be faced. Unlike North-American cities, most of these areas were still being heavily utilized by a large amount of the population, particularly riders of public transportation that had to use central stations. The historic and cultural patrimony had to be respected for legal, symbolic, and political reasons, thus introducing a new perspective of sustainability. Over the past two decades, several revitalization projects are changing many areas in Brazil’s major cities, most with a cultural and recreational bias; good examples can be found in the cities such as Rio, Salvador, Sao Paulo, Recife, Porto Alegre, and Belem. To move towards a sustainable urban development, these projects had to focus on shared decision-making and on the use of public-private partnerships.
The most important of such projects is the Cultural Corridor Project in Rio de Janeiro, Conceived in 1982; it was the first inner-city revitalization program in Brazil (del Rio & Alcantara 2008). Both a pioneering and an integrative effort, the project cancelled the modernist zoning and old renovation projects in the downtown. It encouraged the population to preserve the historical and cultural architectural heritage, promoted social and economic revitalization, and renovated the cultural role of the city center. The project is implemented through special design guidelines, tax abatements, specific cultural programs, and street renovation (Fig. 3). In 2004 the Cultural Corridor included more than 3,000 buildings, 75% of which had been partially restored and 900 had been totally renovated. In addition, the area received more than 25 new cultural centers, theaters and museums, and various street beautification projects. Last year, the first new residential complex for more than forty years was inaugurated and now contributes to add new life to the downtown. This successful urbanism is sustainable in many aspects, and it harmonizes architectural to social, cultural, and economic regeneration (Fig. 4).

The success of the Cultural Corridor Project and its sustainability model inspired other Brazilian cities in their quest for preserving historic architecture and revitalizing central areas. One of these cities is Salvador, Brazil’s first colonial capital which historic core contains one of the most important collections of colonial buildings and churches in Latin America. The Pelourinho district, an area of the historic core around the pelourinho (or wiping post, where slaves and criminals were punished), is a UNESCO’s World Heritage Site and was the object of an ambitious large scale public project to fulfill its strategic role in national and international tourism (Fernandes & Gomes 2008). A controversial project from the early nineties renovated the area and achieved a significant increase in cultural gentrification and tourism (Fig. 5).

Although it evicted most of its original population, the project managed to reposition a place that was seriously deteriorated by making it safer and more attractive for locals and tourists, revitalized local cultural practices and the economy, and created new conditions for a proper maintenance of the historical architecture. In recent years, the local dynamics are changing again, and the city is ensuring a gradual return of residents and some of the traditional social practices.

Even the private sector is promoting an urbanism of revitalization, like in the DC Navegantes; a popular outlet shopping center in Porto Alegre, Rio Grande do Sul. This project was totally planned and developed by the private sector that invested in the reutilization of a brownfield (Castello 2008). Different from post-modernist practices, which are based on
false identities, this project explored its own historical industrial architecture, the centrality of the area, and its accessibility by public transportation. Dozens of shops and eateries in recycled industrial buildings, new additions, interesting landscaping, and areas for public events generate an attractive mix. The DC Navegantes mall was expanded from its original site, and other private developers responded by converting other buildings and implementing more attractions that continue to revitalize the surrounding areas.

**Trend 3: Social Inclusion**

One of the most important trends in Brazilian urbanism is the move towards a sustainable social inclusion: an opposite outcome of most social and economic models of globalization. Urbanism plays an important part in the re-democratization of Brazil in guaranteeing the social function of the public realm, and as a tool in responding to the social function of city. Citizens and political parties realized that the quality of public spaces and services are major aspects for full citizenship. Public urbanism moved towards generating a socially sustainable city, recuperating the city as a pluralist environment, while seeking to extend social and cultural amenities to larger groups. These efforts are particularly clear through the experiences in Curitiba, but also in other cities through the renovation of public spaces and the upgrading of favelas (shanty towns; squatter settlements).

The successful story of Curitiba is well known (Hawken, Lovins & Lovins 1999; Schwartz 2003; Irazabal 2005 & 2008). Since the 1970s the city has been successful in implementing a planning process and urban design solutions that have served as national and international examples: an efficient public transportation system that is integrated to land use planning, a lively pedestrian precinct in the historical core, a city-wide system of bike trails and numerous new parks, efficient garbage collection in shanty towns, and other innovations (Fig. 6). Curitiba now faces problems generated by its own successes: population growth attracted by its quality of life, a needy (Not sure if “needy” is the best word choice) metropolitan area, and a population that is used to relying on paternalistic public planning.

An important effort in urbanism toward sustainability and social inclusion is Projeto Rio Cidade, a citywide program for remodeling public spaces in Rio de Janeiro’s commercial cores started in 1993 (del Rio 2008). These areas were deteriorated and had been taken over by street vendors and other forms of illegal practices. Through public competitions, several private firms were hired to redesign the public spaces through new streetscaping, new furniture, public lighting, and the reorganization of vehicular circulation (Fig. 7). Through very different designs for different neighborhoods, Rio Cidade helped to strengthen local identities while providing for a more comfortable use of the public realm. Projects attracted new private investment, revitalized retail, and contributed to the transformation of the city image as a whole.

Another important example is Favela Bairro, an innovative program by the city of Rio de Janeiro to upgrade favelas (squatter settlements) (Brakarz 2002; Duarte and Magalhaes 2008). This project considered environmental upgrading and security of tenure as fundamental steps toward sustainability, a community’s development and integration to the city, and eventually full citizenship. As in the case of Rio Cidade, private firms were hired through public competitions to design for small and medium sized favelas throughout the city. Physical
improvements included installation of storm drainage, sewage, water pipes, public lighting, vehicular and pedestrian accesses, playgrounds and recreation areas (Fig. 8).

Community development included educational and income generation projects such professional training, work cooperatives, and hiring residents for trash collection and reforestation. Community buildings would be occasionally built by the program, such as daycare centers and new housing units for families evicted from their original homes by the project. The Favela Bairro program is an excellent example of social and environmental sustainability, and benefited more than 500,000 people in 143 favelas throughout Rio de Janeiro.

**Final Remarks**

Like in most of Latin America, models and injustices imposed by Brazil’s historic model, by unequal development, and by globalization and the expansion of privatization still exist. However, as we have seen, political avenues have paved roads toward an urbanism that is based in more than just cities and in a better quality of the urban realm. New urban projects have been generating places that are more livable, attractive, and responsive to the social and economic reality of the communities they are serving. The public realm is being redefined through various experiments at the local level.

Contemporary urbanism in Brazil have moved away from a model that was frozen inside a modernist paradigm, to one that respects different approaches in a quest for more sustainable cities in social, political, and economic terms. Different from modernism which relied on centralized control and determined rigid models of what and how a city should be, contemporary Brazilian urbanism may be considered postmodern in the sense that it incorporates different visions of quality of the public realm, and includes different stakeholders participating in its creation and maintenance.

Although environmental, economic, and urban policies still have to be more decisively integrated, and environmental planning has to rely more on specific spatial and social expressions, the practices of urbanism in Brazil have advanced towards Godschalk’s sustainability prism model in which all vertices are in a constant state of conflict but which results in a balanced environment having livability on the top (Fig. 9) (Godschalk 2004). While the ecological vertex is still to be more and better cared for, Brazilian cities have advanced significantly towards the equity, the economic, and the livability vertices. Hopefully, with the advance of democracy and public participation, in the next few years, we will see a more balanced and sustainable development model in Brazil, and particularly a better integration between environmental planning and urbanism.
References


The CRP Department has always encouraged community-outreach projects through studios and special projects. In this article, Umut Toker writes about his work for the City of Delano’s downtown, starting with a participatory concept plan in the winter. In the spring, his class developed three urban design proposals.

In fall 2008 the City of Delano approached the City and Regional Planning Department through Department Head Bill Siembieda, expressing their wish for collaboration for Downtown Delano. Following a series of communications it was decided that a participatory effort for idea generation on the future of downtown would be appropriate for the task. A two-step timeline was developed with the Community Development Department of the City of Delano. As a first step, through Winter 2008, a Downtown Concept Plan was developed based on a community participation process with the residents of Delano. As the second step, in Spring 2008 quarter, CRP 203’s Section 02 developed three Urban Design Plan Proposals based on the Concept Plan developed earlier. In the following sections of this paper these two phases will be summarized.

Development of the Concept Plan

Working with the City of Delano Community Development Department, a community participation process was developed that included four workshops. With the participation of Delano residents, downtown business and property owners, as well as the Chamber of Commerce members, four workshops were held. The workshops were held by the Cal Poly team, a team of students and Umut Toker (Figure 1).

The first workshop consisted of an “awareness walk” and focus group interviews. In this process, participants first conducted a tour of downtown, and identified key issues. Using disposable cameras provided by the Cal Poly team, participants took photos of what they liked and disliked about downtown. Once this process was over, participants gathered in the community center and elaborated on their ideas in groups and discussed these with the Cal Poly team.

Analyzing this information, the Cal Poly team developed an idea generation instrument for the second workshop. In this workshop, team members worked with the participants to identify goals and strategies for the future of Delano’s downtown. The information collected in this process was analyzed and used to develop the third and fourth workshops. In the third workshop, using instruments designed by the Cal Poly team, participants identified actions that would be required to achieve the goals they identified in the previous activities. The fourth workshop, on the other hand, focused on specifically space related issues. A board game-style “downtown planning game” was developed by the Cal Poly team, which consisted of a plan of existing downtown, and icons on stickers. Each icon identified a desired use, activity or area specified in the previous workshops by the participants. In the fourth workshop,
participants were able to plan their “ideal downtown” by participating in this activity.

