



focus

16

JOURNAL OF THE CITY AND REGIONAL PLANNING DEPARTMENT

College of Architecture and Environmental Design

California Polytechnic State University San Luis Obispo

Table of Contents

A Note from the Department Head 3

Editor's Overview 4

The Practicing Planner / At the Elbow 5
Chris Clark

Eulogy for Ken Schwartz 6

Cartoon Corner 8
Xander Taylor

SPECIAL EVENTS

Urban Warfare: Housing Under the Empire of Finance 10
Presentation and Book Launch
Raquel Rolnik

IV California Climate Action Planning Conference 19

Cartoon Corner 20
Carlos Almeida

PEER-REVIEWED ARTICLES

Place as a Constructivist Learning Tool: Social and Material Aspects of Group Learning in Urban Planning Classes 22
Laura Tate

Transportation Demand Management and Group Cycling Programs: Lessons for Policy and Practice 35
William Riggs, Shivani Shukla, Amanda Ross & Louis Yudowitz

ESSAYS

Keep the Lot: Housing Development on the Peripheries of Cities in Poland, Serbia and the United Kingdom 48
Ivor Samuels, Anna A. Kantarek & Aleksandra Djordjevic

Urban Regeneration in Dublin, Ireland: Success, Failure, or Both? 54
Teal Delys

The Demand for Affordable Housing in US Cities: Considerations Towards Closing the Gap 62
Allan Cooper

The Challenge of Attracting Good Design in a Suburban Environment: The Case of Oviedo, FL 66
Teresa Correa

Cartoon Corner 72
Eduardo Rocha

FACULTY AND STUDENT WORK

Rethinking Downtown Glendora, CA: Linking the Village to Route 66 as Light Rail Comes to Town 74
Vicente del Rio & Hemalata C. Dandekar

Redevelopment Visions for the Paso Robles Boy's School Site 80
Hemalata C. Dandekar & Eric G. Azriel

Placemaking and Augmented Reality: A Theoretical Exploration 86
Erick S. Gomez & Amir Hajrasouliha

The Planner's Use of Information 93
Hemalata C. Dandekar

Cartoon Corner 96
Tarcisio Bahia de Andrade

INTERNATIONAL

Urban Design Workshop in Lisbon - Summer 2019 98
Vicente del Rio & Diogo Mateus

SPOTLIGHT

Conversations with Alumni: Rachel Raynor 102

Conversations with Alumni: Kevin Fang 104

Learning from California: Highlights of CRP Studios, 2018/2019 AY 108

FOCUS is an annual publication of the
City and Regional Planning Department
College of Architecture and Environmental Design
California Polytechnic State University San Luis Obispo

Cal Poly President: Jeffrey D. Armstrong
Dean, CAED: Christine Theodoropoulos
CRP Department Head: Michael Boswell

Managing Editor: Vicente del Rio
Peer-Review Section Editor: Amir Hajrasouliha
Editorial Board: CRP Faculty
Cover Design: Schani Siong and Vicente del Rio
Design: Vicente del Rio
Manuscript preparation and lay-out: Vicente del Rio
Copy-editing: Vicente del Rio
Front-cover illustration: "Urban Intricacy" (Alfama, Lisbon); photo by V. del Rio

FOCUS is thankful to its readers, authors, contributors,
reviewers, and supporters, without whom it could never exist.

FOCUS is the recipient of the following honors:

Outstanding Planning Award in Journalism, 2006
California Chapter of the American Planning Association

Award of Excellence in Education, 2006
Central Coast Section, California Chapter of the American Planning Association

City and Regional Planning Department: www.planning.calpoly.edu

FOCUS is available from:
(Hardcopies) Amazon.com and Createspace.com
(On-line PDF version) Cal Poly's Kennedy Library at <http://digitalcommons.calpoly.edu/focus/>

*Copyright 2016 City and Regional Planning Department Cal Poly San Luis Obispo.
Reproduction permitted for educational purposes only.
Authors are sole responsible for the contents of their articles including
permission to reproduce any materials included in their articles.*



CAL POLY
City & Regional Planning
COLLEGE OF ARCHITECTURE
& ENVIRONMENTAL DESIGN

ISSN: 1549-3776

I am proud to introduce this edition of FOCUS, the Journal of the City & Regional Planning Department. Many thanks to the editor, Dr. Vicente del Rio, and all the volunteers and contributors to this edition. At Cal Poly, our primary mission is education but we also see an important role for sharing with a broader audience what we have learned and what we do. In this edition, you will see that our students, alumni, and faculty make meaningful contributions to society. We encourage you to share your story and consider writing an article or essay for the next issue.



Dr. Adrienne Greve and I continue to pursue work in the field of climate action planning, and we seek to advance the idea that planning plays a critical role in helping solve the climate crisis. Dr. Greve is leading an effort to organize university faculty and students in the region to participate in the activities of the Central Coast Climate Collaborative. This summer, we hosted the fourth California Climate Action Planning Conference—a conference we initiated in 2016, and this year attracted nearly 300 climate and sustainability professionals from around California. I am participating in the Planners for Climate Action Planning (P4CA) initiative begun by UN-Habitat to accelerate action on climate change from planning professionals worldwide. I do believe climate change is a real global climate crisis that requires “all hands on deck” and I’m proud that we at Cal Poly are doing our part.

In the City and Regional Planning Department, we recently completed a successful accreditation review and are now looking to keep improving and evolving our planning education. The faculty has identified various critical challenges facing the profession: climate change, housing affordability, the transportation revolution, and social justice. We are carefully examining our curriculum and thinking about our role in educating the next generation of planning leaders. We welcome any thoughts or contributions from the CRP community.

Each year in FOCUS, I present several priorities for CRP that I want to share. This year I want to focus on two and

suggest how you can help. Whether you are an alum, colleague, or just a friend of the program, we invite you to participate. First, we are in the midst of a campaign to raise \$75,000 to support the CRP Cal Poly Scholars Program, which was devised to provide scholarships and support to first-generation students (i.e., first in their family to go to college). In CRP, we believe that everyone who wants to be a planner should not be held back because of their financial situation. Recognizing this need, Professor Emeritus Paul Wack made a

generous donation to establish this scholarship for CRP in honor of all CRP alumni. Please join Paul and all the subsequent donors in supporting this initiative. We have currently raised over \$25,000, and Cal Poly is matching donations one-to-one, thus doubling your impact. You can donate at the following link by choosing CRP Cal Poly Scholars for your gift: <https://planning.calpoly.edu/support-city-regional-planning>

Second, we want to increase enrollment in our undergraduate and graduate programs and increase the diversity of students. We ask you to spread the word to young people about possible careers in planning. Consider giving a talk at your local high school, community college, or university about the importance of planning in our society and the impact they can have on creating great communities for everyone.

Finally, I want to draw your attention to the eulogy for Professor Ken Schwartz, who recently passed away. He was incredibly influential in our community and helped start Cal Poly’s City and Regional Planning program serving as its first director. We owe him a debt of gratitude for recognizing the value of our profession and doing the work to make it part of Cal Poly and the College of Architecture and Environmental Design. What an incredible legacy Ken has left!

Michael R. Boswell, Ph.D., AICP
Department Head & Professor
City & Regional Planning

As founder and managing editor, I am very happy that we have been able to keep FOCUS alive and well for more than fifteen years. The journal is leaving its teenage years having reached maturity with high level of contents that, undoubtedly, have been contributing to the advancement of the planning field. According to Cal Poly library's platform, the digital readership continues to expand both in number of downloads and in their geographical location. FOCUS and its articles have reached almost 145,000 downloads from across the US and several other countries! Plus, many hardcopies are distributed by the department and Amazon continues to make hardcopies available. The CRP Department is very proud and thankful to you, reader, to make this happen!

This year the Opening Session includes very sad news for the department and the San Luis Obispo planning community. The passing away of Ken Schwartz, architecture professor, founder of Cal Poly's planning program, creator of the Mission Plaza, former Mayor, and highly influential in our community in so many ways. His eulogy was authored by CRP alumnus Keith Gurnee, who collaborated with Ken in several occasions.

The **Special Events Section** includes the transcription of Raquel Rolnik's presentation to the APA's Central Coast section. Raquel, a planner and a professor in Brazil, was the United Nations special rapporteur on adequate housing, and she talked to us about her new book on the impacts of the financialization of housing and how it led to the current global housing crisis, particularly in the developing nations.

Two articles are included in the **Peer-Review Section**, and FOCUS is grateful to our colleagues who served as blind-reviewers. Laura Tate's is a reflection on how place, as an object-to-think-with, can foster a constructivist learning experience, based on an urban design class at Eastern Washington University in Cheney, Washington. William Riggs, Shivani Shukla, Amanda Ross and Louis Yudowitz discuss the impact of group cycling programs in encouraging cycling among those who are not already cycling commuters and suggest the need to revisit traditional transportation demand management strategies.

Four contributions are presented in the **Essays Section**. Based on the assessment of residential developments in Poland, Serbia and the United Kingdom, Ivor Samuels, Anna A. Kantarek and Aleksandra Djordjevic show that, although the self-build lot by lot type of development by individual home builders is more democratic, locally appropriate, varied, and responsive, they tend to lead to a less coherent city structure. The experience of urban regeneration is discussed by Teal Delys, through the positive and negative impacts observed in two case studies in Dublin, Ireland. Allan Cooper follows with a provocative dis-

cussion what US cities can do to face the increasing demand for affordable housing. The last article in this section is a reflection by Teresa Correa on her experience as a planning director on the challenge of attracting good design to the City of Oviedo, Florida, fundamentally a suburban environment.

The **Faculty and Student Work Section** opens with an article by Vicente del Rio and Hemalata Dandekar on their third-year studio that collaborated with the City of Gledora by developing urban design ideas for the redevelopment the area connecting the old village, the future light-rail station, and Route 66. In the next article, Hemalata Dandekar and Eric G. Azriel describe a graduate studio's collaboration with the City of Paso Robles in redeveloping the now abandoned Boy's School facilities. The potential and the various applications of augmented reality in planning, a discussion based on Erick Gomez's senior project, is authored by him and his advisor, Amir Hajrasouliha. The last article in this section, by Hemalata Dandekar, is based on the introduction to the recently published third-edition of her popular text-book *The Planner's Use of Information*.

The **International Section** presents a brief account of the II Summer International Urban Design Workshop, coordinated by myself and Professor Diogo Mateus at the Lusofona University, Lisbon in 2019. Participants included students from CRP and Brazil, recent graduates from other US institutions, and graduate students and professionals from Brazil, Portugal and Russia.

In the **Spotlight Section**, interviews with alumni Rachel Raynor (BSCR, 2016) and Kevin Fang (MCRP, 2009) explore their opinions about the education they received at Cal Poly as well as their professional trajectories. Rachel is an associate planner at RRM Design Group, and Kevin went on to get a PhD and is now an assistant professor at Sonoma State University. The session ends with *Learning From California*, and account of all CRP studio projects during the 2019-2020 academic year. Unfortunately, due to impediments experienced by the university's office of graduate programs, this issue is missing the list and the abstracts of master's theses and final projects.

Punctuating the journal in **Cartoon Corners**, Carlos Almeida, Eduardo Rocha, Xander Taylor and Tarcisio Bahia de Andrade indulge us with their satiric takes on various planning issues through inspiring sketches.

I hope you enjoy this issue, and invite you to contribute to next year's by sending us an article for peer-review, a professional essay, or a personal account of your post-Cal Poly experience. Happy plans, and happy 2020!

Vicente del Rio, PhD.
Professor, City and Regional Planning

At the Elbow

Chris Clark

J.D.; Adjunct professor, City and Regional Planning Department, Cal Poly San Luis Obispo.

I am seventeen.

It's time to decide. Where am I going, what am I going to do? My friends, my parents, and my high school counselor are pushing me towards college. Yes, I want to go to college. But then, where will I be on the other side? What do I want to do?

I know all the usual jobs, or I guess professions: lawyer, doctor, accountant, etc. I have friends who say they are heading in these directions. But then I have others who want something different. They talk about gap years for travel and community service. One friend even wants to go into the military.

I don't know exactly what I want to do. But I do know that I want to do something that makes things better, not worse. And, different maybe than my parents, not to just keep things the same. Because no matter how many different voices I hear, I do believe things are deteriorating. Too many angry people, too much waste, too much carbon.

I watch people in the streets protesting the inaction on climate change. My mom said that in her day, it was war, environment, and race, and she thinks those will always be problems. But she says the climate is different than other environmental issues. In the past, we needed to change our behavior towards the water and the air and living things. But this is bigger. Systemic, as my geography teacher says.

My dad sent me an editorial in the New York Times written by Al Gore.¹ He was a Vice President before I was born. Dad laughed when he sent it to me because I was only ten feet away. He said, "so many satellites between us!" Whatever.

I don't want to be famous, and I don't care about making a billion dollars. But I do want to be working on the right stuff, making things better. I guess I said that already. My grandfather once told me that he thought the ideal career was at the intersection of interesting and important. To who, I asked. To you, he said, and it's whom.

So, what kind of college degree would move me in a good direction?

I want to know about so many things; history and politics and science and how things can change. But I want to know enough about stuff, so I can actually accomplish something. Broad or deep, my high school counselor asked. Both.

My dad says go broad as an undergraduate, then go deep in graduate school. That seems like forever. Mom says, do whatever you want, but do it the best you can. My brother just tells me to shut up, but I suppose he means well. Right. Enough advice.

I've learned that there will be tons of work that responds to a changing climate. OK. My science teacher says the world will need to be adapted and made resilient to changes. I'd like to know about that. I learned about sustainability, environment, equity, and economy. That's a lot. Maybe everything, I don't know.

I googled sustainable college degrees and found a site that lists 130 of them, in all kinds of fields. The ones I liked the most were in architecture, engineering and city planning. (I have to say it seems kind of weird that they would still teach this stuff in a way that isn't sustainable!)

But I like these because they are so physical. And I don't want to just sit in classrooms and hear lectures. I want to learn how to do stuff by actually doing it.

I think Al Gore's point, or at least what I got of it, is that this future is more than building and doing things that won't hurt the environment. This is building a new and better environment.

That's good. A built environment. That's what I want to know how to do. And not just for me, because now my pronouns are:

we, ours and us.

I'll be eighteen when I start college. That's my elbow; the place where I start the direction I'll point. If that makes sense. I believe it does.

¹ <https://www.nytimes.com/2019/09/20/opinion/al-gore-climate-change.html>

Ken Schwartz

FAIA, Emeritus Professor of Architecture (1952-1988)
and CRP Department Head (1968-1977).

1925-2019

Reflecting Upon a True Visionary

On Saturday morning, October 19, 2019, we lost Kenneth E. Schwartz, who served as one of Cal Poly's most respected former professors in the College of Architecture and Environmental Design. Ken also served the City of San Luis Obispo as one of its greatest community leaders for decades. Passing at the age of 94, Ken lived a long and distinguished life that few will ever match.

While growing Cal Poly's Architecture and Environmental Design program, Ken Schwartz served as Mayor of San Luis Obispo from 1969 to 1979, becoming known as the "Father of Mission Plaza." He was the driving force behind establishing Mission Plaza as a distinctive public gathering space at the foot of Mission San Luis Obispo de Tolosa in the heart of downtown San Luis Obispo. But it wasn't an easy task. With his passion and persistence in "making the impossible happen", Ken made Mission Plaza a reality, thereby transforming an underperforming downtown into one of the finest small-town downtowns in California. Ken was a true visionary who possessed an even rarer quality: the ability to craft a consensus to achieve that vision where few thought it possible before.



His Cal Poly Years

After growing up in Los Angeles, Ken became inspired by the modernist architecture that was emerging there in the 1940s. By the mid-1940s, Ken married Martha Riggio and started his family while living in the Watts district of Los Angeles. After graduating from USC in 1952, Ken was lured to Cal Poly as a faculty member of the Architecture program where he enjoyed a long career before retiring in 1988. During his tenure Ken served as a Professor, Associate Dean, and Interim Dean in the department during his 36-years of tenure. He helped launch the City and Regional Planning (CRP) program in 1968 and served as its first director (1968-1977). Each year, CRP awards the Ken Schwartz Excellence in Leadership Award to an undergraduate and graduate student who demonstrates the highest ideals of leadership in planning.

My first interaction with Ken was as an 18-year-old freshman Architecture student in the late 1960s. The first course I took, "Introduction to Architecture," was jointly taught by Ken and then Dean George Hasslein. By bringing in such famous guest lecturers as R. Buckminster Fuller and modernist architect Richard Neutra, he ignited his student's interest in pursuing such an exciting career. Ken Schwartz impressed us as a rare critical thinker who taught us how to think instead what to think.

His Civic Years

From 1959 to 1967, Ken served on the City of San Luis Obispo's Planning Commission, where he led the effort to formulate and adopt the city's first General Plan. He was also behind the idea of creating Mission Plaza that gathered strong public support and was approved by the City Council as a measure in 1968. Riding the wave of success, in 1969 Ken was elected mayor by a 2-1 margin, and he continued in this role until 1979.

During those years, Ken and our City Council approved the city's first Open Space Element, adopted creek protection policies, started greenbelt protections, restored the historic Jack House, established the city's public transportation system, enacted the first local campaign finance and conflict of interest regulations in the state, created the Architectural Review Commission,

updated the General Plan, and enacted floodplain protections. Ken's vision and leadership were instrumental in all of these successful efforts. After leaving the office of Mayor, Ken served on the County Planning Commission in the early 1980s and was appointed to fill a City Council vacancy in 1998 until the beginning of the 21st century. But he wasn't done yet.

His Later Years

After retiring from Cal Poly and then from politics in 2001, Ken remained very active in civic affairs. In 1990, Ken collaborated with graphic artist Pierre Rademaker, and architects Chuck Crotser, Andrew Merriam, and Rod Lenin to create the first Downtown Concept Plan, a visionary plan of what downtown might become in the future. That plan was unanimously approved in concept by the City Council in May 1993.

In 1997, Ken received the well-deserved APA Distinguished Leadership Award for helping "San Luis Obispo gain a reputation as one of the most beautiful, well-planned small cities on the West Coast" and for "making the impossible happen."

After adopting its latest General Plan Update in 2014, the city resolved to update the Downtown Concept Plan and a concept plan for improving Mission Plaza. Ken Schwartz was appointed to a Creative Vision Team (CVT) to oversee the updated Downtown Concept Plan. Entering his 90s in 2015, he started having health problems and asked me to take his place on the CVT, but he still kept a burning interest in what might come out of that process.

From 2015 through 2017, Ken and I collaborated weekly in preparing a series of sketches to enhance and expand Mission Plaza as part of the Downtown Concept Plan. The vision we crafted called for the significant revitalization of Mission Plaza and extending it down to Nipomo St. with additional park, plaza, and ADA accessibility improvements. As a result, our sketches were incorporated in the Downtown Concept Plan adopted by the city in 2017. Implementing those concepts for expanding Mission Plaza would be the ultimate compliment to his vision and leadership.

As his health declined, I visited him regularly at his home and in his healthcare facilities. At my last visit with him just two weeks before his passing, I could tell he was getting ready to go. When I left him that day, I said, "It's great to see you", to what he replied, "It's great to be seen!" Sadly, we won't be seeing him again, but we will never forget him.

Final Thoughts

Ken Schwartz leaves behind so many legacies: a great family man, the steward of a great small town, the rarest of visionaries, the keeper of great friendships, true compassion for his community, as an inspiration to all who knew him, and as the "Father of Mission Plaza." When I asked his daughter Lorraine what quality best defined him, she said: "Persistence. He would never let go." I couldn't disagree, but it was his odd combination of humility and passion that stood out to me.

Kenneth Schwartz will be sorely missed by those who had the privilege of knowing him. His legacy will be forever remembered.

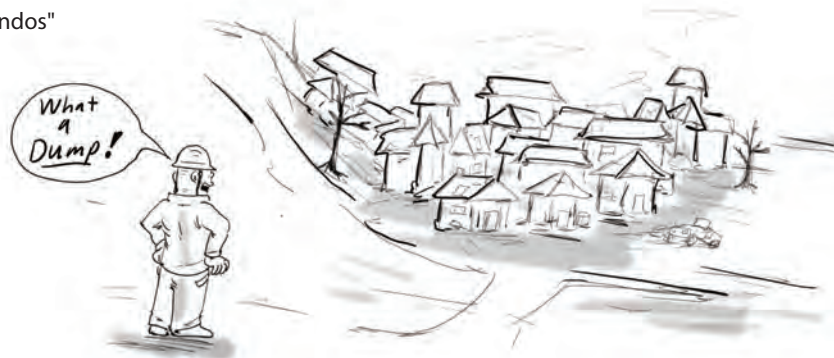
by T. Keith Gurnee

APA, BACRP Class of 1973, and San Luis Obispo City Councilmember 1971-1977.

Ken Schwartz's sketch for extending Mission Plaza, from the Downtown Concept Plan, 1993.

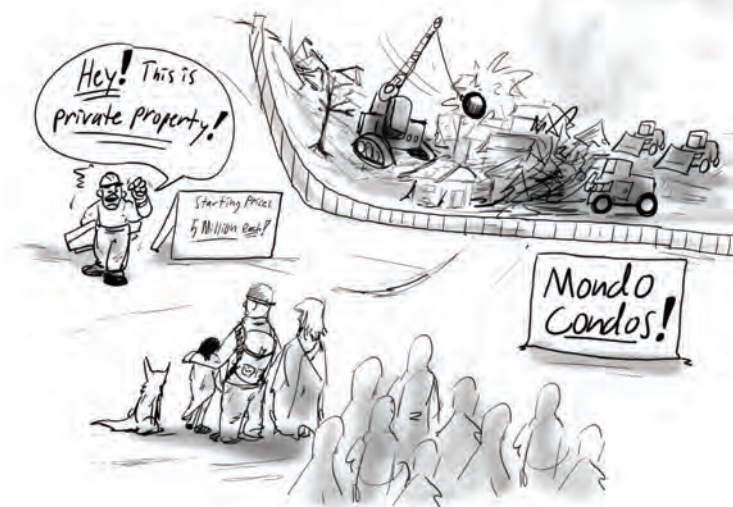


"New Condos"

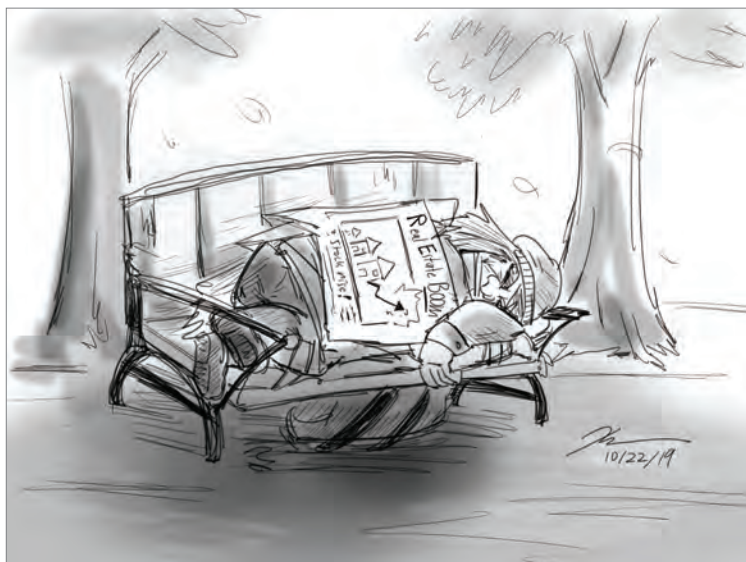


by **Xander Taylor**

Xander is a Graduate Student in Environmental Sciences, Cal Poly San Luis Obispo. Focusing his efforts in environmental planning and politics, he does most of his art electronically. Xander's expressive illustrations reveal surprising messages and criticisms about the status quo.

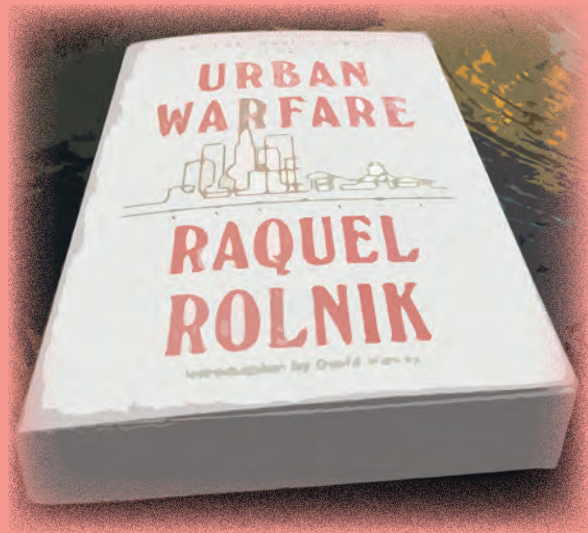


"The Boom Doesn't Cover All"



FOCUS 16

Special Events



Urban Warfare: Housing Under the Empire of Finance

A Presentation and Book Launch: Raquel Rolnik

The Central Coast Section of the California APA and Cal Poly's CRP Department organized a presentation by Brazilian urban planner Raquel Rolnik, and the launching of her new book. Considered by David Harvey "the most comprehensive study of the current housing crisis", Urban Warfare: Housing Under the Empire of Finance (Verso, 2019) charts how the financial crisis, the financialization of housing, and the adoption of home ownership models from the US and UK have left millions homeless and in financial desperation across the world. To professor Rolnik, our homes and neighbourhoods became the "last subprime frontiers of capitalism". Raquel Rolnik, PhD is a professor of planning at the University of São Paulo, Brazil and, besides holding important positions at the state and national levels, she was the United Nations special rapporteur on adequate housing from 2008 to 2014.

First of all, thank you very, very much for the opportunity of being here and having the opportunity to discuss my new book and some of my research with you. I would try to make my presentation brief in order to have time to discuss more, for you to raise questions. I am a planner and professor at the School of Architecture and Urban Planning of the University of São Paulo, Brazil. During my professional career, I held different positions in the planning profession. For instance, I was the head of the City of São Paulo's Planning Department from 1989 to 1992, and the National Secretary for Urban Programs of the Ministry of Cities in Brazil, during President Lula's and the Workers Party Administration.



For six years, from 2008 to 2014, I was the United Nations Human Rights Council special rapporteur on the Right to Adequate Housing. The Human Rights Council is the diplomatic body of UN that deals with human rights, and the work of the rapporteurs is one of its special mechanisms. As the Human Rights Council is made up of diplomats from the different countries and due to all the politics involving them, there is not a very clear space to discuss the violations of human rights that are presented to them. So, they created the Special Procedures, special mechanisms to nominate independent experts to receive denunciations or claims of human rights violations from anywhere in the world and to take the case, investigate it, and then report back to the council.

Having said that, it sounds beautiful, because I was nominated as the special rapporteur on specifically the Right to Adequate Housing. There were also other rapporteurs, such as on the

Right to Health, on the Right to Non-discrimination, minorities, different civil economic and cultural rights etc. But the thing is, a rapporteur is a voluntary non-paid position. One rapporteur for the whole world without any staff other than one full-time assistant, of high level and trained in human rights but based in Geneva, and I was living in São Paulo! So, you can believe all was not easy and rosy, with difficult communications and work load problems, and without real resources to really investigate the cases that was arriving to us.

But on the other hand, we had the resources and the opportunity to do, what the system denominates, two country missions per year. A country mission means a visit in a country for 10 to 15 days, in order to investigate how much housing as a human right was being implemented in the country. During my six years of mandate, I had the resources to do 12 country missions in different parts of the world, and we also had the resources to develop and present thematic reports twice a year. Thematic reports deal with different aspects of the human right to adequate housing, such as climate change and the human right to adequate housing, or the financial crises, mega events, post disaster reconstruction and other important topics that were in the agenda during that period and analyse them through the lenses of the human right to adequate housing. In order to prepare the reports we frequently officially raised questions to countries, receive their replies, prepare a report, present it to the Human Rights Council, and discuss it with the countries. We also were able to promote seminars and consultations on the referred topics.

The missions were basically prepared by the governments, who would invite us; as a matter of fact, we had to ask the country to invite us. The countries and their national authorities would organize those trips, meetings, site visits, in order to show us their policies and the measures they were taking to protect and promote the right to adequate housing in the country. But, the interesting is that apart from the official one, with access to data and authorities, part of those missions could be organized independently from the governments and were organized by local communities, social movements, non-profits, NGOs, academics, etc. And, for me, this was always a very important part of the missions: meetings with the people who are suffering violations of their right to adequate housing, collect their testimonies, hear their voices and then mobilize all that in the reports.

I was lucky to have had this chance but, in 2008, when I started my mandate the rest of the world was very unlucky at the time with the financial crisis, the mortgage crisis, the housing crisis... So, from day two of my mandate I was to start understanding this housing crisis, and what was happening in the US, in Ireland, in Spain. Normally, the housing mandate in the Human Rights Council had to do with countries in Latin and Central America, Asia, or Africa, such as Brazil or India, where a majority of the population live in inadequate housing solutions, or are simply homeless. This was, traditionally, the preferred subject of the mandate on adequate housing. But, all of a sudden, we were seeing violations of the Right to Housing in countries like the US and many countries, UK, and many other countries in Europe, where supposedly, there were no very significant housing problem, and supposedly a solid policy was in place for a long time.

In trying to investigate the roots of what had happened, one of my first missions was to the US in 2009. A long 18-day mission, visiting different parts of the country, meeting and discussing with different people and organizations. I met with people living in very harsh conditions, people that were suffering

foreclosures, living in their cars, or were homeless, and a lot of situations like that. And that was the beginning of a research project to take on to myself, as an academic, to understand the origins of the housing crisis in the US and Europe, and the financial crisis and the mortgage crisis.

My next mission was in Kazakhstan. I had not had a background on the country and I had no expectations. I accepted the idea of going to Kazakhstan, because not too many rapporteurs were willing to go there. On day two of my mission, representatives of the civil society and the social movements, took me to a place where there a hunger strike was going on. And why a hunger strike? Because of housing! Because the post-socialist government –by the way, the President was the party head same as during the communist regime– was pushing everybody into mortgages, offering credit to buy their homes in the new system implemented in this post-socialist setting. And everybody mobilized their savings to buy homes that were built by Turkish companies, financed by German banks and involving other European investors. And when the financial crisis hit, these moneys just fled from the Turkish companies, they went bankrupt, and all the buildings remained there, unfinished. Meanwhile, people were left in the middle of the street without any home, any savings, and the hunger strike was to press the government to do something about that.

This same situation was happening in other countries too. In Israel, my mission was supposedly going to be totally captured by the Palestinian-Israeli conflict, and Israel's occupation of the west bank. But no, some months before there was a political demonstration in Dizengoff Street, one of Tel-Aviv's main streets, on housing. Israelis were used to a very wide welfare system of housing for all including Jewish migrants. But it had been dismantled by of new measures and policies by the government.

So, I am just telling you the origins of my book, which is basically the thesis that a new colonial empire—faceless and

Manifestation on the housing crisis in Kazakhstan, and a sign announcing "We occupied this building due to the lack of a housing policy" in downtown Sao Paulo, Brazil. Photos by R. Rolnik.



flag-less—is seizing territories and reshaping cities. The name of this colonial empire is Global Finance. It is a global process, it is de-territorialized, it is abstract, it is speculative because finance is speculative by nature. This is the nature of Finance, betting on the future valorization of something yet to happen. Where space, especially built space has a key role. We will get back to this point. This is global but, like all other experiences of colonialism, each locality has a particular, unique expression of this “financialization” of the city and of housing, depending, of course, on specific political economies of place and of housing in every locale. I use the word “colonization” because, yes, it is an occupation that includes a military logic and new forms of sovereignty over territories, which I will not develop here but are of an extractivist nature.

This new extractivism include key extractive operations, especially in digital capitalism through very sophisticated algorithms, that are basically capable to build this electronic cloud of financial fluxes that is floating over the world, made of oil-sheik money together with Chinese plutocrats, Russian millionaires, North American millionaires, but also sovereign funds from countries and from our pension funds, our savings. This massive amount of capital in the cloud is constantly seeking where to park, and built space and housing became one of the frontiers for this big electronic cloud to park.

And why built space? There are many aspects of the built space that are important for it. Firstly, it is something with a long life-span. The value of a place can go up, down, up again, down again, over a very long period of time. For pension funds, for insurance companies, and for most of the players in the real state financial market, the question is a long-term perspective for capital appreciation. So, even if the price is not so good today, like our Latin American grandparents and parents always told us, if you have money put it in real estate, in land

or built space because at least it won't disappear, it will not become powder. This is the logic. Secondly, built space and land are collaterals—that's also something that everybody here knows. If you go to a bank and ask for a loan, the first question the manager will ask you is: do you own something? Do have an apartment, a piece of land? Do you have something as a collateral? Built space is a powerful collateral, and for the big players in the financial circuit these collaterals are very important and, for them, they are assets.