This process helped the Cal Poly team to develop the Downtown Delano Concept Plan, which included a series of recommendations and implementation strategies for Downtown Delano. The Concept Plan was presented to the City Council, receiving positive feedback. The recommendations developed focused on four areas: (i) land use and economics, (ii) urban form and visual quality, (iii) circulation and transportation, and (iv) public amenities and recreation. These recommendations, which also guided CRP 203’s urban design proposals, were completely based on participants’ opinions and wishes about the future of their downtown.

Development of Urban Design Plan Proposals

CRP 203 Urban Design Studio II was supported by the City of Delano to explore the ideas developed for the Concept Plan and develop urban design plan proposals. The class formed three urban design teams, and each of the teams picked one “ideal downtown” scheme developed by Delano residents in workshop four (Figure 2). Then, the concept plan was studied in-depth by the class members. Visits from the Community Development Department Director Keith Woodcock ensured the development of a good understanding of issues about the City and its downtown.

The three urban design teams started work by analyzing the site. The class visited the city, and was briefed by the Community Development Director. Then, a site visit was conducted, during which Director Keith Woodcock gave the class a tour of key issues. Urban design teams were able to conduct an in-depth analysis of the site, visually documenting the existing conditions, and relating their findings to the Concept Plan. Each urban design team then developed site analysis reports.

The second step in the process was to analyze a series of urban design plans developed and adopted in California as precedents. During this process urban design teams conducted in-depth analyses of three urban design plans per team, and identified various urban design plan components. This process enabled the urban design teams to identify urban design plan components, and how urban design plans relate to specific plans, general plans, as well as the architectural design process.

Following the site and case analysis steps, urban design teams moved into the conceptual development phase. In this process, the Concept Plan recommendations and Delano residents’ input were the driving forces. Urban design teams developed three conceptual diagrams that were accompanied with a series of design concepts, all of which responded to Delano residents’ wishes with different solutions (Figure 3).

At this stage, five class representatives visited the Delano Street Fair under Umut Toker’s supervision, with posters displaying their conceptual diagrams and design concepts for different areas of downtown. A CRP stand was set up on Main Street. Through the fair, class representatives explained the design concepts they have been developing to residents who stopped by (Figure 4). A large number of residents stopped by the stand, giving input to the project. Boxes were set up for each of the conceptual diagrams, in which visitors could leave written feedback about each proposal. This
gave the residents the opportunity to leave their comments on note cards; and the students got an additional medium to receive feedback. The information gathered in the street fair was analyzed in class, and the remainder of the quarter was used to develop land use ideas, design guidelines, a conceptual site plan, and visualization of proposals.

In the weeks following the feedback received in the street fair and from the Community Development Director, the urban design teams proceeded into the development of land use concepts and design guidelines. The land use concepts were translated into land use maps by each urban design team. Along with the development of land use plans, planning teams studied the concept of form-based codes (Parolek, Parolek and Crawford, 2008), and developed design guidelines for different areas of downtown. The design guidelines developed by each planning team related to: (i) land use and economic development, (ii) circulation, transportation and street networks, (iii) community amenities and recreation, (iv) urban form, visual quality and massing, (v) standards for street furniture, lighting and signs, and (vi) sustainability and natural resources (Figure 5).

The land use plan and design guidelines were also accompanied by a conceptual site plan developed by each urban design team. The conceptual site plans represented visual accounts of the three urban design plan proposals, and their intended outcomes. Each urban design team’s conceptual site plan represented various solutions to the issues communicated by the Delano community (Figure 6).

The urban design teams presented their urban design plan proposals to community members at the end of the quarter (Figure 7). This process enabled the teams to receive feedback about their plan proposals, and the City of Delano to receive a set of ideas that would help enhance their downtown. The
Urban design teams developed design guidelines, supplemented by visuals that exemplified design ideas.

Figure 5
Urban design teams developed design guidelines, supplemented by visuals that exemplified design ideas.

Three conceptual site plans were developed by the urban design teams.

Figure 6
Three conceptual site plans were developed by the urban design teams.

three urban design plan proposals were submitted to the City of Delano Community Development Department.

Conclusions

The development process of urban design plan proposals for Downtown Delano proved a valuable experience for the planning teams. Throughout this process, the students were exposed to the issues and concerns raised by the residents of Delano. Planning teams received feedback about their ideas from community members and city staff.

The experience with the city and community members contributed to the processes of urban design and learning. The students were able to study the urban design process, urban design plan components, as well as the community participation process with an added sense of reality.
provided by the community. The design concepts and ideas developed by the planning teams related to the residents of Delano, their opinions and their environments.

The community positively received the work of CRP 203. At the end of this process, the Community Development Department expressed their wish to continue working with Cal Poly. Discussions led to the initiation of a new project, the development of a Strategic Plan for the future of Delano. In Fall and Winter of 2008-2009 academic year, the senior project studio (CRP 410-411) undertook this task under the supervision of Kelly Main and Umut Toker.

The hard work of CRP 203 students, and the high quality of their projects helped initiate the start of continued work with the City of Delano. In this way, CRP 203 students not only contributed to the Delano community, but also helped their fellow students start a new project for their senior studio (Figure 8).

References

Ebenezer Howard’s lessons and the Garden City movement spread throughout Europe between the end of the 19th century and the beginning of the 20th. In this article, Karl Eckert discusses the origins of the movement and the translation of the concept to Germany. During a recent trip, he visited and studied Siemensstadt and Britz, two garden cities located in what now are the suburbs of Berlin.

In reading the book Cities of Tomorrow by Sir Peter Hall, one comes to realize the profession of planning is a relatively new field of expertise. Modern day city planning stems from the early 1900’s when the societies of the developing world were dealing with the menace of the urban slum, a new phenomenon spurred by industrial forces and a rise in migratory populations to major city centers for employment. Developing ideas that would counter-attack this dire urban condition would soon define and establish what is known today as city planning.

Life in the Slums

Peter Hall’s Cities of Tomorrow elaborates on how, during the period of 1880 to 1920, major cities such as London, Berlin, Paris and New York experienced complications with slum populations. These cities exhibited high concentrations of poor residents within areas defined by the lack of physical maintenance, crowded conditions, disregard for sanitation, and general social decline. Andrew Mearns, a pamphlet writer of the time, described the slums of London with clarity:

“Few who read these pages have any conception of what these pestilential human rookeries are, where tens of thousands are crowded together amidst horrors which call to mind what we have heard of the middle passage of the slave ship. To get to them you have to penetrate courts reeking with poisonous and malodorous gases arising from accumulations of sewage and refuse scattered in all directions and often flowing beneath your feet; courts, many of them which the sun never penetrates, which are never visited by a breath of fresh air, and which rarely knows the virtues of a drop of cleansing water. You have to ascend rotten staircases, which threaten to give way beneath every step, and which, in some cases, have already broken down, leaving gaps that imperil the limbs and lives of the unwary.” (Hall, 2002).

When large amounts of people lived in such areas, crime and socially destructive practices would take place. The slums became known as the “vice” areas for the city and were generally feared for the crime within.

The slum issue persisted because the people who lived in such areas were generally poor and lacked the ability to move into neighborhoods of better condition. Instead they were forced to live in these dire urban conditions to be close to what casual jobs they could find and hold. Living in the country away from the mess of the city offered no means of making money, since rural areas were void of the economic activity cities exhibited.
The first attempts at ridding society of the menace the slum environment imposed included the actual physical tearing down of the cramped and unsanitary housing complexes in London. After the demolition, construction would begin building newer developments to rid the area of its previous record. Unfortunately, the new developments were seen as failures because the rent for the housing was out of reach for the people who previously lived in the area. So the now displaced inhabitants had to look for housing similar to their previous situation because they could not afford much else. This, of course, perpetuated the slum within the city, and where as the new developments did a general service to the area made anew, the slum would move and manifest itself somewhere else. The failure of the redevelopment programs, quite simply, is attributed to how the new developments did not address the social and economic demographics of the population in the slums. Eventually, after seeing no positive results, the city of London gave up on the rebuilding of slum areas. The slums were to stay until a better idea came about to address the social and economic needs of the slum demographic.

The Garden City Concept

To address the dire conditions of the slum era, a line of thought developed to address the problems of the layman worker in the slum environment and, in turn, created the planning profession as we know it today. Hall recognizes that the main proponent of this line of thought was Ebenezer Howard (1850-1928) working in London and describes his idea in great detail. Howard, through adapting the thoughts of many other thinkers of his time, (a list so extensive as to be sufficient for a separate paper) developed and made popular the notion of creating what he dubbed “The Garden City”. Inspiration for the concept came from many angles, for example, the key concept of a planned city (an idea somewhat foreign to Howard, being initially a shorthand writer) such as low population density, good housing, wide roads, open space and underground railway was first offered to Howard from a pamphlet titled Hygenia, or the City of Health by Benjamin Ward Richardson. Also at the time, there was a widespread agricultural depression in Britain, causing rural land prices to plummet. To take advantage of the situation, Tomas Spence came up with the idea of purchasing the land on which a city was to be built, so construction on the land would cause the future land prices to rise. The profit from the higher land prices would be directed to the inhabitants of the city when parcels were exchanged between private interests. These are but a few of the ideas incorporated into the final garden city concept by Howard.

Howard also saw the problem of competing advantages and disadvantages between city environments and small rural towns. The garden city was to become a fusion of the two, taking the advantages each had to offer and disregarding the disadvantages. The Three Magnets figure by Howard shows the concept. The diagram places the values, both positive and negative, of the two competing atmospheres and provides the solution through the hybrid of the two, called the Town Country (the academic term of the physical garden city). Where as the city lacked interaction with nature and exhibited extensive and stressful working conditions, the country lacked the amusement and employment of cities demanded by most residents. The Town Country
Finally, the garden city idea under Howard’s vision included creating areas of community building and cooperation. In his mind this is achieved through the collective management of the resources in each garden city. As stated before, the land on which the city is built would be owned by representatives of the community. Also, each garden city would provide municipal services or contract them out depending on cost and efficiency factors. Howard sought to create each garden city as separate autonomous communities.