Figure out a huge amount of money that, because of all the new liberal reforms of the economy in the world, those financial circuits can circulate freely from place to place, without any barriers anymore. Not exactly the same thing with people: people cannot circulate, but money can. So, we are talking about a new scale of money being mobilized through algorithms and digital technologies, and it can enter and exit a place very quickly. Money circulation is now only a bit. And also, because new financial instruments such as real estate investment trusts and others, in contemporary cities it is now possible to overcome one of the main problems for financial capital to be invested in real estate: the transaction costs of local bureaucracies and notaries, of passing property from one person to another. Now, all of that is in the past, because you can enter and leave any place without really passing through the traditional property transaction process, because financial managers can buy shares, can buy participation in the physical space without owning it, what makes it very easy for these fluxes of capital to arrive and also to exit very quickly.

What have governments done in relationship to this new mass of capital willing to come and park? They have basically said, “Yes, come on, welcome. No taxes.” And more than that, in the case of housing—and this is well documented in the first part of my book—countries actively promoted it financialization

View of a slum in Rio de Janeiro. Photo by V. del Rio.



Rental house in poor conditions in Traver, California. Photo by V. del Rio.



and the taking over of housing by finance. How? By doing two things: first, by destroying any other alternative. In the case of US, by basically defunding the construction of public housing and even by physically destroying it, in such a way that there was no alternative but to get a mortgage, to get credit, to be indebted and become a home-owner. Because there is no other way, no other support. This can also be seen in many other countries, even in the post-socialist countries. All the public housing stock is being privatized. That is exactly what happened in UK, where public housing represented 40% of the total residential stock by the end of the 1960s when it started to be privatized to the tenants during Margaret Thatcher's time as prime minister. For the sitting. Tenants thought it was a great deal, what also helped to propel the conservative vote. But for the generations to come after that, it was a disgrace. Because now there is no other option than getting a home in a very speculative private rental market. Also measures to ease rent control systems, such as those in New York and Berlin, making them more fragile and less enforceable, in order to push all the residential stock into the market.

So, while in one hand they were privatizing the public housing, on the other they were coming up with policies in order to promote home ownership and easier access to credit. When the financial crisis hit the housing market and ownership, generating a lot of foreclosures, the new frontier for financialization became rental housing. And in operations like Airbnb which supposedly started as a wonderful solution for homeowners to make up some extra cash by renting out a spare room. But in reality, AirBnB and others like it became a massive corporate financial investment in all large cities, particularly those with a strong tourist pull. Big investors and global corporate landlords took over and destroyed the rental and the residential rental market everywhere. And city after city and the names of these corporations are the same as before

the crisis: JP Morgan, Blackstone, etc. The same guys that were promoting and provoking the foreclosure crisis now became big global landlords. Buying out the houses that lost their values after the crises, putting them into the rental market, and controlling rent. In Atlanta for instance, there is one single global corporate landlord who owns 80,000 residential units!

In a few words, this is the fundamental issue marking the first part of my new book: an account of housing financialization and it had different expressions in different countries. I discuss examples from countries in the global north, such as the US and UK, but also in the global south such as South Africa, Chile and Brazil, with different models, different strategies, but the same paradigm. The second part of the book is a discussion on the relationship between housing and land financialization with urban policies in general. It is a discussion on what it means to "unlock land value", the new urban planning mantra that took over urban planning practices all over the world. Unlocking land value starts with a question like: "How come such a valuable location be occupied by all these poor people and unimportant entrepreneurs? Let's get rid of them and replace them with something that can bring in more taxes, jobs, and wealth to the city."

This reasoning was behind the destruction of a lot of public housing in US cities. Not those in the out-skirts or in the food deserts of the periphery of Chicago, but the ones that were very well located. And since public housing was pointed as places for crime and drug dealing and consumption, we are going to put up mixed housing, mostly market rate, but we will make sure there will be a few affordable housing, always insufficient for the housing needs. Make the count. While 300, 400 public housing units that were really affordable are destroyed, replaced by a nice shopping center and luxury condos, only 10 "affordable residential units" are included in the development.

Astana, Kazakstan. An example of the global financialization of places. Photo by R. Rolnik.



What's worse: they were not really affordable for those who need them the most. Of course, they are more affordable than the rest of the units because that price is absurd, but not for the ones who need them the most. Planning instruments have been very complicit on these types of operations. My book discusses this issue a lot because this is one of the thematic areas which I also observed during my mandate.. For instance, how much sport mega events, such as the Olympics, are used in order to open space for urban renewal policies, for opening new frontiers and new grounds for financial capital to land in the city, to the real state financial complex and their products?

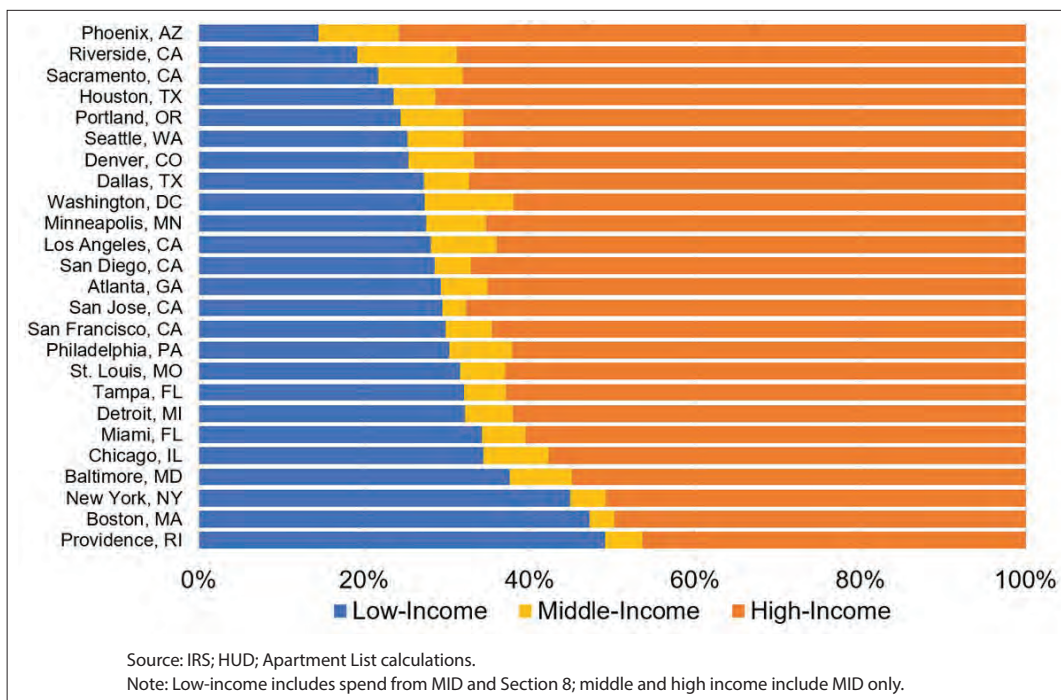
I would also like to note that some of these new places built by financial capital as collateral might even not be used. They might even be empty! In one of my trips as UN rapporteur, while going to Indonesia, I made a stopover in Dubai. When I realized that most of the buildings there were empty, I thought: "Oh, poor developers, they must be bankrupt... they put all their money into these developments but they are empty!" Well... of course not, because, now I realize, for financial capital and long-term expectations, it is not important that the buildings are inhabited now. Something can be an asset to feature in their books, their investment portfolios, and if the buildings feature there, it really makes no difference if they used or if they are empty. So, in the book, I discuss a lot of these types of examples and their impacts on the people.

Finally, my book's third part is around a question that I raised to myself: how come the financialization of housing in Brazil have

happened during the years of the Labor Party presidency which, supposedly, was anti neo liberal socialist administration. How could they have created a program such as "Minha Casa, Minha Vida", that translates into "My House, My Life". This program was the Brazilian version of financialization of public housing, based on the model previously implemented in Pinochet's Chile. In this model, the government subsidizes you, providing you with a loan so that you acquire a unit in a private development. Generally speaking, because these units have to be within a price bracket established by the government, developers build very cheaply in very cheap land—meaning far from the city centers and better serviced areas. The families buy the dream of owning their own units, but with it they get a long-term mortgage debt they have to pay for, a poorly built unit they will necessarily have to invest on, in a location far from work center, recreation and other city comforts, and sometimes even lacking infrastructure or public transportation.

I guess I will finish now to give you an opportunity to discuss and raise questions. But I cannot finish without saying that I could old touch on tiny part of the book today, and that I wish I could have extended the discussion of the financialization of housing and of the residential and transitory rental market in the book. But the book is already this thick... so I could not just go and on, writing it forever. But I want to point out that during my time as UN rapporteur and in my research, I have been observing a lot of resistance and reaction from people. The resistance is in the streets so to speak.

Total federal housing expenditures by metropolitan region. Less than half of benefits go to low-income households. (Retrieved from <https://www.apartmentlist.com/rentonomics/imbalance-housing-aid-mortgage-interest-deduction-vs-section-8/>; reproduced with permission from Apartment List)



I think it's very important to have that in mind: that in every country, in every place where I have seen the impact of financialization of housing, I have also seen a new wave of social movements around housing taking place, with very different faces and expressions. In Los Angeles for instance, the Tenants Union is getting stronger, more and more organized, fighting for the human right to housing for all. We are also talking about rent strikes, something new that we had not seen here in the US maybe for more than one century now. There is a rent strike against a landlord going on in North Hollywood right now! Yeah. It's something that is taking speed in large cities. In Barcelona, the social movement of those affected by foreclosures was so powerful, that it was able to elect a mayor, Ada Colau. She is a political activist and one of the leaders in trying to implement and enforce policies to counteract gentrification and the financialization of housing. We have also seen a victory in New York just two weeks ago, the measures that the city was trying to implement in order to make rent control more fragile, were suspended by a court decision. In countries like Brazil, particularly in large cities, there is a new raise in squatting: on empty land, public or private, and on vacant buildings. In Sao Paulo, social movements are pushing the city government to transform abandoned buildings into low-income housing.

The commodification and financialization of housing, implemented from the late 1970s, early 1980s in the entire world eventually led to the housing crisis that we have now, even in places that had no housing crisis before. Social resistance, these social movements, are basically related to de-commodifying, de-financialize housing, and to disconnect housing from the financial circuits in order to connect housing to the people who need it. I think it is very important, even in a local level, that every city takes this into account and to try to create or support community land trusts and encourage co-operative housing. And there are a lot of strategies that can be mobilized in order to block the connections housing and the predatory investors empire of finance. I think this struggle is very important, and I think this is the struggle for the next years.

Thank you very much for coming. I hope you have enjoyed the presentation. We still have time for some questions... I would very much like to hear them and your comments.

• • •

Questions and Answers*

Comment from the audience: I wanted to bring up two things that I think it would be great for everybody to think about. First, I appreciate you bringing up the international context because there countries that tax substantially real estate transactions, like in France where there is a 20% transaction tax, so that there is less speculation on flipping of houses. It would be really great to see that influence here. The other thing that you might want to think about adding to your book is the growth of investment opportunities in the rental market through operations such as Roofstock.com, where one can buy shares of an individual rental home and diversify investment across multiple homes and locations.

Question from the audience: You mentioned that states by and large have enabled the intrusion of available financial capital into the housing market. But at the state/provincial/regional/city levels, what examples have you seen of short-circuiting this relationship? Of taking back some of this space? What specific examples can you cite of starting to fight back?

Raquel Rolnik: One of the things that I learned about taxation and real-estate is that, in almost every country although it has different names, real estate investment trusts do not pay taxes; they are tax-exempt. So, this is even more absurd because we are talking about a type of operation that attracts tons of money, take over land, and doesn't even contribute to any type of welfare fund that could support a parallel housing policy or urban policy for those who are not involved with those operations. I am in favor of all type of taxes in terms of raising those taxes and generate some more direct benefits from those operations. This is very new, but for one or two years some cities have been trying to do something to block this type of financialization of housing. Because until very recently cities have been very complicit, and base their rationale in two big lies. The first lie is, "let the market do the job". States need to get out of the job, of the housing sector, and let the market do the job because they know how to! But states have not simply being enabling this process, they have been leading it. States are not really getting out as they are enforcing a different policy to make financialization happen. One that benefits financial capital, not the people who need housing the most.

Second lie: "Oh, cities have no money. We have a fiscal crisis, we don't have money, so let's get private money to do everything, because the government is broken." That has been the whole rationale from the late 1970s. Let's get private capital to come

* Due to the audio limitations, only part of the questions and answers could be transcribed.

in, because governments don't have any more money to support welfare systems, public services, and things like that; they are very costly. Yes, it is true they are very costly, but it is a lie that the state and the governments can't spend money on them. In the case of the US, for instance, tax exemptions for home ownership are climbing more and more; and this is our money. Every tax exemption means dollars that are not going to a welfare fund in order to be redistributed. In my book there is discussion on that with some statistics showing that the money taken out from HUD and other public agencies was spent on tax exemptions for home-ownership, while those public agencies were left to go to the market to see what could they get from it.

So, again, we are talking about a lot of public money going into these schemes. In the case of Brazil, it is a scandal. Most of the financialization was done through the public bank itself! And we see that over and over again in other countries. Berlin, for example, had a large stock of municipal public housing spread out among several non-profit municipal companies. In order to raise money to face the fiscal crisis that was hitting German cities, they decided to sell some of that stock. And what is happening now? They are trying to buy the units back! Because they sold to financial managers, who raised the rents and evicted the older tenants who could not pay more. The city, facing a big political pressure, is now buying back the same units that they had sold.

We are talking about cities, provincial, and national levels being very complicit and actively helping to produce the scenario. Even cities run by so-called progressive local governments are promoting the same schemes. Those are the guys who now must do the opposite, but they will never do that without a huge pressure from the citizenry. Cities where something like that is happening, such as Barcelona, Berlin, and New York, are responding to social movements and organizations who are pushing back and getting stronger at local level, otherwise forget it. The cities will never do that by themselves. But with pressure some cities have de-privatizing, making some of the housing stock public again, or offering it through nonprofits again. I think that helping and supporting a nonprofit cooperative sector is very powerful because they survived the foreclosure crisis in the US.

Question from the audience: Do you think it is useful to think about housing as the way we think about our utilities, such as electricity, water, gas, etc? Housing as a utility. Or would it require a whole separate model?

Raquel Rolnik: I was talking about the radical change that housing went through, from being considered a human right and a social policy, to something which the market should

deal with. I know that here in US, housing has never been considered a human right, but in many other places, yes. And even in places in the global south, where housing as a human right was a utopia at least it was a utopia of a social policy. In many European countries, housing as a social policy, as a social service, such as education or health was a reality. Something that society understands that part of the wealth that is produced must be captured and shared in order to provide for those who do not have it. So, we have seen a total change in conceptual terms, and that was very clear in Europe, from a social policy, from a human right, towards a commodity, a financial asset. Nouriel Roubini, an American economist who teaches at New York University, had a great definition for that: housing as an ATM machine. Housing as something that you can mortgage and use in order to pay your kid's student loan or your health care. in order not to die. In the case of UK, as I described before, during the years of Margaret Thatcher and conservative policies when wages were kept in a very low level without raises, people would finance consumption or raise money in the bank, by using their houses, either by selling them or by using them as collateral. But the key issue is when and you have all these crazy new financial instruments that allow you to can pack together through securitization a mortgage that was originated in... like Mississippi, with a few oil bonds in Texas, together with a mining exploitation in Africa, etc; bonding them and selling them together.

During my mission in New York, I came across the case of a building that was experiencing foreclosure. Its mortgage had passed through 180 hands...! Then finally, when the whole system crashed with the mortgage crisis, who suffered most? Those who were living there, who lost their homes. Those poor guys had no idea that their mortgages were sold so many times, bundled with other types of investments in the financial circuit. And there, as in this process, discrimination is a big issue. Who suffered the most during the mortgage crisis in Spain? Latin Americans migrants. And in the US? African Americans and Latinos. So, again, we are talking about a highly exploitative mechanism that reinvents itself over and over.

Question from the audience: Could you comment on the American ideal of home ownership? I think it has a lot to do with the challenge of housing in the US, and something that seems to be different in other countries.