The garden city concept, so far, is as follows: Howard suggested that:

“a group of people (with commercial competence) should create a limited dividend company, borrowing money to establish a garden city in the country side, far enough from the cities to ensure that the land was bought at rock-bottom, depressed-agricultural, land values. They should get agreement from leading industrialist to move their factories there; their workers would move too, and would build their own houses. The garden city would have a fixed limit... [about] 32,000 people living on 1,000 acres of land...It would be surrounded by a much larger area of permanent greenbelt, also owned by the company.” (Hall, 2002)

As one garden city reached its proposed population limit, another one would be created within the same vicinity. This would eventually create a web of garden cities, connected by rail systems, to help the population of each travel about. Thus the mobility of the population would serve as the basis for social interaction and cultural exchange found in the city. No longer were rural areas a subverted area of inaction, but instead a complex system of connected communities, in constant interaction through weekday commuting and leisurely weekend transportation. In this manner, the garden city avoids the perils of the city slum through incorporating the benefits of cities (mobility, employment, atmosphere, etc.) and the country (nature, lower population, lower rents, etc.). The hoped for end result of the garden city concept would include an interlocked web of community after community, each presiding over its own affairs yet still in constant contact with one another.

In effect, the garden city idea sets forth community control over local affairs in which a board of members has control over the community’s proceedings. The job housing balance is adequately addressed through population limits based on employment offered. Also the population limits would reduce the danger of overcrowding, as was present in the slums. The built community would be adjacent to a main factory in which the residents would work for, allowing for easy and quick access to the work place. The interlocking of multiple garden cities would facilitate cultural and social exchange among various groups of people, providing economic stimulus, entertainment, and atmosphere. And in the time of economic depression in which the idea was proposed the concept was designed to create wealth from the land on which the city was built.

The German Translation

The garden city concept would later be taken by other nations of the time, looking to solve their own urban problems. One such nation was Germany in which Berlin was facing a formidable slum
population. This summer I had the opportunity to visit the two separate Berlin garden cities of Seimensstadt and Britz to get a first hand understanding of the German garden city built during this era and how planning concepts, such as the garden city, can be adapted differently to fit certain cultural standards.

Where as Howard saw the garden city as being an anarchistic cooperative community, the German inheritors of the concept saw the garden city as the ideal platform from which to create the ideal worker community. One of the main German garden city proponents, Ernest May, described the garden city as providing “uniform box-shapes of.. roof gardens [that] symbolize the idea of collective living in a uniform style, like the similarly shaped honeycombs of a beehive, symbolizing the uniform living conditions of the inhabitants” (Hall, 2002). Sir Peter Hall states how “it all sounds too perfectly like raw material for a Marxist PhD thesis: the capitalist state co-opting the local state in a plot to secure the reproduction of the labor force” (Hall, 2002). Through the planned German garden city, the work force would be within a mini section of the city that exactly mirrors their social status while still providing the need elements of healthy living that Howard sought. This planned and controlled environment, it was hoped, would create the ideal situation for the most productive worker to live in, a much need resource for a Germany then devastated by World War I.

The first garden city I visited was Siemensstadt, in the northwestern portion of Berlin, only a short subway ride from the center of the city. Siemensstadt was built around a factory of the electric giant Siemens in the 1920’s to 1930’s. The creation of the project was facilitated by multiple famous German architects of the time, including Scharoun, Bartning, Haering, Gropius and others all putting in modern pieces of architecture (relative to 1920) to reflect the industrial and modern ideal of the creation of the perfect working man’s settlement.

From a design perspective the use of many separate and distinctive architects for the entire project creates distinct neighborhoods within the community. The end effect is that of place-making, a very important design concept to make residents feel more involved with their urban landscape. Thus, through living in Siemensstadt, you could tell people that you live in the flat, pink development on the edge of the settlement, or in the part of the settlement with round curves on the façade and develop an identity with your living conditions.

The antithesis of this concept in our modern day world would be the endless suburban sprawl where the building types are of the same sort, in endless rows and columns without pause. Through this sprawling and monotonous design, residents feel detached and unimportant in their living environment. In Siemensstadt, the place making within the development makes walking through the site an ongoing exploration, one that actively engages the resident and can foster the building of identity with the development.

The other strong impression gained from visiting Siemensstadt was of the carefully articulated open spaces. The open spaces on site, carefully created and grown to perfection over the years, help fully enclose a user...
An identity is readily made between a resident and a building through the manipulation of color, architectural form, and varying surrounding vegetation.

The sign post reads “Use ice cover at your own risk.”

The central open space of Britz is one shared by the inhabitants where the potential for ice skating on the pond in the winter exist.

of the site to make the bustle of the city seem like a distance force. All the building units are designed to face these green spaces, not the streets as is typical with most developments today. This shows how it was the architect’s intent to make the open spaces the focal point of their design. Balconies for relaxation, main entrances, and such are all present on this side. The overall effect of these open spaces, even though the residential area is geographically right next to the factory, makes all sense of work duties and responsibilities fade away as one enters the expansive lawns and mini forests of the open spaces scattered throughout the development.

I asked my traveling companion to consider how he would feel living in such a development, and he simply replied “There would be no privacy”. I agreed with my traveling companion, but in a different manner. For me, instead of focusing on a lack of privacy, I felt as though there was a great opportunity for community to be formed between the residents. Because of the close quarters and shared open spaces, it seemed like human interaction was common and that you would get to know your neighbor and others through living there. This was the last impression I had of Siemensstadt as me and my traveling companion left for the next German garden city, Britz.

The garden settlement of Britz exhibits a new level of design I have never fully experienced before in my career as a planning student. The development is located in the southern part of Berlin and consists of a four story structure wrapped around a central open space in the shape of a horseshoe accompanied by a number of two to three story structures built in a straighter fashion around this horseshoe structure. The horseshoe structure is the defining structure of the development and creates a feeling of total enclosure once entered. The clear definition of space on all sides by the straight façade allows one to lose sense of the out-lying city. Thus, the main part of Britz is a very inward focused area, with the units looking towards one common public space and rejecting the outside world. It is my guess that the intent of this design was to help create an optimum living and family environment for the worker. The worker could leave work and enter a new environment that resembles nothing of where he just came from, despite being relatively close to his place of employment. This environment, unlike his working conditions of factory work, would allow the worker to foster and focus on family affairs, hopefully to generate a happier and healthier lifestyle. Through this, the worker increases his relative productiveness.

The Britz development brings to mind the ideal transcribed by Ernest May, in trying to create homogeneous living conditions for the worker to thrive in. The units are all fashioned in a single manner in the horseshoe structure, which since it is so closed to the rest of the city, perpetuates a uniform living environment for the resident. This is opposed to a more traditional development built along side a roadway, where constant interaction of different forces that utilize the road change the outlook from the residence. However, in Britz, because of the seclusion of the development and its central open space, the forces of interaction seen from a balcony or window are most likely the same scene developing of children playing in the grass and of fellow residents enjoying the
outdoors. In essence, the only users of the area would be the residents who, because of the homogeneous nature of the development and its units, would be of the same social class as the rest. Because of this, the creation of a separate entity that manifests itself differently than the out-lying city is possible. This of course can be broken when the resident leaves the inside of the complex, but when one lives inside of the complex, the homogeneous nature of the residents surroundings would be dominant. In leaving Britz, I felt this breaking off from the seclusion of the inside and re-emerging into the city.

The German garden cities built during the 1920's and 1930's were a direct urban manifestation of the social situation and needs of the time. Today, the ideas behind the garden city concept, such as the interconnection of multiple cities through rail systems, the creation of dense, non-sprawling developments close to employment opportunity and the general desire for a healthy family living environment still persist today. But the most profound end result of the garden city concept was the creation of a new field of study that would cater to the social situations of the time and ever be a changing force in how we live out our lives in urban environments: the study and application of city planning.

REFERENCES

One of CRP’s requirements for both the BCRP and the MCRP programs is that students take at least one quarter of professional internship, which is usually done during summer. Miriam Thompson writes about her internship with the Planning Department of the City of Los Angeles, where she learned more about sustainability, her main interest.

There is a consensus in academia about the importance of internships. An internship can be an extremely valuable opportunity to apply and expand your existing knowledge base as well as increase your professional contact base. The first year of the California Polytechnic State University (Cal Poly), San Luis Obispo Master’s of City and Regional Planning (MCRP) Program equips its students with a first-rate set of fundamental planning knowledge and skills. However, no matter how well the course work prepares its budding professionals, it is the real world application of this knowledge that truly allows us to realize the full value and breadth of our education.

As a 2nd generation Angelino, I have a lifelong vested interest in the City of Los Angeles. I consider myself very fortunate to have landed an internship in my future home, which also happens to be, the second largest city in the United States. As such, innovative planning projects abound. Consequently, there is substantial competition for internship placements, so imagine my zeal when I learned that I was hired to work for the City of Los Angeles Department of City Planning (LADCP).

Being offered this position was a result of networking, the MCRP program’s reputation, and my polished verbal and visual presentation. In the months preceding my acceptance to Cal Poly, I attended a number of networking events and exchanged business cards with people in the planning field. Then, after preparing and designing a resume, cover letter, writing sample, project experience list and reference list I emailed everyone whose business card I received. Of the few responses, one from the Executive Director of the US Green Building Council-Los Angeles Chapter proved promising. He informed me that his colleague Claire Bowin (AICP, LEED AP) was looking for an intern at LADCP and gave me her contact information. After analyzing my resume and an informal interview, she hired me.

My new supervisor, Claire Bowin, informed me that I would be working with her on a LEED-ND Pilot specific plan. My undergraduate study of sustainable design formed the basis for my initial interest in the optimization of the built environment, which I carried to my graduate studies at CRP. As I began to contemplate the negative impacts of traditional development patterns, my interest in finding better-quality alternatives peaked; my internship would allow me to deal exactly with this issue.

Major Assignments

During my tenure with LADCP, my most significant contribution was a multifaceted parking study for the Cornfield Arroyo Seco Specific Plan (CASP). The plan is one of only two public projects participating in the new U.S. Green Building Council (USGBC) Leadership in Energy
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and Environmental Design Neighborhood Development (LEED-ND) Pilot Program. As I begun to realize the comprehensive nature of the benefits that the CASP will provide I became inspired to learn more about the process and contribute to its development.

One of my responsibilities was to collect data on the number of parking spaces within the 603-acre area. I was also to analyze additional parking data and researching strategies for reducing the parking footprint. First, I conducted an extensive visual survey of the area using the Zoning Information Map Access System (ZIMAS), Navigate LA and Google Maps. I then prepared Graphic Information System (ARCGIS) maps and Microsoft Excel charts to convey the results to the Graphics division. This data allowed me to calculate and project the area’s current and potential parking supply vs. demand. Once I established this baseline data, it was incorporated into my supervisor’s larger model. I then conducted a sensitivity analysis on this model, inputting variations in the parking variables. From this analysis, we were able to discern the effect minimum or maximum parking policies would have on the CASP area.

Overall my work proved to be a valuable contribution to the planning process. To be held accountable for decisions on this level of responsibility and liability was new territory for me. Yet I am confident that the education I received during the first year of the Cal Poly MCRP program prepared me to take these challenges head on.

In addition to my research requirements, I attended a series of important collaborative meetings with representatives from over ten affiliates. For example, there were representatives from the consultant team, Council District, State Parks and Recreation, GIS department, Urban Design Studio, Private Developers, etc. The meetings were interesting because they allowed me to gain firsthand experience on how the staff interacted with one another and what level of responsibility planners have for their respective specialties. In addition to these in house meetings, I participated in a community meeting for public comments on the draft of the specific plan. I helped answer questions of community members and helped with the display boards of highlighted information on the specific plan.

Lessons Learned

In retrospect, this internship surpassed my expectations and I hold the experience in high regard. At the end of the summer, I had a number of new interpersonal and technical skills, which make me more confident in my preparedness to adapt to a variety of planning responsibilities. I also gained a wealth of knowledge during this internship; not only from my assignments but also from observing the office culture, management style, and type of people that are in the trenches of LADCP. In terms of my professional development, it was very motivational to witness my role models in action and have a concrete understanding of the career paths available to me.
In the Spring of 2008, Nancy Cole and five other Cal Poly students went on a visit to China, sponsored by the National Science Foundation. Their purpose was to investigate the several Chinese and international development projects in Chongming Island. She noted the conflicts between the local ancient culture and globalization, and between the needs of development and the goals of sustainability.

“Seize the great moment, embrace the great future” (Tongji University)

Departure from the Western World

In June 2008, the National Science Foundation sent six students: four engineers, a social science student and a city-planning student on a study trip to China. The purpose of the trip was to investigate the potential for research projects on an island off the coast of Shanghai, China. Chongming Island has been the focal point of many development projects by the Chinese government and international research institutions. The island is located at the mouth of the Yangzi River had been in relative isolation from the rapid change that Shanghai and other parts of China had undergone in the last twenty years.

During the twenty first century, the Chongming Island changed rapidly. With change comes many sacrifices to both the people and the environment of the island; however, the people appeared tolerant and excited about some of the changes. With the recent construction of a bridge and tunnel that link Chongming to Shanghai, there is no question that the Island will significantly be urbanized. The challenge is how to create a new model for urban growth that can generate enough water, energy and food to support its inhabitance.

Chongming Place and Pace

Chongming Island had many yards filled with used windows and doors that were taken from old dwelling units. From afar, the piles of material seemingly looked like garbage, but upon taking a closer look, the piles were finely sorted materials for construction, such as brick, metal, tile, and concrete. The tile and siding was reused in roads and used bricks were re-mortared to construct walls and buildings.

The Chongming Island had an un-harmonized sense of pace. The pedestrians, bicycles, motorbikes, private cars and buses shared one road with varying speeds and directions. Bus travel was a fast paced, wild experience on Chongming. The drivers were like taxi drivers in downtown Shanghai, were they briskly weaved through cars, trucks, bikers and pedestrians as if they had choreographed the entire journey.

The Shift: Lifestyle meets Technology

People on Chongming Island had seen dramatic shifts in their quality of lifewhich in recent years. China provided millions of people with amenities that were not available before. Electronic shops were filled with the latest technology. Appliance shops had modern air conditioners, vacuums, kitchen
appliances and more. In homes, personal air conditioners were standard, and energy conservation was common practice. Task lighting, localized cooling, and use of day lighting demonstrated an ethic of energy saving.

China had instituted its own energy rating system, like EnergyStar in the United States, which rates the efficiency of appliances. Customers read the products energy facts, just like they read nutrition facts on a package of food. Western-style driers, while time-efficient, were seen as energy wasting and too harsh on clothing.

There were technologies on the island that had become so standard that most people had access to these amenities. Everyone from the taxi driver to the local farmers had cell phones. This type of technology provided people of the island the ability to communicate with family and friends, and have access to mobility, trade and commerce. Besides cell phones, solar hot water tanks had become popular within the last ten years. When asking the local distributor why this technology took off so quickly, the response was because of the very short payback period. People saw the benefits in the short term.

We visited a pilot biogas facility that was fueled by pig manure. A community of 20 used the gas for cooking. While the facility was fully operational, the community said the government found it as an economic waste because it was not as affordable. It seemed like with every project, however environmentally beneficial it might be, it had to have a short-term payback to be widely distributed.

The Scent of Progress

The quality of the air is a powerful indicator of the quality of an environment. Fresh, crisp air reminds us that natural systems are in balance. China is often denoted for its toxic air: the industry, the coal plants, the city smells and wastewater issues. However, Chongming is a unique place in China. It is a place where the thick gray haze of the big city is cut by the purifying effects of lush planted forests and carbon-capturing wetlands. The island is clearly a sanctuary from the same pressures that Shanghai and other industrializing cities have faced. But many indicators show signs that Chongming may very well fall into the same trappings that other cities have fallen into.

On the first trips to the island, we observed many notable land uses that might have posed significant conflicts with sustaining and retaining the quality of the environment and preserving the customs that exist on the island.

We passed places on the island that were completely destroyed and abandoned. The future was left unknown. The demolition of homes and displacement of people were a common practice on the island, according to Gong, a Tongji University student from Shanghai and a former resident of Chongming. Gong suggested that the future of the Chongming people was extremely uncertain because their living patterns had been disturbed. Eminent domain was a major issue on the island. Whole communities had been moved to make way for the new bridges, eco-tourist parks and high-rise developments.

A farming community of about 900 was moved to a nearby apartment complex. We visited their abandoned homes. Rubble and empty shells were the only indication of the community that once was. And for the first time, I understood where all those old doors and windows were coming from.
These building materials were ravishes of homes and lives that used to exist on the island. These lives would be replaced with new lives that come with all the twenty-first century standards that humanity craves.

The farming community had been moved to an 8,000-unit complex with all the modern amenities of any western-styled development; complete with a gym, childcare facility, a market, hotel and hospital. We were generously offered entry into a family of five households. They gave us a tour of their two-bedroom apartment, and offered us watermelon. This ultra-modern apartment, decorated in an IKEA-style was completed with sleek furnishings and China-chic color palette. I thought to myself, what a great apartment for these people! They seemed so content with life. They explained that the government provided them with their apartment free of rent and two additional apartments to generate income. I realized that these people had no longer any connection to the land. They were no longer farmers; their history was erased, what was left was the remnant’s of their old homes, which would be used as paving for another road.

The balance between land rights and civic duty was just as important as the balance between modernizing and preserving cultures. Whether or not these people were able to maintain their identity amidst this process of urbanization had yet to be determined. I thought back to the 1950’s post-World War II era in the United States. During this time, people had such an extreme optimism and sense of opportunity. Now, I think how the 1950’s created both physical and social challenges that we face today. I do not know what the future holds for these people, but I can only hope for the best.

Prior to coming to China, my perception was that the people would be extremely insecure and dissatisfied with the changes that are occurring on the island. My concerns were validated by Gong’s perceptions but no one that I encountered who lived on the island seemed apprehensive or unwilling to confront change. Opportunity and development seemed intrinsically linked in China. They perceived China’s steps toward change had been moving in a positive direction.

Some of my lasting impressions of China were images of Pudong, the east side of Shanghai, filled with skyscrapers and cranes. The streets were relatively barren compared to the amount of construction that is going on. I envisioned Pudong 20 years prior and saw Chongming Island, filled with agricultural fields and farmers making a living selling food at local markets. The life on Chongming Island was highly reminiscent of what I envisioned downtown Shanghai before the big boom.

The pressures on Chongming Island were observed in the agricultural sector. The inhabitant’s lifestyles were heavily influenced by a deep connection to the land. All the land on Chongming was extremely well utilized, with food crops grown on almost every open piece of available land. People grew food on hillsides, at road edges, next to businesses, and in playgrounds. It seemed like most people have some form of garden, even people in the high-rises utilized every available piece of land for cultivating food.

**Food and Livelihoods**

Urban children from Shanghai were brought to the island to learn the value of farmlands, but were not shown the value of preserving and cultivating land in their own living space. These toolsets are not practical unless applied back to the urban setting.

In Chongming, Agriculturists were divided up into two major categories:
those that were farming for subsistence and those that had larger agricultural operations for foreign or domestic markets. The commercial farming operations use domestic and migrant laborers from other provinces, similar to the migrant laborers in the US coming from Mexico. The small-scale farmers maintain a family operation. They may sell to foreign market, but have preserved some of their family traditions.