Raquel Rolnik: In the US there has been always two paths. One is home-ownership, which is still very powerful, through credit and mortgages, backed by Fannie May, since the early 1930s. But, in parallel to this system, there was another: public housing. A significant number of public housing projects were built in the United States with subsidized rental schemes. In other countries, such as Spain home-ownership is also more

important than rental housing. Home-ownership can be nice, it can be fine for many people. I'm not criticizing home-ownership per se; what I am saying is that from the '70s '80s all other alternatives were gone. The problem in accepting the financialization of housing and housing as an investment, and moving its policies towards the private market, the state is fragilizes and destroys all other alternatives. The public housing resident became a sort of marginal or criminal who has to accept the state's new model: "no, this is not the way to go; you have to go this way". The problem is the lack of alternatives, the lack of different models. The one and only model will never work.

In the case of Brazil, and other Latin American, Asian, African countries most of the housing is self- built by the people themselves. And there is a whole machinery and many economic and political actors supporting this type of housing, putting it a very ambiguous legal status. Is this housing illegal? Are these people being able to stay there forever or will they be evicted? This ambiguous status eventually creates a sort of state of exception in these settlements, a state of exception that allows, for instance, the violence with which the police in Rio or Sao Paulo invade these settlements, shooting and disrespecting that population. Something that the police never does in a middle-class neighborhood or in a gated community. I am talking about the conceptual destruction of all other sorts of living, of all mechanisms that the people themselves have created to survive and to call their homes. The stigmatization and the criminalization of all other models towards the idea that the one and only model is if for you to buy a home built by a private developer; the only solution for housing. This is the language of finance which cannot park in irregular land such as those that the self-help communities occupy.

A very important political issue because financialization of housing is about transforming all sorts of tenure, all sorts of relations between people and the territories they live in into just to one: freehold private property home-ownership, which again, it's not a problem; I myself am a home owner. The problem is to make any other alternative fragile, criminalized, stigmatized, forbidden, destroyed, or non-available, in order to enforce home ownership. This is colonialism through the imposition of one-way of living over and of the same types of policies over the whole planet, but also through opening doors for financial capital to park. In the second part of my book I discuss several examples of that, of how many countries, like Indonesia and the Maldives, implemented land reforms in order to enforce freehold and private property as the one and only tenure system. Collective individual groups, communal, and indigenous systems are being destroyed.

Question from Heidi Harmon, Mayor of San Luis Obispo: Thank you for the honor of having the last question. My question is: if you were the mayor, what would be the top policies that you would pursue to create more equitable and affordable housing for all? That's a loaded question.

Raquel Rolnik: When I was a rapporteur for the UN people would ask me "what is adequate housing?". What is the size of an adequate housing? What is the material for adequate housing? And, of course there is no answer to that. My reply was that a house is not only four walls and a roof. A house, a home, adequate housing, is a kind of portal from where you can access an adequate environment, an adequate education, an adequate health, an adequate everything. Of course, location is very important. Land, land, land... location is crucial! I think it is fundamental that cities don't trade locations. Location is the most important asset a city has, not to raise money, but to accommodate, needs. Part of the policies implemented in the 1990s led cities to get rid of any public land and to make money with it. I would say cities should to the opposite: if there is any public land, any public building, try to use it and transform it into adequate housing and connected services.

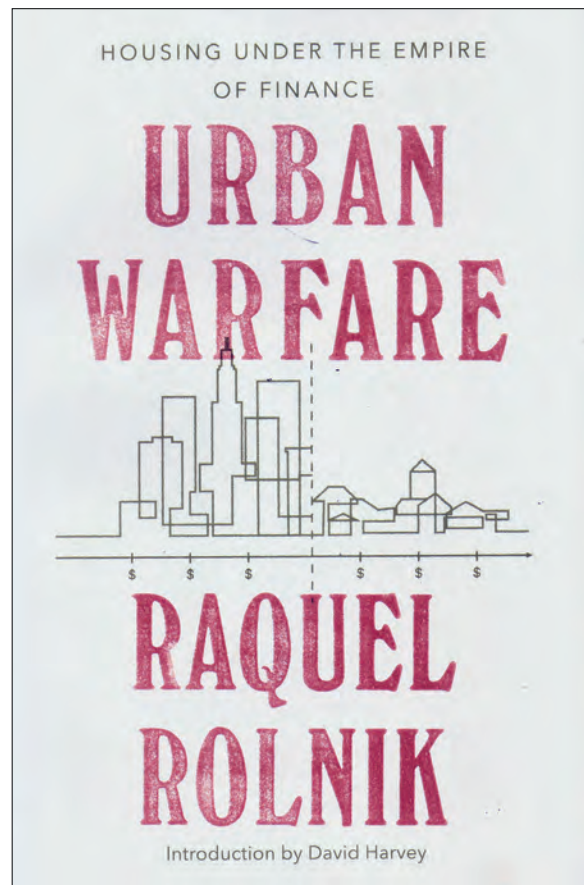
So that is one thing. The second is to support cooperative housing and other forms of de-marketized housing. There are many people trying to do cooperative housing but find no support. One of the things, for instance, that the Mayor of London is trying to do now is to support cooperatives, support them with land, with some finance, with projects, etc. It is important to support the initiatives of citizens who are trying to solve their housing problem. Also rent control is very important. In a city like San Luis Obispo, that I understand is becoming more and more a tourist destination, it is important to regulate and control the invasion of Airbnb and other such temporary housing services because they inflate the local rental housing market making it prohibitive for locals.

Heidi Harmon, Mayor of San Luis Obispo: Sorry to interrupt you but this is a really important issue. To clarify, in terms of Airbnb, what could be? You mention to regulate or control it, but what does that actually mean?

Raquel Rolnik: I know of some cities who are doing that. For instance, Barcelona has taken two measures. First, through a zoning ordinance, an instrument that any city can use. There, Airbnb is forbidden in zones that are purely residential; it is only allowed in zones that can receive hotels. In other cities, such as Lisbon or even Santa Monica, every Airbnb unit must be registered with the city, pay a tax apart from the Airbnb tax. In the case of apartment buildings, in Lisbon the owners of the other units also have to agree with that operation. Some cities prohibit that any one owner have more than one Airbnb

apartment, room or house to rent in order to avoid corporate Airbnbs. In other cities, the owner is required to be living in the house. But of course, many of these control mechanisms are hard to enforce. Barcelona imposed very heavy fines to Airbnb because they refused to provide the list of places they were offering in the city through the platform. Airbnb alleged they could not disclose their business operations so Barcelona fined them and managed to the system more transparent and to keep an Airbnb cadaster. Another thing is rent policies and rent control. Regulate how much landlords can raise their rents every year, using a rent control board composed of representatives from stakeholder groups: city officials, realtors, tenants, experts, etc. It can help avoid huge hikes in rents that will affect tenants enormously.

• • •



IV California Climate Action Planning Conference

Cal Poly's City & Regional Planning Department, in partnership with the Governor's Office of Planning and Research (OPR), hosted the fourth California Climate Action Planning Conference on Thursday and Friday, Aug. 24-25, 2017. Nearly 300 climate and energy professionals from around the state attended the conference, including Cal Poly students and faculty. The conference featured leaders in the field and an in-depth focus on greenhouse gas emissions reduction and climate adaptation at the local and regional level.

The conference opened with remarks from David Bunn, Director of the California Department of Conservation and Lindsay Buckley, Chair's Advisor for Strategic Communications & External Affairs at the California Energy Commission.

Mr. Bunn spoke about the role of agriculture and agricultural conservation in climate mitigation and adaptation. He emphasized the need to work on local land use to achieve climate action goals and offered a perspective on the co-benefits of partnerships: "Ranchers would say it this way: food production is the benefit, and greenhouse gas reduction is the co-benefit and biodiversity is the co-benefit....all those benefits can be achieved if we focus an effort of working with local ranchers and landowners." Ms. Buckley discussed the goals of the state and the Governor and provided information on state programs and resources available to local governments. She closed with inspirational words from climate activist Greta Thunberg "You are not too small to make a change."

The conference opening session also featured a panel of elected officials discussing how they are addressing the climate crisis in their communities. Supervisor Phil Serna of Sacramento County (and Cal Poly MCRP alum) shared his story of the commitment

to public service and the opportunity to make a difference in the things you believe in. Mayor Heidi Harmon of the City of San Luis Obispo spoke about the city's goal of being carbon neutral by 2035—the most ambitious goal in the U.S. Former Mayor of the City of Richmond, Gayle McLaughlin, addressed the importance of building alliances and being politically active.

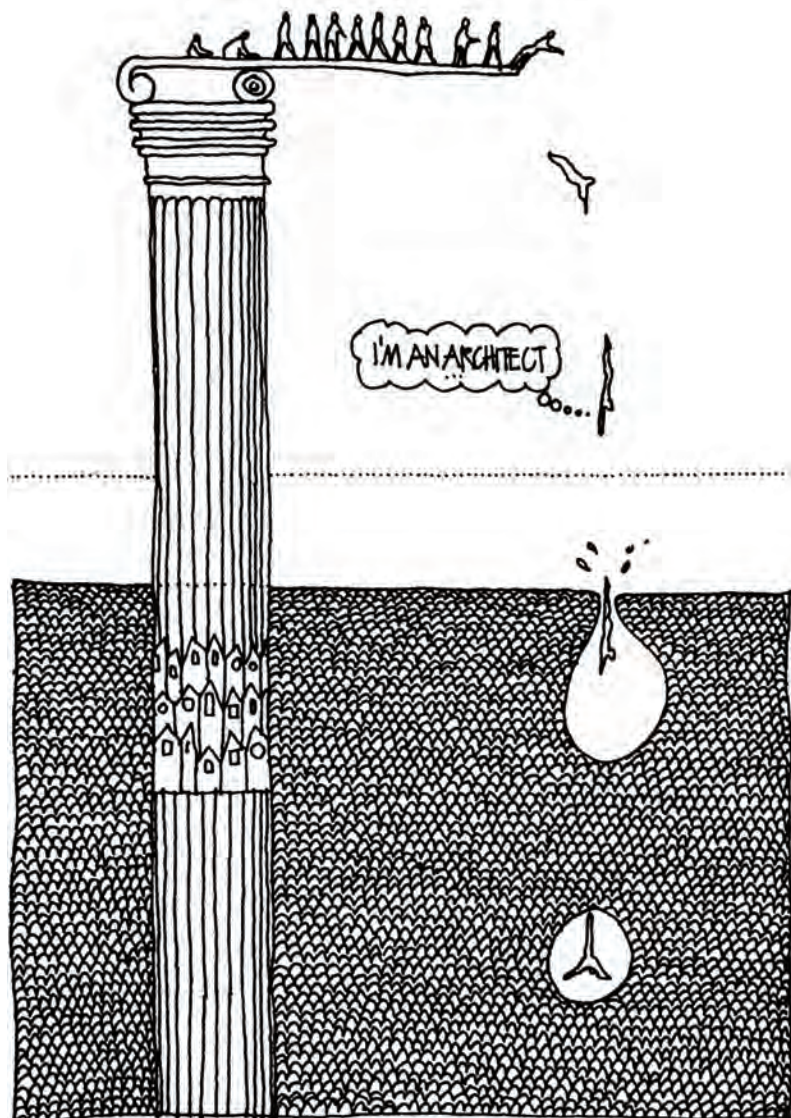
Dr. Michael R. Boswell and Dr. Adrienne Greve are the conference organizers and continue to position Cal Poly as a leader in educating future climate professionals. Also, they have assisted numerous local and state agencies in the preparation of climate action plans and other technical plans for addressing the climate crisis. Often these projects involve students who are able to gain hands-on training in the field. Several graduates of the program presented at the conference and are now demonstrating their leadership.

"California is a leader and innovator in addressing the climate crisis," said Michael R. Boswell, professor of city and regional planning and the conference director. "We are bringing the leaders in the field to Cal Poly to share best practices and inspire each other to create low-carbon, resilient communities."

Event sponsors included California Department of Conservation, Bay Area Air Quality Management District, StopWaste, Climate Resolve, PlaceWorks, SLO County Air Pollution Control District, Integral, Southern California Edison, RRM Design Group, ICF International, Fehr & Peers, Harris & Associates, and Raimi & Associates.

Information and resources from the conference are available at <http://climateactionplanning.org/>





"Bubbles" - From their pedestal, architects keep distant from people's needs.

by **Carlos Almeida**

As a licensed architect in the European Union, Carlos has worked in four continents and is currently a Design Studio Leader/Director at AECOM's Baltimore office. An accomplished graphic artist and avid Urban Sketcher, he is working on his first book. See Carlos illustrated article Variations on City Form in FOCUS 15, 2018.

FOCUS 16

Peer-Reviewed



Place as a Constructivist Learning Tool: Social and Material Aspects of Group Learning in Urban Planning Classes.

Laura Tate

PhD., Planner.

Group learning is a common pedagogical approach in planning studios. In this article, Laura Tate discusses how, when focused on place as an object-to-think-with, it can foster constructivist learning experiences where students use their own knowledge as a base and build upon it through new learning and experiences. The article is based on the author's experience teaching an urban design class at Eastern Washington University.

This paper considers promising practices for group learning, and positions it as a technique within the various types of applied planning course formats. It draws some preliminary promising practices from a literature review, and illustrates these with a single case study. Group learning in project-based settings can improve student learning outcomes across disciplines. There have been ongoing gains from group learning years after the actual classroom experience, found in the literature outside planning (Pascarella, 2001). And, group learning can be especially important in planning, where students prepare for practice that will rely heavily on skills in working with smaller and larger groups (AICP, 2017; Greenlee et al, 2015; and Ozawa and Seltzer, 1999).

Group learning, including (but not limited to) team-based learning, encompasses much more than the group dynamics and relational skills planners often link with this term. Group learning can be broader, where the immediate goal is to enhance the different ways in which learners encounter course material. As Boyer observes, this latter form can “diffuse the learning process through student-to-student interactions”, making students less reliant on the professor or text book as the sole interpreters of core concepts (2018:8). Furthermore, and as this paper will discuss, group learning—whether or not it is part of a formal studio or community-engaged learning class—supports constructivist learning environments which enable learning through experiences with other people and with the materials and places around them. Unfortunately, the intimidating aspects of group work can cause frustrations for students and instructors alike, making some instructors reluctant to include them. To value and facilitate group learning in planning pedagogy, this paper draws from the literature and a classroom case study to tease out some promising practices appropriate in more experiential planning classes as well as other class settings. The article begins with a brief liter

ature review, followed by a description of the case study and research process. It then presents case study results, and promising take-aways for future classroom practice.

Literature review

Four literature dimensions are considered here. First, the article outlines broad findings from planning and urban studies pedagogy. Second, it reviews some instrumental considerations on group learning. Third, it considers the relationship between constructivist approaches and group learning. Finally, it reflects on research on student stress and anxiety levels. While the latter do not directly address pedagogy, they did influence some lesson planning choices for the case study; they are thus included in the review. The literature review ends with a summary of key take-aways related to the case study.

Selected broad findings -planning and urban studies

Planning and urban studies pedagogy literature has addressed broad debates and described specific studio and experiential learning ideas (e.g. Baum, 1997; Brooks et al, 2002; Gu, 2018; Johnston, 2015; Matunga, 2017; Ozawa and Seltzer, 1999; and Shephard and Cosgriff, 1998). Much of this literature considers processes and outcomes for planning students—often intertwined. For example, Arefi and Triantafyllou (2005) distinguish those learning approaches in urban design planning classes emphasizing the visual and physical, from those taking a more integrated or systemic approach to understanding place.

More process-focused, Rubin (2012) asked his urban studies students to undertake aimless walking, or a *dérive* (after the Situationist concept), to get an experiential understanding of place in planning and policy work. For Brooks et al (2002), internship and applied learning experiences can help students more effectively synthesize classroom learning. By moving

between scholarly and practice-based knowledge, students can gain experiential facility with reflexive practice. In fact, as Long observes, a significant portion of planning pedagogy writing emphasizes the value of synthesis in experiential learning (2012:438). These and several other articles addressing the process and outcome of planning pedagogy underscore transformative experiences within the learning process, to help students see the city—and themselves—in new ways.