For those that could afford it, farmers switched to organic production because they received four times as much for their produce. Commercial organic farmers often switched to mechanized farming because of the increase in revenue.

Tractors were not commonly used, and on the entire visit, only one or two tractors were spotted in use. The shifting trends toward mechanization were creating new jobs for people on the island. While the patterns of growing and tending the land had changed, the seasonal practices, such as rotation of the crops or applying natural fertilizers are still common practice.

Chongming had strict rules about not over-farming and over-fishing the island. During the summer, no boats were allowed out of the canal to catch fish because they understand that would destroy the natural regeneration period for the fish. The canals were left open for the importing and exporting of goods and raw materials, such as the exportation of rice and the importation of bottled drinks.

The evolution of agricultural patterns on Chongming applied traditional farming practices to changing circumstances. A local herb farmer and his son said his family had utilized the same practices for generations. He made it clear that the surrounding land development increased affluence and access to mobility and would not alter his farming practices. The farmer had also been selling his product on the domestic and international market. In contrast, an organic large-scale farmer had significantly altered his practices because of the increase demand and desire to output a higher yield.

As traditional patterns of farming are becoming less prevalent alongside the overall decrease in domestic farming caused by urbanization on the island, there is a growing interest in preserving skills and maintaining an appreciation for the land.

**Final Thoughts**

To be truly sustainable, how can a place sweep a whole history and culture under the proverbial rug? The ecotourism model emphasizes not giving handouts, but meaningful opportunities to the people that inhabit the area. Chongming is not yet modern enough to hide the real problems it has related to labor issues and human rights issues. One day soon, it will be modern enough to hide its own history.

China faces two realities: a rich historical tradition amidst the pressures of its transforming world. The legendary speed of development have forever changed the way humankind perceives pace, place, and lifestyle.

The vernacular constructs— Influenced by Westernization, globalization and an emergent open economy— have rapidly modernizing. Upgrading amenities have forever altering living patterns through the built environment. But what we cannot always see, what we never hear, and what I still have yet to understand is the process of creating this shifting world.
In the Summer of 2008, Ryan Brough took the most out of his vacation with family friends in the beautiful Cullera, Spain. He got an internship with a real estate development company in Valencia, and was able to learn a lot about local planning and construction practices. He also learned about the Spanish culture and their very urban lifestyle.

Culture Shock

In summer of 2008 I had the once in a lifetime opportunity to travel to Spain and spend eight weeks experiencing a culture so different from my own. My first morning in my new flat in the city of Cullera, I awoke in and walked into my living room I opened my windows and looked out over the city and it hit me, I was no longer in America; Valencia would be my home for the next eight weeks. It was a surreal feeling; I immediately grabbed my camera and took pictures to remember that moment. There is no comparison to make in the United States; the people, culture, and built environment warrant endless exploration. For the first few days I was completely overwhelmed but it was not long before I felt right at home.

I spent my first day getting a tour of the city from a family friend and owner of a real estate development company based out of Valencia, Spain, Nagada Arquitectura. A typical tour guide never could have given me that perspective. His company has restored many structures throughout the city, including some of the historical buildings in the downtown. Seeing these structures with him also gave me the opportunity to ask him questions about the process of development in Spain and that was where the real learning began. On some occasions, I was able to also gain entrance into the structures and see them up close and personal.

Professional Experience

In the United States planning and architecture are always imitating what they think history should look like to achieve a certain nostalgia. Spain appeared to have some similar methods of imitation, but by in large, the country embraced their authentic history. In Spain, I found that even in the more recently developed areas, the development patterns had key Spanish elements present. Nagada Arquitectura had two such projects currently under development. The primary project that I was able to be involved with was a multi-family housing project in Moncofa, Spain.

The City of Moncofa sits roughly thirty miles north of Valencia. The project consists of 101 condominiums on the coast with beach and ocean views. Prior to going to any meetings or site visits for the project, I reviewed the architectural plans. This gave me the basic structural makeup of the project and the detail of the project down to the material boards. The financial statements and pro-formas were also made available for my review; however, they scarcely resembled anything we learned in school. These pro-formas were written in great detail and with direct correspondence to the phasing plan. A financial cushion was also built into
the budget for the unavoidable speed bumps that the project would hit. The architectural and financial review of the project gave me an opportunity to see basic site, structural, financial opportunities, and constraints with full transparency. This was one of the most valuable experiences because I got to see proprietary project information that most companies never would have revealed.

At this point I also received the opportunity to speak with the architect on why specific decisions were made and what alternatives were considered. This open dialogue between all the players was invaluable to understanding how the project had progressed to the construction phase. Listening to all of the reasoning behind each decision gave context to the whole project; this also made understanding the whole process much easier.

The following week, I saw where the project would come into fruition; at that point the site was dug out to set the foundation for what would become the subterranean parking. On that same day I also attended a marketing meeting for the project. In our curriculum, we often deal with the development phase of projects, but rarely do we get the opportunity to see what happens after the structure is built. Attending this meeting with the developer and his sales team gave me the opportunity to see post-construction work.

Planning Spotlight - Turia Riverbed

If there is one element in the Valencia landscape that stands out and is unique to few cities, it would be the Turia Riverbed. This feature is so prominent, widespread, and innovative that it is impossible to miss. Although many water features are present in this space, there is no river.

In Turia’s riverbed, a spine creeps through the center of all major cultural centers. In the 1950’s, the River Turia flooded and in an effort to prevent future flooding and any additional damage to the various districts, the parliament approved the Plan Sur to divert the river elsewhere. This left a riverbed full of rich soils perfect to nurture the garden that would come thereafter.

Since the approval of that plan, the space has evolved to be a social center. Before the sun comes up, the space comes alive with runners, and continues long after the sun goes down. Similar to Central Park in New York, the space in Valencia is not only a great place for running, but also for watching people throughout the day. For me, it became an especially wonderful place to run in the mornings. Every day I would find a new little garden or nook. After eight weeks in the city, there is still plenty to explore the next time I return.

By default, the space is sunken lower than the rest of the city because of its historical use; this geographical quality also makes the space startlingly quiet and serene; sound waves from the city bounce over the lower riverbed elevations.

This enables every visitor to find their own special secluded place, even in the middle of the day. There is also a spectacular tree canopy, which has grown over the last fifty years. The canopy is so extensive, that visitors can get caught up in nature and forget that they are in the third largest city in Spain. This natural backdrop sets the scene for countless other places.

Not only are there attractions for the children, but there are attractions for entire families as well.
There are multiple jungle gym park sets and all the typical play equipment children expect and some they wouldn’t that double as great pieces of public art. For families of all ages cafes are dotted along the length of the riverbed where you can get an afternoon snack or a cool cup of orchatta, a traditional drink made from the chufa plant.

**Spain - Lifestyle**

Americans visit their history, while Europeans live with their history. This was made ever so clear to me this summer while I lived in Valencia, a city with a rich history that is infused into every facet of life. It is especially evident in the historical district of the city where the new and old are seamlessly woven together. In a city founded before Christ, an extensive and continually growing subway system (named Metro) connects the historic and modern pieces of the city. This Metro system is used everyday by most city residents namely because it is simply the fastest way to commute. This is not a new concept for Europeans, but for me, coming from the personal vehicle dominated California, it was. I very quickly warmed up to the idea of public transportation and used it nearly everyday.

Valencia’s regional role makes it the cultural center. Within the city limits exists parks, countless museums, L’Oceanogràfic, (the largest aquarium in Europe) and multiple sports complexes, including a new under construction soccer field. These cultural destinations made the daily exploration of Valencia sure to never disappoint. During the typical day I was able to walk the city and take advantage of most of the cultural destinations. At night the opera house and concert halls opened their doors with a diverse schedule of performers. However, on the weekends, we were off to the summer home.

In Spain, virtually everyone takes their vacation in either July or August. During this time everyone escapes to their summer homes and my family friends are no different. Every weekend I went to Cullera Spain, I learned what Spanish living was all about. When I went to the porch off of my bedroom and saw the view pictured below, it became clear to me how well the Spanish culture really embraces life. They take pleasure in life in a way incomparable to anyone I can recall in the United States. Everything is a family affair and no one is ever left out. I was shocked every night as I peered over the beach from my room and saw how many families with young children would be out strolling on the boardwalk until midnight. The outdoor spaces come to life and people interact with genuine interest and concern.

In Spain they work to live. When we were at the summer house, work was not on the minds of anyone. It was all about the food, family, friends, the afternoon siesta, and the nightly festivity. The food was always in mass quantities and unparalleled to any other I have ever had; I cannot begin to explain it. Being on the Mediterranean Coast, seafood was in nearly every meal. Even lunch was an experience not to be rushed. The meal would usually be a two hour event with long discussion and plenty of beverages. Food is not only eaten to feed your hunger but also your soul, there is history and culture in every dish. Even where they eat is a spectacle. Most Saturdays and Sundays we would dine on the bluff overlooking the family’s orange grove seen below.

**Conclusion**

Spain hardly gets enough accolades for what it brings to the international traveler. Its rich history and
its people’s generosity make all visitors feel right at home. For the architect planner or spectator of the arts both physical and otherwise the city leaves something for endless return trips. Most importantly, a trip to Europe, especially Spain gives a look into another culture which fosters reflection on our own.

Living, studying, and working abroad are experiences every student should take advantage of while in college. The personal and professional growth that occurs cannot be created in a classroom setting and is truly irreplaceable.

Figure 4
Center for Science and Arts located in the Turia Riverbed Park, Valencia. (photo by Ryan Brough)
In the summer of 2008, Erin Cooper was the first graduate student of Cal Poly’s CRP department to participate in the exchange program with the Federal University of Rio de Janeiro. She spent a couple of months there taking classes, studying transportation and sustainability, and learning a lot about planning, life, and culture from a very different perspective.

I decided to investigate Cal Poly University’s City and Regional Planning department’s exchange program with the Universidade Federal de Rio de Janeiro. I had heard that it was going to be challenging and perhaps dangerous to travel to Rio. However, the opportunity to attend one quarter at the Universidade not only demystified some of my previous ideas I had of Rio, but proved to be one of the best decisions I have made about my educational experience with Cal Poly University.

Of Rio, I often thought of Copacabana, Ipanema, some sort of glamorous lifestyle, and at the same time, the favelas, or shanty towns, and some of the world’s worst poverty in an otherwise “developed” country. These were my images anyway, and I wondered how they would fit into one city. As foreigners, we have many images of other countries. I like to see what images are true.

My first impression was slightly different. A friend who I had met while she studied abroad at Cal Poly, Gabriela, picked me up at the airport, and drove me to the house where I would be staying. On the way, I saw my first favela, which was far from being glamorous. High rises are mixed in with historic buildings in the Centro area; I could not make out any particular city order. I had no idea where we were going, but we ended up on a very pleasant street, with the statue of Christ the Redeemer just above us. The house was amazing and looked exactly like one would imagine in South America. After lunch, Gabriela left me there. Because Gabriela had offered me a sense of comfort and hospitality, I was a little sad that I would not be staying with her.

A few days later, I went to UFRJ for the first time. I caught the bus from the Zona Sul to the campus, about half an hour on a bus ride of terror. I honestly didn’t think I would survive; I didn’t know a bus could take an onramp at that speed, but I was proven wrong! The bus passes through a very poor area, on freeways, over a polluted and smelly river, to a campus and building that took me back to a nice modernist time period.

Upon entering the building and figuring out where I needed to go, I felt everything was a little disorderly, and the general administration of the college seemed somewhat out of control. Eventually, I had my first class. Students would wander...
in and out as they pleased. They would chat with their friends if they wanted. Their behavior was surprising for an American student who is used to very strict order. Though this may seem inefficient to us, it definitely makes life more enjoyable. Generally, students were paying attention, but there was no sense of obligation, which I found relaxing.

I took three classes while I was there: a class on the history and development of architecture in Rio, a basic transportation class, and discussion seminar on urbanism. Though there were similar themes to those in the US running through the discussion of architecture and planning, I learned much more about South America. The development pattern of Rio seemed similar to many cities in California. It was a very small port town for many years. It was not until the 1930’s that the city began rapid development and became something like the city we recognize today. The favelas, which are located everywhere, have a long history that was based on soldiers’ and workers’ living situation. There are also different laws and ideologies that govern the development of land, which create the background for many projects even today.

The transportation system that has evolved in the city is different than many transportation systems in American cities. There are more buses, which are more widely used. Cars are also very popular, but there is very little space on the roadways. In the class, we analyzed a plaza and the surrounding road network to make recommendations on how it could be improved. The plaza served as a major bus stop and transfer station, but was not originally laid out to serve this purpose. The surrounding streets were mostly two lanes, one way streets. In short, this is a situation that does not happen in the United States. Though I could make recommendations to make the area more efficient, this experience drove home the importance of having a cultural understanding of area before attempting to make improvements. People in Rio may want a more efficient bus station, but they may not want to give up what Americans often give up in order to have efficiency.

Gradually, I started meeting more people in my classes. They did not mind my less-than-perfect Portuguese. I realized early on that I would never be able to relay my true thoughts in Portuguese when the discussions got very complex. It was unsatisfying when I could only respond to someone with a yes or no; but it was a nice change to focus on listening to conversations. Eventually, I was able to understand more complex thoughts, but I still had difficulty conveying these thoughts perfectly to another person.

This did not stop me from meeting many people. Because I was a foreigner, one professor gave me tours of some interesting areas. He showed me the port area, which is an area in transition. There are many plans to improve the area and create a more attractive port, as is done in cities across the United States, but the political will and funding are always in question, and therefore nothing is done. I also got to know the students who insisted on giving me rides home from school. Why would you ever drive yourself home from school alone when you could give three other people a ride? The Brazilians were open and friendly. Where else can you hang out at the plaza until 4 am, listening to a Samba band, having a few drinks, and just talking with people? Brazilians love to talk; everyone has

Figure 2  
Copacabana Beach.
to talk. I found the lifestyle in Rio to be very relaxed, but no Brazilians agreed with me on this point. Almost everyone goes to school and works and has exercise classes, along with a busy social life. In her free time, Gabriela took me to churrascos (barbeques). Cristina took me to different parties. The neighbors always had people over just to hang out. Without fail, someone played the guitar, someone started singing, and everyone else enjoyed the atmosphere.

For most of my time there, I was only with Brazilians, but I also met a few Americans. When we first started hanging out, I realized I had not spoken English in weeks, and it felt strange. They also loved Brazil, and talking with them helped me to understand what I had started feeling – that I did not want to go home.

Although I have spent time discussing the positive experiences of the trip and the city, there were also some aspects of Rio which were less than perfect. In general, there were many times when people asked me for money on the streets. Also, on most buses someone sold candy to the passengers. I also observed that many people of lower incomes commuted hours by bus to have decent jobs. Also, many people slept out in the open on the street. But despite experiencing this less than perfect vision of Rio, I didn’t want to go back to a beautiful clean city.

In general, Rio de Janeiro and Brazil offer some things that the U.S just does not have. The further you get inside of Brazilian culture, the more Portuguese you speak, the fewer Americans and foreigners you hang out with, the more you see why the Brazilians are never surprised you wanted to go to Rio. You will also see how nice people can be. Perhaps there are problems, just as in any culture, but this is a place where you can almost always find someone who is willing to have a chat for a little while. They never seem offended if you do not speak Portuguese; in fact they are quite impressed if you do. They have a million more things to complain about than we do in the U.S, and yet few people complained or looked depressed. People seem more realistic about life, and yet, more content with their lives; it is a city where it is so difficult to be sad. Those are just some observations my American friends and I had.

It was over all too soon, and I felt I only touched on understanding of this part of the world which we learn very little about in school. I found myself in the evening at the airport. I had just had a cab ride through the city at dusk, and was happy that I was now able to have a conversation about politics with someone who did not speak any English. There was a little music and many people talking calmly while I caught up on some sleep. Then, like a glass crashing to the floor and breaking into pieces, I heard a group of Americans speaking the fast and loud way we speak. It shattered my little world of the winter in Rio de Janeiro. Of course, I have many more stories than what is written here, but I recommend you go for yourself and see what you are missing!
In late October, 100 alumni of the City and Regional Planning department celebrated its 40th Anniversary. Attendees spanned from the class of 1970 to the class of 2008, and came from as far south as San Diego and as far north as Seattle. The two-day event was packed full of activities that celebrated the planning profession and utilized the alumni’s broad experiences to inform the department and its student.

We would like to say Thank you to our sponsors and donors, RBF Consulting, PMC, HMH Engineers, Crawford, Multari & Clark, Earth Design and Jacobsen & Wack, as well as other firms and individuals for providing $3,400 toward the event. These donations greatly helped in defraying the events costs and making it successful.

The kick off party was a sunny Saturday BBQ lunch on Dexter Lawn. As alumni filtered onto campus, an excited crowd formed at the welcome tables as everyone greeted old friends. With a little prodding, alumni began to sit down for lunch and speeches. R. Thomas Jones, the Dean of the College of Architecture and Environmental Design gave an uplifting speech to the audience on the importance of the planning profession and its future at the university, while William Siembieda, Head of the City and Regional Planning department talked about how the Department first was started by George Hasselein and Ken Schwartz, and where the Department is looking to the future.

Following lunch, a Career in Planning panel was developed by Christopher Jordan, providing a contrast of public and private planning as well as a quick run down on employer expectations during the job hunt. The panel included: Rod De La Rosa (T-Mobile), Shannon Nash (City of Simi Valley), Chandra Krout (City of Irvine) and David Davenport (Golden Gate Bridge Authority). About 20 junior, senior and graduate students took advantage of this time, looking for ways to improve their job hunt strategies and trying to decide which planning arena to focus on after graduation. This was not the first connection alumni had with students of the day. An Open Studios was held earlier by student representatives to display current and recent student work. This time allowed alumni to ask students specific questions about the program and their work products.
In the afternoon, alumni gathered to talk about their future roles in supporting the City and Regional department. The main idea was for the alumni to create a small active group that is engaged with the department, its faculty and its students. This group would come to campus twice a year to continue a dialogue with professors on the department’s curriculum, to offer educational programs such as career panels and alumni lectures and organize other events. Also, the alumni wish to build a stronger collective effort, and welcome other alumni who could not attend the anniversary to become involved.

The alumni and guests enjoyed the good feeling of the festivities, which started with the BBQ, and culminated with the evening event at The Art Center. The downtown venue provided a warm backdrop for a jazz band, more food, and, of course, more chatting, laughing and reminiscing. Everyone had a fabulous time and was particularly excited when the cake cutting was announced. The earliest alumni graduates in attendance were Bruce Baracco, Ronald Edgerly, Donald Pinegar and Jeffrey Webster from the Class of 1970. The newest alumni were Jessica Berry and Nicole Smith from the Class of 2008.

To enhance the department’s curriculum, a pre-event Educational Curriculum session was organized by Mike Draze (BS 1974) as a way to update alumni on the existing curriculum for both the Bachelor’s and Master’s programs, and to encourage feedback on specific ways to improve the curriculum and therefore students’ skill at graduation. About 20 alumni, professors and student sat in the new graduate lab, brainstorming ways to balance the skills desired in planning employees and the tight time constraints of the program. Overall, alumni were impressed with the skill sets students were developing through class work. They were happy to see that the curriculum focuses on urban design/development and environmental planning. Alumni also liked that support courses such as collaborative planning were offered, although it was thought that additional course offerings with other departments might round out students’ skills.