While still mindful of process, other research emphasizes the end products of pedagogy, through problem- and project-based learning (PBL) experiences involving an external client. This is especially common for studio courses; and most planning discussions of group learning focus on studio classes. Kotval's (2003) discussion of capstone studio courses typifies this, where students work with communities to produce real products responding to local need. Kotval's reading of the literature on experience-based planning education raises both benefits and challenges. Among the benefits are: a deeper connection with, and understanding of key planning issues; stronger problem-solving skills; and better communication skills transferrable to varied settings. Group interaction skills are also listed among the benefits of experiential learning. Guided less by other literature, and drawing more from prior teaching experience, Kotval (2003) notes that:

It is imperative that groups be structured with care. Learning will only occur when the group functions in a cohesive and efficient manner. When the positive interdependence needed to link group members is absent, the team will falter and the learning experience, as well as the project, will be compromised. (p. 302)

Thus, experiential learning and group processes can be valuable; but in a studio context which aims to create a product for a client, positive outcomes depend on careful structuring.

Unfortunately, despite paying lip service to the value of PBL and other forms of experiential learning, the planning academy (as with other academic disciplines) struggles to recognize and support these courses in core curricula (Kotval, 2003; see also Senbel, 2012; and Botchwey and Umemoto, 2018 for discussion of why such courses need extra support). This is compounded by only sparse reflection on teaching techniques for enhancing the group aspects of these learning forms. Brooks et al (2002) acknowledge the importance of group or team-based projects in planning, but directions for how to structure these is outside the scope of their article. Kotval has taught several capstone projects, including group work, for which a strong skills base is needed to ensure productivity and, ultimately, positive outcomes. Kotval acknowledges that some instructor intervention in helping with group dynamics may be necessary, both in

helping when challenges occur, and in actively structuring the groups at the start of any group projects. Clear expectations, and consequences for non-performance are also essential for Kotval. Still, and while not within the scope of Kotval's paper, there is little mention of tactics and structures which might assure this, except for at a very high level.

Three notable exceptions exist to the sparseness of planning research on group learning, but more work is needed. Senbel's (2012) article describes an explicitly constructivist approach to unpacking the learning involved in a hybrid design studio and planning workshop class, and does reflect on the relationship between a specific exercise, group and community interactions, as well as learning outcomes. Also, Boyer's (2018) recent research on team-based learning in the planning classroom reveals the possibilities for broader approaches using group experiences in less instrumental ways (i.e., beyond the end product). Such possibilities include the use of readiness assurance tests on core readings along with immediate feedback forms to help individuals and small learning teams of students assess their grasp of course concepts alone and together. Moreover, Botchwey and Umemoto (2018) have created a very robust and specific set of guidelines for successful community-engaged learning projects, including very good overall process design advice, albeit with less specific guidance for group components. Notwithstanding these robust contributions, there still remains a need for more reflection and guidance on group learning specifically in the planning context.

Compounding matters, there is also a lack of clarity in the planning literature on what we mean by various types of learning experiences, described through a range of terms, including studio courses, planning workshops, community-engaged learning, experiential learning, etc. As Long (2012) observes:

U.S.-based planning programs routinely use terms including studio, workshop, practicum, or client-based study interchangeably, with little consistency in definition either within terms (e.g., two programs using the term workshop may mean different things by it), or across programs (e.g., a studio at one school is a practicum at another). Consistency for its own sake is not necessary, and may even be undesirable; however, some movement toward a common vocabulary would benefit future discussions and research. (pp. 444-445)

The key take-away here: there is still room for more specific descriptions of experiential courses involving group learning, including how and when group learning and group process skills are addressed in various learning formats. Table 1 depicts which of the different types of applied learning formats (which have been taken up in various planning programs) involve

group learning experiences, based on reviews of the literature. These clarifications show how group learning can explicitly, and optionally, support various experiential learning forms.

Instrumental considerations from outside the planning literature

Research from outside planning gives further guidance on using and structuring group learning experiences. Neu's (2012) grounded theory analysis of university students' group experiences in PBL settings found mixed learning results if lessons and grading approaches were not appropriate. Specific concerns observed were:

- Constrained learning, arising from divisions of labour in group assignments which enable some students to avoid learning some skills;
- Stereotyping, which students may use to choose groups, when allowed to self-select;
- Constraining students of lower ability and motivation, by not allowing or counting on these individuals to perform critical tasks; and
- Various grading inaccuracies, including the risks of grade inflation.

To mitigate or prevent these, Neu has recommended more concerted analysis of teamwork-related assignments, their goals, and potentially unintended consequences. Neu also supports designing entire courses in applied programs, such as business and marketing, that focus exclusively on teamwork

knowledge skills, and abilities (see also Chen et al 2004). This implies that the range of skills needed for effective group interaction is too large to be addressed in a minor tutorial within a larger course. Moreover, work by Aggarwal and O'Brien (2008) found that reducing group size made an important difference. Specifically, individual students were less likely to shirk responsibilities (a behaviour called "social loafing") when allocated to smaller groups.

Still others have considered how instructional design and grading can impact group learning. For example, Johnson et al (2014, p. 3) discuss theory and techniques for postsecondary teaching through cooperative learning experiences, defined as "the instructional use of small groups so that students work together to maximize their own and each other's learning". For these authors, cooperative learning requires a state of positive interdependence, where group members see their own success depending on others' success; and they see mutual benefit from the endeavour. This approach is distinct from competitive or individualistic learning; and it requires appropriate instructional design. Thus, in cooperative learning, any rewards allocated should maximize a sense of positive interdependence.

At the same time, individual accountability is critical to successful cooperative learning. Johnson et al claim that instructors can best encourage accountability when assessment considers both group and individual efforts, and rewards work completion. To date, the planning literature has said little on how to use assessment directly in this manner. The exception here is Boyer's discussion of team-based learning in planning, which

Table 1: Group learning in different experiential learning formats.

	Project-based or problem-based learning	Experiential learning	Studio-based learning	Community-engaged learning	Service-learning	Group learning/ collaborative learning	Formal team-based learning
Group skills, dynamics, and relations are an explicit part of the learning and work produced	◆	◆	◆	●	■	■	■
Learners form a creative community/ community of practice	◆	◆	◆	●	●	■	■
Involves real world problems in context/ situational analysis forms part of work	■	■	■	■	■	◆	◆
Introduces/ enhances practitioner perspective	■	◆	■	■	●	◆	◆
Formal peer review of interim and/ or end products	◆	◆	●	●	●	■	■
Results in an end product for client	◆	◆	●	■	●	◆	X
Aims at some form of capacity building for client, regardless of whether or not there is an end product (e.g. report, plan, proposal)	◆	◆	◆	●	■	◆	X
Provides explicit opportunity(ies) for reflexive practice	■	◆	■	■	■	◆	◆

■=always, since this is a central part of the approach

●=often/ usually, and an accepted, but not explicit part of the approach

◆=possibly, but this is not a central focus for the approach

X = rarely or never, not expected.



Figure 1: Constructivist Learning Models - Three Applicable Types. Summarized by the author from Long (2012). (images are public domain, from Pixabay.com)

used individual and team readiness assessment tests of core concepts before enabling groups to progress to more applied team work (2018). This appears compatible with the idea of co-operative learning, since passing the team readiness test would help bring along other group members who might have struggled more individually.

That said, in Boyer's case, grading also involved peer evaluation, in contrast to Johnson et al's model of positive interdependence and gentler approaches to accountability. In fact, Johnson et al go so far as to suggest cultivating an awareness among group members of which individuals require more help with assignment completion. In addition, they recommend including social skills development lessons, as well as group processing of the experience. To this end, Johnson et al advocate exercises which prompt group insights on the actions by members which are helpful and unhelpful in good working relationships; and then also encouraging groups to reflect on what behaviours to encourage and discourage going forward.

Constructivist approaches to group learning

Additional research celebrating group work comes from constructivist learning. Some planning pedagogy researchers have indeed endorsed constructivism, including Long (2012), Hjorth and Wilensky (2014), and Senbel (2012). Drawing from her reading of the broader educational literature, Long highlights three

subsets of constructivist learning models applicable to planning (cognitivist, activist, and participatory approaches), summarized in Figure 1.

For Hjorth and Wilensky (2014) constructivist learning is a process using one's existing knowledge as a base for actively engaging in other cognitive processes. Constructivist approaches, which build from Piaget's work, see knowledge as an actual structure. Hjorth and Wilensky suggest that, by picturing knowledge as something which is buildable and malleable by learners, constructivist learning models see human-material interactions as more than just the sum of their parts. And, when education based on this model adopts specific learning tools, any of the latter can become "an object-to-think-with that helps learners construct and share their thinking on a particular issue" (Hjorth & Wilensky, 2014, p. 198).

This appreciation of objects aligns well with broader theories (outside planning) about how we think and learn. For example, Scottish philosophy and cognition scholar Andy Clark suggests that both thinking and new learning rely on patterns; but, most critically, the raw materials for such patterns are not limited to the single mind (1998; also see discussion in Tate, forthcoming). Rather, the patterns comprise networks of internal neurons as well as relatively stable external objects to extend the thinker's capacity. To illustrate, Clark draws the example of a ship navigation system, which is a mode of large-scale functional thinking extending beyond a single individual and encompassing an array of different objects, people, and routines or practices (1998, pp. 214-215). Clark also counts tools and language among the external objects that extend human capacities (see also Tate). In short, learning approaches which recognize both the constructivist and the emergent nature of objects-to-think-with present exciting opportunities for planning instruction.

Senbel's work also values the role of objects-to-think-with, using an alternate term of design artifact to discuss them (Senbel, 2012). He how a class task of building a model of a neighbourhood undergoing change (implicitly constituting an object-to-think with) stimulated more effective discussion of larger issues among students, and supported effective collaboration in generating more design ideas together. As Senbel (2012) observes:

The model as a whole represented much more than the sum of the individual incremental designs. It represented a form of consensus that included many voices.... Because the medium of communication, negotiation, and expression was a physical model, they were able to advance their understanding of urban design. (p. 461)

While none of the above authors explicitly describes place as a potential object-to-think with, by extension, place does seem to be an appropriate object for group learning in a planning con-

text. As discussed shortly in the case study, structuring lessons that use place as an object-to-think with can also draw upon basic student familiarity as a helpful, confidence-building asset.

Thus, a number of applied forms of teaching involve assembling knowledge through learner experiences –through encounters with each other and with the materials (and places) that they study and use to enhance their study (Kotval, 2003; Hjorth & Wilensky, 2014; Long, 2012; Senbel, 2012). This assembly occurs in various ways, and is directly influenced by the individual's own background, learning style, and future interactions. For Education scholar Neena Kottalil, this is because “in constructivism, learner characteristics and choices are important in learning and instruction” (2009, p. 6). In constructivist learning experiences, then, the individual student's reaction to their own learning process, and reaction to any other objects and people potentially implicated in that learning process, become an equally significant part of the learning. This context-sensitive understanding is particularly appropriate for any form of experiential learning in planning (Senbel, 2012).

Other influential factors impacting group learning: student stress and anxiety levels

Scholarship on mental health in education comprises a final stream of relevant literature for the case study, and to group learning in general. Specifically, recent surveys suggest current students face a number of challenges which may have been less prominent fifteen years ago. For example, preliminary results from a national study have found that, from 2008 to 2016, the proportion of university students facing an anxiety disorder in the past year had doubled, from 10% to 20% of students (Scheffler et al, 2019, p. 1). Male students were somewhat less likely than female students to articulate this level of anxiety –roughly 10% compared with 23% (Scheffler et al, 2019, p. 2). But the same study also found that anxiety levels were likely to be higher for students spending twenty hours or more of their free time using computers and electronic media (Scheffler et al, 2019, p. 2). Moreover, financial stresses in students' family units were even more strongly correlated with anxiety levels.

The latter study is not the only one flagging stress and anxiety concerns among post-secondary students. Another national study of 631 self-selecting undergraduate students found that just under half of those students were at risk of mild to severe depression symptoms (Acharya et al, 2018). These findings are further reinforced by the latest results of the American College Health Association ACHA study from Fall 2018 which suggest, among other things, that well over half (57%) of American post-secondary students felt overwhelmed by all of their work in the past two weeks, with female students far more likely (63%) than male students (44%) to feel this way (ACHA, 2018:16).

Elsewhere, research suggests that at least some workload issues have been exacerbated by focusing challenges in the 21st century. In their own work, and their readings of research by other scholars, Neuroscientist Adam Gazzaley and psychologist Larry Rozen (2016) have found significant evidence of such challenges. For example, their experiments found that students could not stay focused for more than 3-5 minutes at a stretch. In other research, students who allow smart phones and other devices to interrupt their studies take much more time (compared with students who do not) to learn the same content. In essence, students who need much more time than others to achieve results (due to interruptions) are more likely to face time crunches, which can induce stress. Also compounding the time crunches and related stress, there is some suggestion of an overall decline in deep reading skills across all age groups, linked with the rise of online reading. This possibility has been discussed by American literacy and education scholar Marianne Wolf (2018). And, the longer times needed to read and study and ensuing stress can trigger, or compound, challenges like depression and anxiety. By inference, instructors should structure successful group assignments mindful of ways to prevent the greater risks of anxiety for all students, and the particular risks of anxiety for students with focusing challenges related to unhealthy uses of electronic media.

Key take-aways from the literature

From the literature, then, several points are germane for those wishing to develop or refine group assignments for urban planning classes. First, while group learning is traditionally valued for helping students synthesize learning in more applied planning classes (e.g. like studios), and in preparing students for future careers, it can be used in a range of broader experiential learning forms. This breadth can occur whether or not the learning is product-oriented or career-oriented. Second, where group exercises can be structured to facilitate cooperative learning, including positive interdependence, they can potentially enhance overall learning as well as social skills development. Personal accountability can be a critical component in this. Third, since not all group assignment results are successful, care is needed to prevent distortions, including student skill avoidances (via project division of labour); student stereotyping of each other to enhance prospects for successful groups when self-selecting; effectively constraining learning for students of lower ability; and various grading inaccuracies.

Fourth, group learning is a valuable tool in fostering constructivist learning; and planning educators have seen the value of constructivist pedagogy. Group learning is especially helpful in processing material and social interactions. Planning educators have already confirmed the value of understanding and using objects-to-think-with, particularly in the form of computerized

models (Hjorth and Wilensky, 2014); or conventional streetscape models (Senbel, 2012). By extension, place can also become an object-to-think-with in constructivist planning education. Fifth, and finally, assignments should be structured to reduce potential for unnecessary anxiety, in light of documented rising student mental health concerns over recent years.

Case study

Case studies provide a specific view of reality which is context-specific and non-generalizable. They are often qualitative, but may also blend both quantitative and qualitative data. Because it appreciates, rather than discounts, context, research based on a case study can build deeper awareness of the specific processes at work in local settings which may impact results; and a case study can help the researcher to see more holistically the range of material and social factors at play in a particular outcome, and why they might be impactful.

Together, this same richness and specificity suggest that case studies are not generalizable; however, they can launch further experimental and quantitative research. As Danish urban planning scholar Bent Flyvbjerg observes, case studies can be generalizable when they help falsify a dominant hypothesis if they observe a single case refuting that hypothesis. This draws from Karl Popper's point that observing a single black swan can falsify the claim that all swans are white. Flyvbjerg elaborates, explaining that "the case study is well suited to identifying 'black swans' because of its approach: what appears to be 'white' often turns out on closer examination to be black" (Flyvbjerg, 2001, p. 77).

One could thus surmise that, where there is a single case of positive learning outcomes from group assignments designed specifically around constructivist principles, it disproves the pre-conception that there is no value in including group learning strategies. Thus, for both its value in providing deeper awareness of the value of an object-to-think-with in group learning within a specific setting, and its role as a black swan, the case study below is of merit in exploring further the ways in which group assignments in planning can enable learning, whether

they take place in a studio class, PBL, or other course formats.

Group learning in this case study arose through my experiences as a visiting lecturer at Eastern Washington University, with campuses in Spokane and Cheney, Washington. It involved a mixed class of undergraduate and graduate students, taking an introduction to urban design. Students learned urban design basics through a combination of lectures, readings, and PBL. It was not explicitly a studio, but did include some aspects of studio learning, in that students learned about design principles through real-world, place focused, exercises. In this case, place became a critical object-to-think-with during the course. Overall, students enjoyed the course, with an average overall rating of 4.75 (on a Likert scale from one to five, with five meaning "excellent", and one "very poor") in anonymous, independently collected and analyzed, student evaluations conducted outside of the study described here.