Attendees agreed that students needed competent presentation skills. However, alumni felt that new hires regularly lack oral communication and writing skills, and felt this needed to be emphasized more. There was a spirited discussion on environmental planning and CEQA with an
agreement that knowing how to write the findings section was the most important part of the planning effort. Professors Mike Boswell and Adrienne Greve were excited by the group’s suggestion; they had been struggling to cover such a broad topic in 10 weeks. Another skill that should be emphasized for students is a basic understanding of infrastructure and subdivision design, including the ability to read plans, know the lingo and make educated decisions. Alumni were willing to help develop a course or a module to educate students on this topic.

This event would not have been possible without a dedicated group of alumni who worked behind the scenes as the visionaries of the anniversary and provided direction to the City and Regional department. On Friday mornings in April 2008, when Paulo Hernandez (BS and JPH Consulting), Christopher Jordan (BS and PMC), Michelle Gluekert (BS and County of Ventura), and Janna Minsk (BS and City of Santa Paula) would take time from their busy work schedules to conference call the Department. Three basic ideas came out of these conversations; the desire to provide a real world perspective to enhance the planning curriculum, to connect with students and provide valuable career advice and to have a great setting to reconnect with old friends. These ideas became the format for the Anniversary.

The next alumni event will be held in April at the Cal Poly Open House. The video 40 Years of Planning Education, features interviews with alumni, professors and clips from the 40th anniversary event in October. It is hoped that a formal alumni group will form and develop yearly interactions with the department and its students.
In 2006, Buzz Kalkowski, a CRP alumnus, and his wife volunteered to help plan Kanglung, a town of about 4,800 people in Bhutan, a small kingdom in the Himalayas stuck between China and India. Buzz writes about his experience and how he and his local team overcame the lack of tradition in planning and the inexistence of a data base, and engaged in a planning process that included innovative methods and community participation.

Friday Morning, June 23, 2006, came too early. During the previous two days my wife and I, both Cal Poly graduates, Donna in Landscape Architecture, 1996; and myself, with a 1995 Master of City and Regional Planning, missed Wednesday June 21st altogether. We left our home in San Luis Obispo on Tuesday, the 20th, for Los Angles and LAX. That evening, due to aircraft changes, we were unexpectedly rushed through the LAX Airport and, fortunately, without additional payment, put on a Cathay Pacific business class fight to Hong Kong, and a connecting flight to Bangkok. Crossing the International Date Line without recognition of time and the lost Wednesday, we arrived in Bangkok on Thursday afternoon, with enough time to attempt a night’s rest in a hotel.

At 2 AM, Friday, we were in a cab waiting a Druk Airlines flight to Calcutta, India, continuing on to our destination in Paro, Bhutan. As the flight left Calcutta, the plane crossed the flat plains of eastern India. Without announcement, the flight entered the mountainous canyons of the lower Himalayans. Within a quarter hour our plane’s wings dipped to avoid centuries-old, three story Bhutanese farmhouses, as we glanced at the faces of the occupants.

It was a surreal dream; a graceful dance in the air swirling around mountains, forests, and ancient untouched history. We landed in Paro, the country’s only operating airport, facing a two-hour, 40 mile drive to the Bhutanese capital of Thimphu, where our Bhutanese assignment was scheduled to begin at 4 PM. Our mission: as independent volunteers, create a town plan for the eastern Bhutan community of Kanglung, the home of Bhutan’s first college offering a degree. Here is our story of town planning in Bhutan.

Background

Let’s begin with Bhutan. Bhutan is a Kingdom, changed from an absolute monarchy to a constitutional monarchy in 2008. Like being caught in a vise, Bhutan is sandwiched between China (Tibet) on the northern sides and India (once the Kingdoms of Sikkim and Assam) on the southern side. The kingdom’s elevation runs from just under 500 feet along the edge of the Indian plains to just under 25,000 feet above sea level along its border with Tibet. An estimated 750,000 people reside within the kingdom.

Back in the early 1960’s, Bhutan’s lands were occupied by its people but never surveyed or registered for ownership; it was a land without roads, cities or towns, education and medical systems. Things have changed. The capital Thimphu had 15,000 people in 1985. Today, it has nearly 90,000 residents. Thimphu and Paro –where the airport is located– are within the western third of Bhutan.

The town of Kanglung is located in eastern Bhutan’s Tashigang Dzongkhag (district – similar to a state or county), about 340 miles east of Thimphu and two 16-hour days of driving in each direction. The
2005 census for the Kanglung Geog (similar to a township) was 4,749 people. The town is located at about 6,500 feet above sea level, high on a ridge side overlooking deep Himalayan river valleys, rice paddies and villages below. The kingdom’s eastern north-south highway, National Highway Two, often one lane wide, snakes through Kanglung, and is for the most part, the town’s only road.

Besides the main airport at Paro, the kingdom’s only other airstrip is on a ridge top ten kilometers above Kanglung. Built by India in the late 1960s, its use was short lived as the 1.3-kilometer runway is often hidden in clouds; one end of the runway has a portion of the mountain rising above it, and a major air crash occurred shortly after it was built. However, it does have some limited use for Indian military helicopter landings in eastern Bhutan.

The 1.4 square kilometers area designated for the proposed town plan contains 2,283 people and 375 households. The town has no public water system, sewer treatment facility or solid waste collection or disposal program. Several private untreated water collection systems exist. Streams running from the higher ridge areas above the town have collection devices from which PVC pipes carry the water to participating homeowners.

The community has electricity, as do most towns and farmhouses in the southern two-thirds of Bhutan, even when they are miles from the nearest road. During the summer monsoon precipitation and glacial melt, Bhutan’s major export revenue is from hydroelectric generation – using only diversion dams. India is the sole importer of Bhutan’s electricity. During the winter months, Bhutan imports electricity from India.

Kanglung is the home of Sherubtse College, the country’s first. In 2006 it had an enrollment of 1,058 students, with an estimated increase to 2,000 students by 2013. In 2006 the town’s primary school had enrollment of 554 students, a secondary school enrollment of 275 students, and a shedra (Buddhist monastery-college) enrollment of 107 monks, with an expected increase to 500. Nearly 30% of the Sherubtse College students live off campus, often in substandard housing at high rent costs.

The town has 31 licensed businesses; the country’s only eastern Bhutan newspaper office and printing facility (Kuensel, government owned); the country’s only eastern television news and broadcasting facility (Bhutan Broadcast Service, government owned); a Bhutan Food Corporation warehouse for the six eastern Dzongkags (government facility for both retail and emergency use food); and a major electricity power substation. The town also has a basic health unit with an authorized staff of eighteen (which was under staffed by seven while we did the plan, including the doctor) and ten beds.

About 15 kilometers and a 40-minute drive down the mountainside is located the town of Tashigang, the government center for the Tashigang Dzongkah. There have been proposals to move the government from the historical center to Kanglung, but the proposals remain highly speculative. Tashigang Town has limited mountainside buildable space, but it is the location of the centuries-old, traditional Dzong (a
building complex, housing the regional government center, monastery and defense facilities-fortress).

**Problems Faced**

Critical to the making of the plan for Kanglung was the need for an accurate and up-to-date cadastral map (a parcel map with ownership documented), which did not become available during our stay. As mentioned that up through the early 1960s, land was neither surveyed or ownership registered. Currently, occupied and registered land does not always coincided, and land is seldom held in reserve for public use such as roads, parks, utilities and other public facilities.

Adding to the quandary, was rampant land speculation through unregistered subdividing and land sales, often with new parcels too small to be buildable or serviceable. The forthcoming town plan helped to push the speculative land sales as new owners of diminutive parcels anticipated land area gains necessary for developable plots (parcels).

To overcome the issue of town planning where little or no public land exists for road development, utilities, parks and public facilities, common in Himalayan countries, the concept of land pooling was developed. Utilizing the land pooling method, most or all of the land parcels within the plan development area are transferred into one single holding with the ownership temporarily held by the government agency creating the plan. Through the planning process, parcels are redesigned, reconfigured, with a portion of the land made available for public use such as streets, parks, utility and public facilities. The reconfigured parcels are then distributed back to the original owners. Most owners loose land area, a few might gain, but all property owners gain new roads, road access, utilities, parks, etc.

In some land-pooling plan making, additional parcels exceeding the original land ownership parcels are created and sold to pay the cost of the new infrastructure development. In Bhutan, most of the infrastructure resulting through town planning is paid by obtaining long-term, low interest loans from the World Bank and, or, the Asian Development Bank. Given that Kanglung is high on the ridge, without significant water storage, adequate water supply were a concern in the plan making process.

To provide sufficient water, a number of stream sources would be necessary. Land would be required for sufficient storage and treatment. Except for the three largest cities in the country, the typical wastewater treatment facilities were multiple community-serving septic tanks, or nothing at all. Septic tanks release the treated water into the ground and not into the streams flowing to areas below. Between Kanglung and the river far below, villages, rice paddies and other farm produce are dependent upon the water coming off the ridge too. To develop a wastewater treatment facility land would be required. Level land within Kanglung, with gravity flow and away from any substantial development is limited.
Plan in the Making

Our first month in Bhutan was spent gathering information. In late July, we made our first visit to Kanglung. The purpose for the visit was to learn first hand the setting, to meet the key stakeholders, and to hold a community meeting.

Our first event was a half-day-long meeting with 22 Tashigang Dzonghag sector leaders (regional government leaders) in Tashigang Town. Prior to the meeting, individual questionnaires were faxed to each of the 22 sector leaders. During the meeting, we gathered the information that had been reported and then analyzed the results to complete the town plan.