Constructivist learning unfolded in all three forms described by Long (2012): cognitivist, activist, and participatory. Activist and participatory learning, which involve social problem-solving and consideration of context, progressed through three group assignments. Cognitivist learning occurred when students spent time individually with key design concepts through readings, homework and a major individual report or design brief. None of the class activities involved an external client. Each group assignment focused on a particular theme (connectivity, porosity, and authenticity) using selected design goals from the text book, Nan Ellin's *Integral Urbanism* (Ellin, 2006). Before groups began work, they saw several concrete examples of the relevant design goal, through PowerPoint slides in lectures (and available to students afterwards online). The group assignments asked for one or more new projects to enhance the assigned goal in a particular location. Groups also presented via PowerPoint.

By giving three group assignments over the ten-week quarter, I could: test and refine the group assignments used to further constructivist learning; and identify areas for future learning. Together, the three group assignments counted for 21% of total course grade; however, students could also "recycle" group content in their final individual assignments, for up to 25% of the content. Allowing recycling aimed to reduce stress in what was otherwise a very demanding workload for students, and to also help students re-encounter and use prior content in a potentially new way, deepening the learning.

In the first assignment (group assignment #1) I asked students to propose one project each at the macro, meso and micro scales to improve connectivity in Cheney (a small town thirty minutes outside of Spokane, and the site of the university's main campus). By starting with a familiar location for most students,

Figure 2: Key takeaways from the literature about group learning.

- 1 ... is **not** just **limited** to studio classes in planning.
- 2 ... is especially impactful when designed to foster **positive interdependence**.
- 3 ... should **avoid distortions**, like skill avoidances or stereotyping in group selection.
- 4 ... can foster constructivist learning about **material and social interactions**.
- 5 ... should be **designed to reduce** the potential for unnecessary student **anxiety**.

this assignment aimed to help students appreciate that they already had a useful base of knowledge; and it reinforced that they could draw from an easily accessible object-to-learn-with (the town and campus itself), in constructivist fashion. Starting with the familiar may have also helped reduce the potential for student anxiety (especially as highlighted in Scheffler et al, 2018 and ACHA, 2018). And, in their presentations, students could speak to patterns they had observed not just during a single site visit, but through daily exposure to certain place features that figured in their recommendations.

For the second assignment groups were asked to assess a specific low-density industrial site, equivalent to a large city block, and to propose ideas to redevelop the site, emphasizing porosity. As elaborated under Case study results and analysis, students got dedicated class time to ensure they became familiar with the site. The third assignment allowed a choice of either Spokane or Cheney; and it asked again for proposed macro, meso, and micro-scale improvements. Varying location and assignment sought to give students a sufficient breadth of experience to complete a robust final individual assignment at the end of the quarter. Figure 3 summarizes the different assignments.

In group assignment #1, students could select their own group; and no individual reflection on their experiences was required. Self-selection resulted in some uneven group processes since a few groups had a disproportionate number of students with learning disabilities (formally and informally diagnosed) or histories of struggling to complete assignments in other courses. While some students may have chosen groups strategically, others likely joined students sitting nearby. Notwithstanding the resulting unevenness, all groups except one created an end product that demonstrated clear understanding of connectivity as a design goal. Still, based on the experience with the first assignment, I adjusted some parameters, applying them to group assignments #2 and #3. These parameters responded to the mid-course reading from the literature. Corrections included response to suggestions that groups tend to do better when they are small (Aggarwal & O'Brien, 2008). There has also been some anecdotal suggestion that there is value to assigning individual roles, which resonated with the students in this case study.

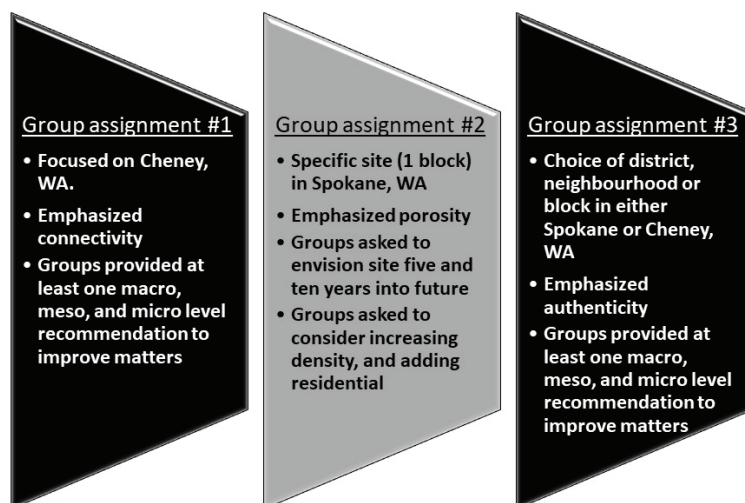
As noted above, the literature also underscores the importance of accountability (Johnson et al, 2014). While some instructors might promote accountability by asking students to rate each other, I preferred not to as I was especially mindful of the distortions which can arise with this approach (Neu, 2012; May & Gueldenzoph, 2006; Sherrard et al, 1994). Still, I reinforced accountability indirectly for group assignments #2 and #3 through requiring each individual student to reflect on the group project. More importantly, I asked that each of them to

acknowledge, in their individual reflection, at least one other team member who contributed positively to the group's work. This avoided the potentially anxiety-provoking direction to report negatively on each other, while still dropping the hint that others would monitor their behaviour for the positive.

For the next two group assignments, groups were allocated by myself. This process balanced several factors, and drew from prior knowledge of most of the students' personalities and work ethics. For example, I aimed at avoiding repeats of any observed personality conflicts to date, either from the first group assignment or as identified through discussions with a colleague (who had randomly assigned many of the same cohort of students to group projects in another class). Group assignments also considered student grades and homework completion rates. The aim here was to avoid large skills imbalances which might disadvantage any one group.

Assigned groups were also made smaller, following recommendations from the literature. Given that some students had uneven track records with completing work, pairs would be too small, and could be a disadvantage. Three as a minimum size would still leave a functional team in the event that one student became absent or "ghosted" their team mates. Groups comprised three or four students with designated roles: a designated leader/ coordinator; a second person responsible for presentation editing and continuity; and the third, or third and fourth persons responsible for photography. Some groups enjoyed greater success with the second group project and, anecdotally, most students appreciated the role assignments, with a slight majority also appreciating not having to choose their own group. That said, in one instance, an unanticipated personality conflict arose in a group of four, and I debriefed extensively with three of the four group members. Despite

Figure 3: Different place-focused group assignments.



those challenges, anecdotal feedback suggested the overall approach was valid, and so I continued this approach in group assignment #3, allowing new students to try a leadership/ facilitator role, and project continuity.

In addition to these adjustments, after each group assignment, the class was debriefed as a whole, letting students know what I thought had worked, and where I realized more could be done to set them up more effectively. I was up front about this being the first time teaching the class, and about this being a learning process for me as well. This included explaining the rationale for moving to formal role assignments. After the first assignment, I told the class that in some groups there had been perceptions of individuals not carrying their weight; and yet, some of those same individuals had privately expressed concerns that their views had not been heard, causing them to disengage. Based on this, I gently suggested that students stretch themselves to improve communication (again, following Johnson et al, 2014). It was at this time that I also announced I intended to assign roles and groups for assignments #2 and #3. Instruction on group process was light, given my own logistical constraints.¹ I did acknowledge students' concerns about group work challenges, and advised that group assignment grades would be generous but fair, to acknowledge the additional group challenges.

After the final group assignment, I asked students to complete a survey about their experiences, so that they could better appreciate how others were experiencing group work. These survey results, together with selected excerpts from individual group assignments are described further below under the next two sections: research process and student perceptions.

Research process

As noted above, group assignments were integral to course learning, and helped illustrate how group work can foster constructivist learning in planning. To assess student experience and satisfaction, I asked students to take an online survey through Google Forms, combining quantitative (Likert-scale and multiple choice) and qualitative (free-writing) input modes. Students received full assignment points (equivalent to 1.5% of total course grade) for completing the survey. Assignment points partly encouraged survey completion, and partly rewarded students for already acquiring some important experiential knowledge, which they were then sharing through their responses. Students entered their student numbers in the survey, but not their names. This enabled me to cross-reference student numbers to names to give credit for survey completion, while also avoiding the temptation during the analysis phase of analyzing input by individual student name. I explained to the students this approach to confidentiality, including the risk that if inflammatory comments were made, I could potentially look

up names. I also advised students that results would help shape any future class I taught and could potentially be discussed in a scholarly article. Students accepted those parameters; and all but one student enrolled in the course completed the survey.

Case study analysis and results

Survey results included student views on their own performance and attitude in each assignment, where students chose from a range of options describing their own attitude and effort. For each group assignment, students could select as many options as applied; and their potential choices related to level of effort, enthusiasm, communication effectiveness, and what students got back from other group members. When reflecting on the first and third group projects, students consistently selected the option "I put in my fair share of effort" more frequently than any other response (see Figure 4 for detailed results). Even when all three group assignments were taken together, students chose this response the most frequently. This was interesting, given that anecdotal evidence for group assignment #1, and several student written reflections on group assignments #2 and #3 indicated some frustration with group members not pulling their weight.

The next most frequent response when all three group assignments were combined was: "I was enthusiastic", which was more significant with group assignments #2 and #3. Once students had successfully completed the first assignment, they had a better idea of what to expect, along with possibly higher confidence levels and, hence, more enthusiasm for subsequent assignments. The third most frequent response across all group assignments was "I communicated effectively with some, but not all members of my group", suggesting some communication challenges for at least some of the groups. This response seemed most resonant for students in reflecting on the second group assignment, compared with the first and third. As discussed above, this constituted further evidence that students struggled with group dynamics.

When asked for two reasons that they enjoyed their assignment, all students wrote in at least one per assignment. With the first group assignment, six out of sixteen described some aspect of the assignment itself, either its focus on connectivity, or its requirement that groups consider this topic at macro, meso and micro scales. Moreover, four out of sixteen highlighted idea-sharing and/or the chance to be creative as the positive aspects of the assignment. Another five out of sixteen respondents wrote in responses about enjoying the group encounter itself, indicating that they got value from

¹ As a temporary lecturer who had one week to prepare for a course I had never before taught, my focus was on the basics of preparing bi-weekly lectures from scratch.

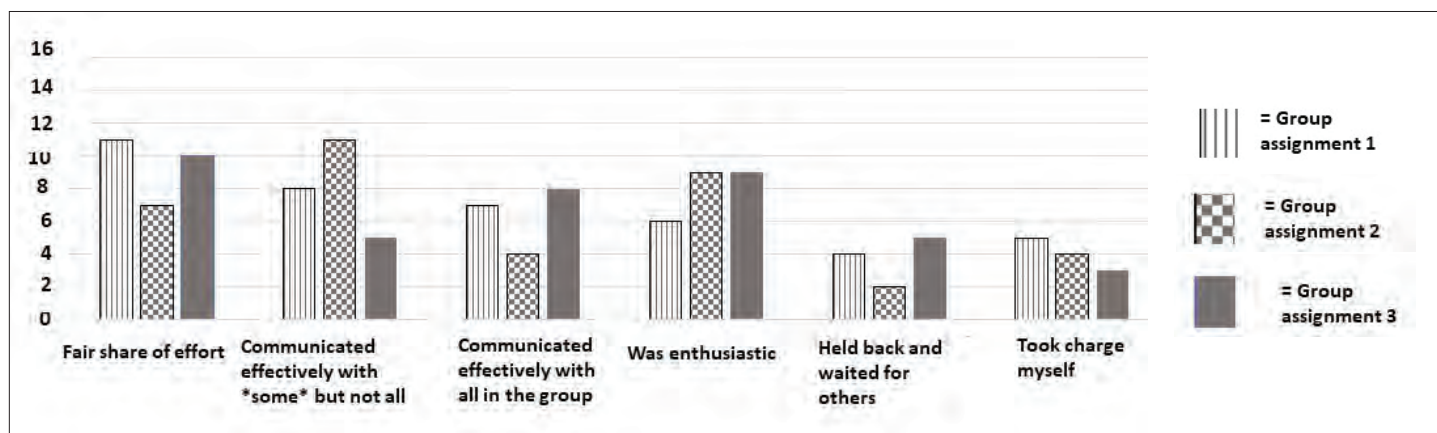


Figure 4: Student assessments of own performance/attitude in all three group assignments, by total number of responses.

discussions with their fellow students.

These responses highlighting the value of idea exchange suggest that at least some positive interdependence (Johnson et al, 2014) was taking place. The results also suggested that the chance to concretely discuss core concepts with other students was a helpful part of their learning, as observed by Boyer, 2018. With the second group assignment (focused on the single site roughly one block in size), all of the students (16/16) wrote in responses which appreciated some aspect of the assignment itself. One student wrote: "I enjoyed seeing how the site could better fit into the surrounding neighborhood, and how activities could be spread out over the city and just this area. I also [liked] finding building footprints and [seeing] how they could possibly fit into this space". This suggests that a relatable scale can be an important quality when place is used as an object-to-think-with. Another student stated:

I enjoyed [having an assignment]... where every group had [the same] assigned location and with that, I got to see how given the same problem, different group[s] could come up with wildly different solutions. I also enjoyed the aspect of being forced to look at actual time-frames for the projects. Even decades into the future. This is instead of creating random big projects that are magically thrown up in an instant on the site.

When considering the first two assignments, it appears that the students responded well to an opportunity for experiential understanding of place (Arefi & Triantafillou, 2005; Rubin, 2012). There is also a sense that students gained from a constructivist approach to assignment structure (Hjorth & Wilensky, 2014; Kottalil, 2009; Long, 2012; Senbel, 2012), which built from their accumulating store of knowledge. It further implied that the encounter with place provided an object-to-think-with, and that the smaller scale of the block site was especially

helpful. Since students seemed to embrace the more relatable geography of the latter, a future course might consider starting with both that scale and the more familiar location.

For the third group assignment, nearly half (7/16) of the students again wrote in responses appreciating some part of the assignment itself, also suggesting some experiential benefit. That said, assignment #3 may also have been more complex for several students, compared with the first two. There were certainly positive aspects to the third assignment and its theme. In the words of one student: "[authenticity] is a very broad concept with many different interpretations, which was shown during presentations, [and which] made the project very interesting. Authenticity can be many different things and figuring out ways you can play on it makes being very creative a strong asset." However, as noted elsewhere in survey results, at times the theme focus could be challenging. For example, in responding to a mislabelled question² asking students to express dislikes with the assignment, one student wrote in the following response:

Being such a broad topic, [the assignment on authenticity] made it very difficult to hone in what we were going to do. I thought I was on the right track until my team members, the day of the project, decided to put some effort into it, then I began to question what it was I thought authenticity was or what it could be. Having nearly zero input until hours before the presentation made finalizing the project very difficult. Not being able to bounce around the ideas of authenticity with other students or the professor made nailing down what the project was supposed to be about tough.³

Still, when group dynamics were generally positive, students seemed to struggle less with the concept. As one student observed in their individual reflection:

The authenticity group project has been the best group

work so far. I feel this group of people really got along great and had excellent communication skills. To start off, [Our group leader] was a fantastic facilitator. [Our leader] really took care of business, right down to every detail. [Our leader] organized the group perfectly. I had tremendous appreciation for the group messaging she had us set up on the very first day. The next really neat thing [our leader] did was organize us with a prioritized list for the project. This made the project flow very smoothly.

The whole group was very willing to work together and around each other's schedules. We all made the effort to go meet bright and early on a Saturday morning at our chosen location. I felt the meeting in Cheney was very productive. Everyone took pictures and added to ideas for the project.

Taken together, student input suggests that the assignment on authenticity might be ideally situated in future in the middle of the quarter (removed from end of session pressures, and after an exercise on a smaller scale and familiar locale). It might even be better to keep this assignment focused on the block scale, which seemed very relatable for students. Despite challenges, across all three assignments overall students seemed to enjoy the group work itself, and the idea exchange with colleagues.

When asked to speak more broadly about what they found difficult in group assignments, the most common concern involved communication challenges. In group assignment #1, these were described by 6/15 respondents, some of which related to an inability to agree on terms or responsibilities. For example, one student wrote:

My group did not fully understand the concept of Macro Vs Meso Vs Micro, and there was a lot of back and forth about what projects actually deserved the designation during the majority of the project. Also, one group member was not present for any part of the project and contributed nothing except the group telling the member what to say 30 minutes before the presentation.

The above response suggests some constrained learning for the largely absent student. Interestingly, the student making the statement above hints at some further learning constraints for reasons other than those observed by Neu's (2012), such as

² Mislabelled due to instructor error for group assignment #3 only; however, most students recognized the intent of the question and wrote in appropriate responses.