The next day we met with the Kanglung Geog (local government) and business leaders, to review the expectations and making of the plan, and to seek their concerns, advice and assistance. This was followed by tours of the town and surrounding areas where we had meetings with the college, schools, monastery, newspaper, broadcast station, and health unit, etc. The geography students from the college were enlisted to do a census, specific to the designated town plan area.

During the third day, a day-long community meeting-workshop was conducted. The planning and land pooling processes were described, followed by the participation of all in defining the community’s current strengths and weaknesses, future opportunities and constraints, and their priorities for future development. In addition to the government leaders present, more than a hundred community residents attended and participated. The meeting was conducted in three languages: Sharchop, the predominante language of the area, and Dzongkha and English, the government languages. A large percentage of the participants were illiterate.

Following the first Kanglung visit, the information gathered was categorized and evaluated. A comprehensive plan was drafted and a concept physical plan was developed (not knowing the underlying property ownership and the exact number of land parcels, a detailed physical plan was impractical). Without the knowledge of actual plots and plot ownership, the plan focused on development policies, guidelines and regulations. The plan somewhat followed the California method of a general plan making.¹

Existing environmental maps, slope maps, and existing and proposed land use and infrastructure maps were generated and incorporated into the plan. An effort was made to have the plan report to the community development concepts, including economic development. Liberal use of photographs, to visually suggest design and concepts to the community, were incorporated into the plan.

An evening meeting involving approximately one hundred Sherubtse College and lecturers was held on October 13, 2006, a dry run for the community meeting the following day. At this meeting, we presented the findings from the first community meeting, and presented the draft plan to seek the community’s priorities for infrastructure development with consideration of costs. In addition, the student meeting was also conducted to test the methods that Donna designed to bring out the community’s priorities. This was important because the feedback in English was possible and all participants were literate.

The actual community meeting was held in the large

¹ A CD copy of the plan is available at the Cal Poly City and Regional Planning Department

Figure 4
Kanglung town center.
college auditorium, was attended by more than 120 people, and lasted from 8:30 AM to well past 4:30 PM. The Director of Urban Development and Engineering Services Department, Ministry of Works and Human Settlement, facilitated the meeting. The Tashigang Dzongdag (the dzongdag is similar to a governor), the Kanglung Gup (the gup is similar to being the mayor of the geog), and the principal of the college participated in conducting the meeting.

The workshop to test the community’s priorities divided the participants into five groups. The emphasis was placed upon the realities of limited financial resources, the costs of infrastructure and making choices. Photo cards with a set amount of points each were used to help the group participants choose what infrastructures they valued the most, as the groups were to stay within a total of 50 points. A lot of negotiating within the groups occurred. At the end of the session and into the group presentations, some groups achieved limited infrastructures, staying within the 50-point limitation. Several groups were above the 50-point limitation and were negotiating, with all group members participating, up to the time of their group presentation. Participants suggested and incorporated creative cost control ideas, including the use of water meters, self-help construction, recycling solid waste and etc.

Following the workshop, community participants offered feedback to the draft plan, including suggestions on relocating the national highway above the town and other road realignments, as well as requests for additional playgrounds.

**Final Remarks**

Following the second Kanglung meetings, the majority of our time in Bhutan was spent on refining the plan, incorporating the community’s suggestions and goals. By late December 2006, we were at the end of our personal time commitment in Bhutan. During the last week of December, we concluded the plan and made a presentation to the Ministry of Works and Human Settlement.

We left Bhutan in early January 2007. For the two of us, it was an opportunity to learn more about town plan making, the people of Bhutan, their culture and history, and to experience many adventures. Donna was able to participate in several multiple-day treks over passes often exceeding 16,000 feet in height. I was able to enjoy some great photograph taking. We enjoyed meeting and working the people of Bhutan, and we deeply enjoyed the very young school children practicing their English as we walked to and from work each day: “What is your name? Where are you going?”

Though our town plan did not provide the final physical design, it is our hope that it will provide the people of Kanglung added value and policy direction in their community development.

In conclusion, my wife and I wish to encourage planners with available time to consider volunteering time to do a town plan in Bhutan. The need exists at this time. The Bhutanese may pay for housing, but cannot pay for travel or other expenses. Food is inexpensive and rather healthy in Bhutan. Planners with available time, funds and desire to work in Bhutan will gain interesting Himalayan kingdom knowledge, experience and friends.

**Final Note:** If interested please contact: Rinchen Dorji (Director, Department of Urban Development and Engineering Services, Ministry of Works and Human Settlement, Royal Government of Bhutan, P. O. Box 791; Thimphu, Bhutan; e-mail: rinchen@druknet.bt
Figure 5
Lhuntsi Dzong.

Figure 6
Tashigang Town.

Figure 7
Taktsang Monastery.
Although the CRP Department offers a final comprehensive planning studio as an option for MCRP students who prefer not to do a thesis or an independent project, the flow of quality individual research work continues. The following master’s theses and projects were defended in 2008, and both the CRP department and Cal Poly’s Kennedy Library hold copies for consultation.

Balancing the ‘Green Community’ a Cost Benefit Analysis of LEED for Neighborhood Development.
Daniel Ross

Green building is a growing trend in the country and around the world. The Leadership in Energy and Environmental Design (LEED) rating system developed by the US Green Building Council (USGBC) has become the standard in the industry. While extensive research has been conducted on LEED for New Construction (LEED NC) such research has yet to be conducted at the neighborhood level (i.e. LEED ND). This thesis examines the LEED ND rating system’s financial feasibility and marketability through the analysis of four LEED ND registered projects. For each case study additional costs and benefits associated with potential certification are examined through interviews with building professionals and city planning officials, as well as surveys of San Francisco home buyers.

Regional Land Use Planning for Water Quality in the Pismo Cree Watershed: Recommendations on Policy and Regulations.
Nicole L. Smith

Land uses have direct implications for surface and near shore water quality. Federal and State agencies are encouraging the use of a watershed approach to balance community growth and the use of natural resources. This study focuses on the land use impacts on the Pismo Creek watershed (the County of San Luis Obispo and the City of Pismo Beach) in order to increase awareness among decision-makers of the connections between land use and water quality, and the policy and regulatory solutions to improve and protect water resources. Existing policies and regulations were evaluated at the watershed and site scales. A code and ordinance worksheet by the Center for Watershed Protection was used to evaluate the management of land use and stormwater at the site scale. Land management on a watershed scale was evaluated using three land use strategies for water quality protection: land preservation, critical ecological area protection, and minimized land disturbance. The findings informed the development of recommendations on policy and regulation in conjunction with best management practices from other municipalities.

The Effect of Neighborhood Park Design on Gender Differences in User Behavior in San Luis Obispo, California.
Lilly Schinsing

Public parks are in danger of losing social and cultural diversity due to poor design and bad management. Specific planning and design strategies have been reducing the ability of a large number of diverse people to feel welcome. While there is significant ethnic variation in usership and experience in urban parks, little is known about how female users as a group experience public park space. There is little knowledge of how women use urban park space, how they feel in these spaces,
and how the design affects space use. This study addresses these issues and presents findings on the effects of special features in public parks on gender differences in user behavior, particularly on female's space use. Results are presented based on the study of three parks in San Luis Obispo, California that utilized time-lapse behavior mapping, a survey of female and male adult park users, and a mail questionnaire sent to neighbors of study parks.

**San Francisco Sustainability: Mission Bay and Plaza Apartment Case Study.**
Alex David Friedman

This thesis identified the planning and management tools used by public and private agencies that contribute to sustainable development. San Francisco policies and practices are studied through the Building Environmental Quality Evaluation for Sustainability through Time (BEQUEST) assessment measure model. This model addresses the built environment at a range of scales, from building to policy planning. The study relies on city documents and information gained from interviews with public agencies, private developers, and non-profit organizations. Despite the enthusiasm for the City's framework for sustainable actions, there is a lack of funding and education necessary to promote sustainability, and more work is necessary to carry out the efforts at the City level. Two private projects of different scales were analyzed -Mission Bay and the Plaza Apartments- which have been learning tools for San Francisco and in response the city will become stricter on future projects.

**Sustainable Development: A Guide for Civil Engineers.**
Ginger Christine Andersen

While the planning profession has been researching and encouraging sustainable development through policies and design strategies, civil engineers have been asking how they can implement sustainability. From this inquiry, sustainable development has proliferated into the world of engineering, and has been incorporated into the goals and objectives of professional engineering organizations such as the American Society of Civil Engineers, American Association of Engineering Societies, Institution of Civil Engineers and the European Council of Civil Engineers. Implementing these goals and objectives however, requires education of both practicing and future generations of engineers. The purpose of this thesis is to develop a guidebook that outlines the concepts and practices of sustainability in an effort to strengthen the leadership role of civil engineers in this arena.

**Form-Based Code for Broad Street Village.**
Ashutosh Pant

The area comprising the Broad Street Corridor between Orcutt Road and Santa Barbara Avenue in San Luis Obispo is the object of this professional project. Originally a multi-cultural area and live-work place for railroad workers, this area is now serving the light-industrial needs of the city. Its central location, proximity to public facilities, and adjacency to the Railroad Historic District are driving the need to revitalize it as a multi-use residential neighborhood, supported by the City's General Plan policies and local residents. The project for it, titled Broad Street Village cannot be realized through rezoning because effective place-making requires a more comprehensive approach. The city decided to adopt the innovative form-based code as a governing document to guide the area's physical development. This thesis is divided into two sections. The first section comprises the background research on the planning area and on form-based codes. The second section comprises the development of the typical elements of the form-based code: the regulating plan, building envelope standards, streetscape standards and architectural standards.
This journal highlights the work produced in the City and Regional Planning Department, Cal Poly, San Luis Obispo.

Special Events
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