³ The instructor was available during standard, posted office hours; however, given student tendencies to procrastinate, last minute instructor availability to answer questions outside of office hours was not possible. The instructor was available to respond to e-mails until 8pm the day before the assignment was due.

a division of labour which enabled students to avoid certain kinds of thinking and learning. Rather, the student's experience suggests that efforts to foster group cohesion may have impeded some urban design learning, while still providing some learning about group processes.

In a related vein, other students spoke of the difficulties associated with creating a shared vision among team members, also hinting at some impeded learning related to urban design. In addition, others spoke of the ensuing difficulties when fellow group members relied too much on promises to communicate by text (while out of town) to agree on contentious issues, which seemed to make it easier for some group members to shirk their responsibilities:

One of our group members was not present for the vast majority of the assignment, including text conversations and meetings. I also did not enjoy how little communication and group meetings were happening considering I was trying hard to get it to happen as facilitator and nobody would contribute despite previous agreements.

In an individual reflection on group assignment #2, another student provided further context on communication challenges, suggesting some important learning about working together:

By having our communication simply through the chat [feature] of google slides I believe some remarks may have gone un-noticed or forgotten over time thus leaving the final product without those corrections or suggestions. Lastly the lack of face to face communication [led] to more miscommunications in the project and so establishing specific times and days the group will work as a whole in person may fix this issue.

While time did not permit an extensive debrief with the students on some of these specific challenges during this particular class, these findings do suggest opportunities for adjustments to the group assignment component of a future course (see Discussion, below).

In spite of communications challenges, the tangible nature overall of group assignments helped many students absorb more difficult concepts with greater ease, suggesting the value of:

- More systemic approaches to understanding place (Arefi & Triantafyllou, 2005);
- Transformative, experiential learning (Rubin, 2012); and
- The value of place as an object-to-learn-with (Hjorth & Wilensky, 2014; Senbel, 2012).

This learning was reinforced by the instructor's repeated urging to go out and actually look at the sites, rather than rely on Google Maps / Google Satellite for electronic representations

(as one student group largely did in the first group assignment). In fact, before presentations for group assignment #2 were due, the instructor dedicated one full class session to having students walk to the site and to take photos and make notes. Most complied, but one student skipped the exercise, as reported by disgruntled fellow group members.

The site familiarization session seemed to pay off, fostering exposure and familiarity, and enabling students to scaffold a somewhat abstract concept like porosity onto their learning. Here again was a discovery process with constructivist elements, as described by Hjorth and Wilensky (2014), Kottalil (2009) and Senbel (2012). This was confirmed by student comments. In a reflection from group assignment #2, one student exemplified this discovery process, with these observations:

After walking the site which we had seen briefly we walked to the No-Li brewery which shares the riverbank with the lot. This was a good example of some of the progress that could be made. There is a green space on the back side of the lot that gives pedestrians access to the river. One negative aspect that we want the area to move away from is it is not inviting from the outside. You wouldn't know the wonderful back yard area by looking at the front. There is no walkability or seating even though it is so close to the Centennial Trail. The industrial lots which are also far from human scale are very intimidating to walk through.

At that area the trail does not have appeal either. It is a good way to move through town, but crossing the street in the manner that it does, it is [not] obvious to pedestrians that it continues or is safe to walk. Some of our photos highlight the barren landscape that it travels through. The area is ripe for development due to its proximity to the trail, river, and college campuses. With increased porosity for pedestrians, it will be more lively and inviting."

Yet another student confirmed directly that the exercise had made the porosity notion more concrete:

For the project itself, as an exercise in implementing porosity to local context, I felt like it was very useful in understanding the concept. Connectivity, walkability, and hybridity were more easily understandable, but porosity is more abstract. I think that the most applicable type of porosity is visual.

In short, where the assignments enabled students to layer new information on prior knowledge gleaned through prior readings, presentations, and assignments, students seemed better able to engage with challenging concepts. Moreover, group dynamics seemed to play a role in the degree of constructivist learning experienced. This suggests a need for further training in group process for students.

Furthermore, when choosing options to describe their overall impressions from all three group assignments taken together, students generally expressed positive views. Three-quarters (12/16) of the sixteen students taking the survey saw the group assignments (as a package) as a good way to learn new things and/or get new ideas from their colleagues. Nearly as many (11/16) found them a good way to get experience working with groups, and a good way to develop their own leadership skills respectively.

Students did acknowledge that the work was stressful, but that it remained a good way to learn group skills (10/16). They also re-iterated the concern about not all group members pulling their weight (10/16). And, in a final write-in question asking students for further comment, one student observed "I think [these group assignments] have good real-world application and forc[e] me to acknowledge some things I need to work on because others depend on me." Taken together, these findings seem to confirm the value of group learning. They also highlight the need to share more research and best practices related to group learning in planning.

Discussion and future work

Results from the case study suggest several take-aways for planning instructors. First, that group assignments should probably not comprise the bulk of students' grades for the course. Despite the challenges associated with group learning in the case study at hand, student did enjoy the class overall. Perhaps this was in part because the group assignments generally provided deep learning, but counted for a relatively small proportion of the overall course grade. This aligns somewhat with Neu's findings (2012, p. 77). While the case study described here did grade the group work, it was a small enough proportion of total grade to keep the stakes reasonably low. Keeping the stakes low may also help prevent anxiety, avoiding worsening the mental health outcomes described recently by various studies (ACHA, 2018; Acharya et al, 2018; Scheffler et al, 2019).

Second, more can always be done to set students up for success with group work through concerted group training. In hindsight, the case study at hand could have included more instruction on facilitation and leadership, or perhaps a smaller instructional session for students assigned that specific role type. In fact, several students wrote in comments confirming that this would have helped. In particular, leaders/ coordinators could have benefitted from more insights into how to succeed with their roles before starting their work. This case study finding appears to align with recommendations by Chen et al (2004) and by Neu (2012) to consider providing an entire course on teamwork within applied programs like business and, by extension, planning.

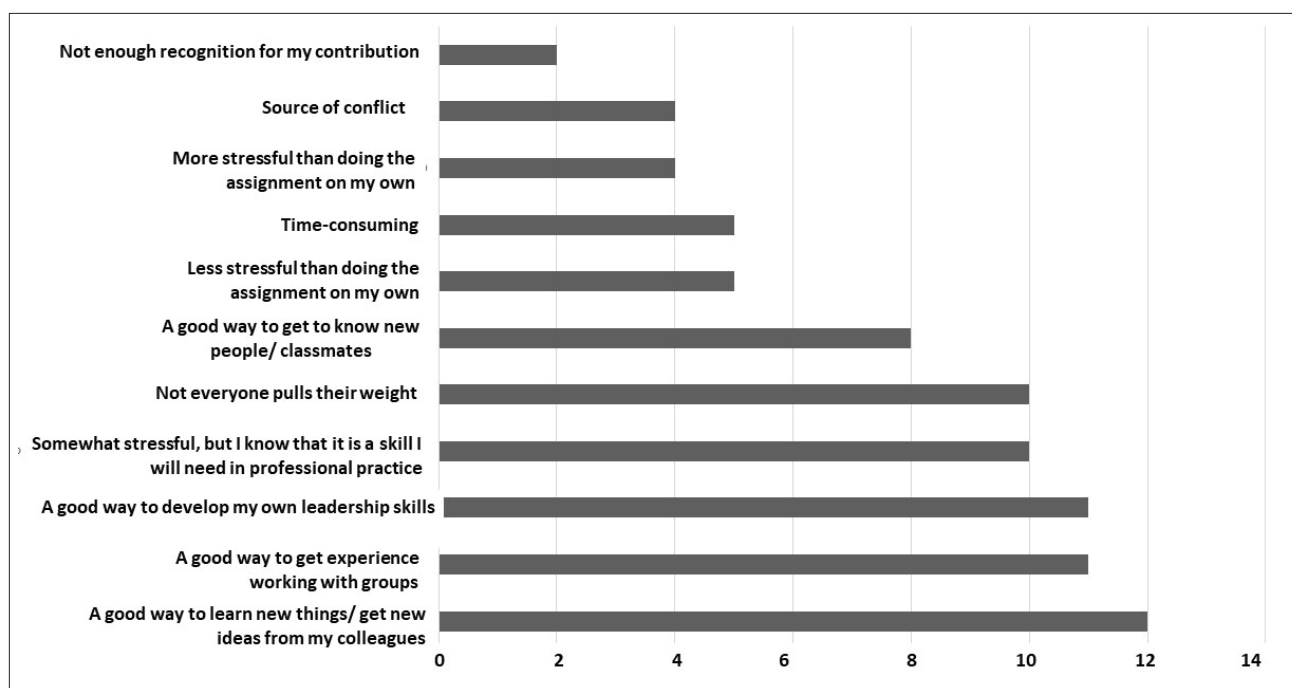


Figure 5: Student perceptions of all group assignments, chosen from list of responses.

Third, specific to group work in planning programs, there is value in appreciating how specific sites and developments in urban landscapes can comprise objects-to-think-with as described by Hjorth and Wilensky (2014) and Senbel (2012). Where students become deeply familiar with a place, and develop their own perceptions of which qualities do and do not contribute to its success, they convert that place into an object-to-think-with. In group assignments, having at least some shared understanding of place qualities can enhance intra-group communication. This may in turn enhance idea exchange. And, there may be value for an urban design course to more consciously seed such objects-to-think-with at the start, before any graded or group work takes place. This could involve conducting a smaller in-class, or ideally field trip, exercise around a specific place with important lessons to contribute to a subsequent group assignment (a seeded place). The seeded place can become a reference point for future group discussions focused on a different location, enabling students to scaffold their group learning upon it. Such an approach could empower students and, here again, reduce the potential for anxiety. Moreover, as discussed above, the order in which a particular type of place is used in group assignments may make a difference in the way that students build their learning. Starting with the most familiar and the most relatable scale may contribute even further to student success, by providing a sturdier base.

Fourth, and finally, as suggested by Neu (2012), the details matter. The timing and level of complexity related to stress

points in the school term can make or break group assignments. Ideally the most complex and challenging group work might be positioned in the middle of the quarter or term, to reduce at least some end of term pressures (potentially exacerbated by any additional group challenges), and to avoid increasing student anxiety levels, which have already risen considerably in recent years (ACHA, 2018; Scheffler et al, 2019).

Given that group learning has much to offer students enrolled in urban planning programs, there is benefit in enhancing instructor comfort and capacity in using group assignments in the classroom. This paper has sought to identify some promising practices, drawing from the literature and from a case study involving an urban design course taught at Eastern Washington University's Urban and Regional Planning Program, which values experiential learning. These recommendations are preliminary only. There are many opportunities to expand upon them, through a larger, and perhaps more comparative study of group assignment experiences, including the potential use of a test group and a control group. There may also be benefits in a deeper review of literature related to tactics for reducing student stress levels in university classrooms. In conclusion, group learning is important to both planning pedagogy and practice; and scholars would do well to delve further into ways to enhance the success of this activity.

References

- ACHA (American College Health Association). (2018). Undergraduate reference group report. Fall 2018. Executive Summary. Accessed at: https://www.acha.org/documents/ncha/NCHA-II_Fall_2018_Undergraduate_Reference_Group_Executive_Summary.pdf
- Acharya, L., Jin, L., & Collins, W. (2018). College life is stressful today- Emerging stressors and depressive symptoms in college students. *Journal of American College Health*, 66 (7), 655-664.
- Aggarwal, P. & D. O'Brien. (2008). Social Loafing on Group Projects - Structural Antecedents and Effect on Student Satisfaction. *Journal of Marketing Education*, 30 (3), 255-264.
- Arefi, M. and Triantaffalu, M. (2005). Reflections on the pedagogy of place in planning and urban design. *Journal of Planning Education and Research*, 25, 75-88.
- AICP. (2017). AICP's core competencies. Accessed from <https://planning-org-uploaded-media.s3.amazonaws.com/document/Core-Competencies-2017-revised.pdf>
- Baum, H. (1997). Teaching practice. *Journal of Planning Education and Research* 17(1), 21-29.
- Boyer, R. H. W. (2018). Team-Based Learning in the Urban Planning Classroom. *Journal of Planning Education and Research*. <https://doi.org/10.1177/0739456X18769145>.
- Botchwey, N., & Umemoto, K. (2018). A Guide to Designing Engaged Learning Courses in Community Planning. *Journal of Planning Education and Research*. <https://doi.org/10.1177/0739456X18772075>.
- Brooks, K., Nocks, B., Farris, J. and Cunningham, M. (2002). Teaching for practice. Implementing a process to integrate work experience in an MCRP curriculum. *Journal of Planning Education and Research*, 22(2), 188-200.
- Chen, G., L. Donahue, and R. Klimoski. (2004). Training undergraduates to work in organizational teams. *Academy of Management Learning and Education*, 3(1), 27-40. <https://doi.org/10.5465/amle.2004.12436817>
- Clark, A. (1998). *Being There: Putting Brain, Body and World Together Again*. Boston: MIT Press.
- Ellin, N. (2006). *Integral Urbanism*. New York: Routledge.
- Greenlee, A. J., Edwards, M., & Anthony, J. (2015). Planning Skills: An Examination of Supply and Local Government Demand. *Journal of Planning Education and Research*, 35(2), 161-173.
- Gu, K. (2018). Teaching urban design: A morphological approach. *Journal of Planning Education and Research*. <https://doi.org/10.1177%2F0739456X18775480>
- Hjorth, A., & Wilensky, U. (2014). Redesigning Your City – A Constructionist Environment for Urban Planning Education. *Informatics in Education*, 13(12): 197-208.
- Johnson, D., Johnson, R., & Smith, K. (2014). Cooperative learning: improving university instruction by basing practice on validated theory. *Journal on Excellence in College Teaching*, 25(3&4), 85-118.
- Kottalil, N. (2009). *Meaning Making and Self Evaluation*, Education Resources Information Centre (ERIC), ED504124. <https://files.eric.ed.gov/fulltext/ED504124.pdf>
- Long, J. G. (2012). State of the Studio: Revisiting the Potential of Studio Pedagogy in U.S.-Based Planning Programs. *Journal of Planning Education and Research*, 32(4), 431-448.
- Matunga, H. (2017). A Revolutionary Pedagogy of/for Indigenous Planning. *Planning Theory and Practice*, 18(4), 640-644.
- May, G., & Gueldenzoph, L. (2006). The Effect of social style on peer evaluation ratings in project teams. *Journal of Business Communication*, 43(1), 4-20.
- Neu, W. (2012). Unintended cognitive, affective, and behavioral consequences of group assignments. *Journal of Marketing Education*, 34(1), 67-81.
- Ozawa, C., & Seltzer, E. (1999). Taking Our Bearings: Mapping a Relationship among Planning Practice, Theory, and Education. *Journal of Planning Education and Research*, 18(3), 257-66.
- Pascarella, E. (2001). Cognitive growth in university. *Change*, 33(6), 21-27.
- Rubin, E. (2012). Catch My Drift? Situationist Dérive and Urban Pedagogy. *Radical History Review*, 114, 175-190.
- Scheffler, R., Arnold, D., Harney, J., Lane, B., Linde, L., Liu, C., ... Vora, V. (2019). Anxiety disorder on college campuses: The New epidemic. Preliminary findings, April 2019. https://gspp.berkeley.edu/assets/uploads/page/Anxiety_Disorder_on_College_Campuses_UCB_Study_FINAL.pdf
- Senbel, M. (2012). Experiential Learning and the Co-creation of Design Artifacts: A Hybrid Urban Design Studio for Planners. *Journal of Planning Education and Research*, 32(4), 449-464.
- Shepherd, A., & Cosgriff, B. (1998). Problem-based Learning: A Bridge between Planning Education and Planning Practice. *Journal of Planning Education and Research* 17 (4), 348-357.
- Sherrard, W., Raafat, F., & Weaver, R.. (1994). An Empirical study of peer bias in evaluations: Students rating students. *Journal of Education for Business*, 70, 43-48.
- Tate, L. (forthcoming, 2021). Learning, planning and policy. Chapter three in L. Tate. *Beyond Rationality: Impactful Planning and Policy in a Post-Truth World*. New York & London: Routledge.

Transportation Demand Management and Group Cycling Programs: Lessons for Policy and Practice

William Riggs

PhD; Assistant Professor,
University of San Francisco.

Shivani Shukla

PhD.; Assistant Professor,
University of San Francisco.

Amanda G. Ross

Regional Planning Consultant,
South Fork Consulting.

Louis Yudowitz

Research Assistant,
University of Warwick.

Group cycling programs have become a common practice to encourage cycling but there is limited understanding of how they may change participants' travel behavior. In this article, the authors discuss their research on such program in San Luis Obispo, CA while looking at two major bike-share services during the same period. The findings indicate that these events mostly encourage the participation of those who are already regular cycling commuters. The authors note the need to rethink traditional transportation demand management, to target events and programs to specific users, and to reduce planners' bias in promoting cycling.

The ability to understand transportation behavior and decisions affects societal issues of inflection, such as public health, congestion, and climate change. Nevertheless, little work has focused on the actual success of many transportation demand management (TDM) programs in encouraging people to decide to walk, bike or take transit—active travel options considered more 'painful' than the alternative of driving and parking (Batty, 2007; Batty & Torrens, 2001). Research suggests that social factors may play a more significant role than financial factors in the success of TDM programs (Riggs & Kuo, 2014; Riggs, 2014, 2015, 2017a; Riggs & Kuo, 2015). At the same time, other work suggests that route-related built environment attributes are also significant (Cervero & Duncan, 2003; Ewing & Cervero, 2010; Ewing & Cervero, 2001; Forsyth, Hearst, Oakes, & Schmitz, 2008). More work is needed to better understand the impacts of financial and social behavioral programs as they relate to active travel behavior.

In response, this study focuses on group cycling events, which have become a common way to encourage cycling as a form of active travel behavior in communities. Although this practice of encouraging group cycling may have an impact on building community and awareness, no research has tested who these events reach and if they have an impact on encouraging non-regular cyclists to become more active cycling commuters. In this study, we examine: 1) if group events are reaching and encouraging non-regular cyclists to bicycle; and 2) if participation in a group bike event can influence perceptions of safety. This research is important in the context of many

emerging land-use policies built to address the reduction of vehicle miles traveled (VMT), and the dialogue that has emerged on the challenge behavior change poses to cities focused on reshaping the physical environment to promote active travel (Handy, 2017).

Firstly, we discuss the literature on TDM and programs that encourage bicycling before presenting the methods, the data, and the results obtained. Next, we discuss the implications for the practice of transportation planning and TDM, and we conclude by discussing how the research and policy agenda may need to move beyond land use to change behavior and address climate-related emissions.

Literature Review

Research has shown that transportation choice is tied to financial and social factors, as well as to public policies (Brock & Durlauf, 2003; Dugundji & Walker, 2005; Marchal & Nagel, 2005); yet, the interrelationship between financial and social forces remains under-explored, along with other influences like competition and gaming, especially in the face of new technology and mobile proliferation. Policies and incentives can encourage or deter driving behaviors and influence auto ownership (Guo, 2013; Shoup, 2005; Weinberger, Seaman, & Johnson, 2008). Some communities use a 'carrot' approach, offering incentives such as free transit passes, cashback ('cash-out') parking programs or social media nudge tools (Carrel, Ekambaram, Gaker, Sengupta, & Walker, 2012) to reward alternatives to driving (Riggs & Kuo, 2015). Other communities prefer to use the 'stick' approach, charging high prices for parking, tolls, or usage fees (Meyer, 1999).

Note: The research discussed in this article was initiated by W. Riggs and A. Ross while assistant professor and MCRP candidate, respectively, at the CRP Department, Cal Poly San Luis Obispo.

Some research suggests that a penalty, or price-based, approach is economically inefficient (McShane & Meyer, 1982; Peters & Gordon, 2009); hence, there is a growing need to study and understand non-financial or social tools. For example, in the late 2000s, Stanford University piloted a social nudge program that used a lottery system with chances to win a large prize in exchange for off-peak travel (Green, 2007; Mandayam & Prabhakar, 2014; Merugu, Prabhakar, & Rama, 2009). Results indicated substantial influence on congestion and parking supply (Hu et al., 2014); however, it was unclear if any individuals changed to non-automotive or active transportation modes directly as a result of the program (Zhu et al., 2015).

Other work, from UC Berkeley, indicates that location-based information, including the number of trips, travel time, money spent, activities conducted, etc., can create better travel decisions (Carrel et al., 2012). At the same time, research shows mixing financial norms (money) with social norms (like gifts or altruistic requests) can cause confusion, leading individuals to default to financial norms and their respective price anchors (Amir et al., 2005; Ariely, 2008; Heyman & Ariely, 2004). This relationship between social and financial norms is tied to the psychological heuristics dictating that the availability of information and recalled experiences can frame behavioral response to the environment (Tversky & Kahneman, 1985). Generally called the availability heuristic, this is more casually referred to as confirmation bias. The heuristic frames how mental shortcuts can make individuals become subjectively probabilistic in decisions (Kahneman & Tversky, 1972).

This travel behavior work is supported by research in behavioral psychology and cognition—for example Fiske's relational theory and four dimensions of social relationships: communal sharing or "we-ness" (CS); authority ranking (AR); equality matching (EM); and, market pricing (MP) (Aggarwal, 2004; Fiske, 1992). Prior experience and habit also affect transportation mode choice decisions and shape the responses to travel alternatives (Akerlof, 1997; Claisse & Rowe, 1993; Helbing & Molnár, 1995; Schlich & Axhausen, 2003). (Kahneman & Tversky, 1972). And recent work suggests that the same heuristics exist in travel behavior—that social TDM programs that employ the influence of social queues may have a stronger impact on some individuals than financial ones, and if social and financial incentives are mixed then both may fail (Carrel et al., 2012; Dugundji & Walker, 2005; Riggs, 2017a).

Cycling Behavior and TDM

In the context of bicycling as a mode choice, the most commonly cited barrier in the research is the perception of safety (Chataway, Kaplan, Nielsen, & Prato, 2014; Jacobsen, 2003; Schepers, Kroeze, Sweers, & Wüst, 2011; Winters et al., 2012).

Furthermore, consistent with behavioral psychology literature, participation in bike-related events is determined, to a certain degree, by perceptions and the notion of being "pro-bike" (Fernández-Heredia, Monzón, & Jara-Díaz, 2014). Most of the literature in this area tends to focus on psychosocial factors that influence bicycle use in everyday travel and these factors generally include perceptions of danger or risk in relation to accidents or falls, areas which transportation policy has traditionally sought to influence through design of the built environment and educational programs (Hopkinson & Wardman, 1996).

In light of this, bicycle events have become an integral TDM policy tool to educate and encourage individuals to bicycle in many communities in the US and abroad (Jones, 2015; Wright-piersanti, 2016). From San Francisco to New York, cyclists meet at a designated time and bike a designated route to advocate for cycling, teach others to cycle, and for the joy of the ride. Events like these promote cycling as more than just a recreational activity, but a social activity approachable by everyone. Additionally, ride-to-work-day events have also appeared, and there have been studies about their effects on which mode of transportation commuters use after participation. The organic growth and pervasiveness of these events have the potential to change the way public agencies and scholars look at ways to increase cycling as a mode choice (Piatkowski, Bronson, Marshall, & Krizek, 2014).

Focusing on this behavior, several studies have indicated that perception and action share representational systems as evidence of why perception affects behavior. This theoretical context has been used for cycling and walking behaviors, linking such perceptions as that of the built environment to increases or decreases in walking and cycling behavior (Dijksterhuis & Van Knippenberg, 1998; Handy, Cao, & Mokhtarian, 2006). In addition, recent studies of avid cycling communities versus budding cycling communities have shown perceptions of cycling landscapes, such as mixed traffic layouts, as unsafe or causing feelings of fear, lead to behaviors of cycling avoidance, even if those cycling landscapes are actually safe (Chataway et al., 2014; Winters et al., 2012). Research suggests roadways can also be made safer by increasing the number of cyclists on the road (Jacobsen, 2003; Vandenbulcke et al., 2009).

In summary, barriers to cycling include many things, but the most prevalent concern for new and avid cyclists in mode choice is safety (Schepers et al., 2011). Yet, very little research has been done to determine if attempts to mitigate these perceptions through TDM programs and group events do increase the adoption of bicycling. One study shows how group rides may have the potential to encourage attitudes and perceptions to make cycling a more enjoyable and approachable experience for children and parents (Lorenc, Brunton, Oliver, Oliver, &

Oakley, 2008), but it focuses only on pre-post sentiment analysis evaluating relative comfort but not if these individuals actually engaged in more daily cycling. Weber and his colleagues have experimented with how to use competition in groups using a mobile application as a TDM measure (Weber, Azad, Riggs, & Cherry, 2018). Others have focused on the experience of female cyclists and show qualitative data indicating how active female cyclists prefer a shared or group experience—again not on a net increase in cycling behavior (Riggs, Rugh, Cheung, & Schwartz, 2016; Simone Fullagar & Adele Pavlidis, 2012). Piatkowski and others provide one of the best windows into why individuals participate in events, finding that many novice or casual cyclists do it for community and fun, and only one-third of them responded that they would change their commute based on these events (Piatkowski et al., 2014).

Our research attempts to confirm and build on the work of Piatkowski. We explore if bike events are targeting existing or new cyclists and if they help participants to overcome the perceived barriers. Other than those mentioned above, we are aware of only one study conducted in Australia that focused on these events and their success (Bowles, Rissel, & Bauman, 2006). This study shows a significant increase of approximately two cycling trips per month for first-time participants, from 7.2 trips before the event to 8.9 trips one month after. If these results can be confirmed through other case studies, then transportation planners and engineers can continue to focus on these events as potential TDM measures (in addition to their community and awareness building value). If not, then perhaps the events can be improved or rethought, particularly in the light of the need for cities to implement programs that capitalize on land-use programs designed to reduce VMT.

Methodology

As suggested previously, this research tests if events that bring cyclists together (e.g. group rides, bike nights, critical mass events, etc.) have an impact on encouraging non-regular cyclists to bicycle. We surveyed individuals participating in 6 monthly group cycling events held from January to June 2016 in San Luis Obispo, CA. (Locally, the events are called Bike Night or Bike Happening.) The survey investigated participants' motivations and if their participation was reflective of their everyday travel behavior or not. We hypothesized that these kinds of events have an impact on encouraging non-regular cyclists to bicycle, testing the results of our survey with descriptive and inferential statistics. We then compared these results to users of other bike programs, evaluating the difference between casual vs. regular users.

Context: San Luis Obispo

Home to roughly 46,000 residents in 2014, San Luis Obispo (SLO) covers about 13.1 square miles in the heart of San Luis Obispo County, part of the central coastal region of California (Bowles et al., 2006). The city enjoys a Mediterranean climate, with mild temperatures and low annual rainfall. California Polytechnic State University (Cal Poly) is located adjacent to the city limits, with a student body of over 20,000 students in 2014 (Bowles et al., 2006). Due to the proximity of Cal Poly, and the local community college, Cuesta College, the city's median population age is 26 years. The city has a Bicycle Transportation Plan, last updated in November of 2013, with the goal of adding 52 miles of bike paths, lanes, and routes to the existing network, totaling 112.9 miles of bicycle transportation network mileage within the city limits at build-out of the plan (Bowles et al., 2006).

According to the California Office of Traffic Safety (2019), San Luis Obispo has ranked either first or second worst for bicycle injuries or deaths out of 92 cities in California with populations between 25,000 and 50,000. In 2016 the city was ranked second in California for the number of bicyclists killed or injured on the road. Census data estimates that roughly 7.5 percent of residents in San Luis Obispo use the bicycle as a means of transportation to work. This number is considerably higher than the California State average at 1.1 percent, and the nationwide average of 0.6 percent (Bowles et al., 2006).

The city has an active biking community and has received a Gold Award by the League of American Bicyclists (Bowles et al., 2006). The County advocates for cyclists, Bike SLO, is headquartered in San Luis Obispo, offering a Bike Kitchen, a maintenance education space to teach people how to fix their bicycles, for residents and visitors (Bowles et al., 2006). The San Luis Obispo Bicycle Club, founded in 1971, promotes safe and legal riding for recreation and transportation in the city, and the city is also home to the highest number of bike shops in the County. The city, other local agencies, and cycling advocates regularly host workshops, lessons, school assemblies, and community events to continue to promote cycling in the city as a form of recreation and transportation (Bowles et al., 2006).

San Luis Obispo's community bicycling event, called Bike Happening, began in 2000 as an informal gathering of friends on the first Thursday of every month to bike ride through the downtown. The event has slowly garnered more attention and avid participants over the years, growing from a few dozen friends to many hundreds of participants. The group's website promotes the ride as a way to have fun, peacefully assemble, respect the community, and charges all participants to obey all laws of traffic. In addition to organizing the location and time of the event, the website also provides participants with the theme of dress

for each month, making every bike night event an extension of Halloween with fun, garish costumes on display, and many homemade and highly decorated bikes (Bowles et al., 2006).

Survey

For six months, an in-person, intercept survey was employed to gather information about participants before and after monthly group cycling events. Surveys were distributed to participants as they arrived at the meeting location for the event, prior to the beginning of the bike ride. The meeting space provided the only opportunity to survey participants in a stationary location. The survey gathered information on perceptions of safety and comfort, as well as behavior rationale and user characteristics / demographics. We also followed up with users to determine if they had changed mode after the event. Key questions are listed in Table 1. Each question's response was written in a way to provide maximum understanding by the respondent. Other data used to compare and contextualize results stems from publicly available bike share data from the Los Angeles Metro (2016) and Washington DC, Capital Bikeshare (2016).

The project was reviewed by the Cal Poly Human Subjects Committee, found to be in compliance with Public Health Service guidelines for the use of human subjects in research and determined to be exempt from further review.

Analysis

The responses were analyzed through descriptive statistics, evaluating primary mode, the choice to participate, and

general level of abilities. We next focused on the dependent variable, those who are not active everyday cyclists for their primary travel and participation in the event. We used a linear regression model to test the following independent variables: perceived level of safety, level of cycling ability, and event experience. We chose not to focus on demographic variables in this study since the population was highly homogenous based on preliminary model testing—all white, fairly affluent and young—given the lack of demographic diversity in our subject location (San Luis Obispo, CA) and an issue for future study. At the same time, data from Los Angeles and Washington, DC are used to underpin the results and illustrate the potential external validity and room for further analysis.

Results

We were able to gather data for 130 event participants, significant at the 95% confidence interval with a margin of error of $\pm 8.5\%$. As shown in Figures 1 and 2, the participants in our events were, on the whole, already active users of bicycles. Most had a high level of comfort (i.e., how safe they felt while cycling) and also owned a vehicle. Although almost all were multi-modal. As Figure 1 shows, 20.2% were drivers, 52.7% were already active cyclists, and the remainder took transit or walked. As shown in Figure 2, 15% of participants rated themselves not very confident, meaning that to a large degree, only a small number of participants were novice cyclists.

With regard to factors that motivated participation, write-in responses were categorized under five main response groups

Table 1: Survey Variables

Variable	Potential Answers
Participation:	Yes / No
Primary mode of travel in the last week:	Bike, Walk, Drive, Transit, Other (multiple coded with primary / first listed)
Perceived level of comfort when cycling:	Not comfortable, Somewhat comfortable, Comfortable, Extremely comfortable
Perceived level of safety when cycling:	Not safe (Afraid I'm going to die), Somewhat safe (I will get where I am going, but it won't be fun), Safe (I will get where I am going and I feel OK), Extremely safe (I will get where I am going and it will be fun!)
Rider Types:	Strong & Fearless, Enthused & Confident, Interested but Concerned, No Way No How (Damant-sirois, Grimsrud, & El-geneidy, 2014)
Factors Motivating Participation:	Open Ended
Event Experience:	No fun, Somewhat fun, Fun!
How did you hear about the event:	Facebook, Friend, Internet, Other
Change after event:	Change primary way traveled following the event

Primary Mode of Participants (>3 Days per Week)

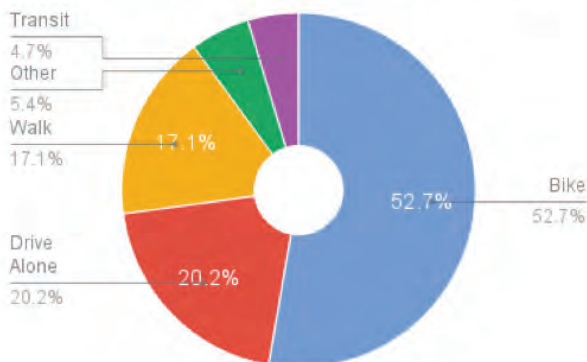


Figure 1: Primary travel mode of participants (N = 130)

based on the frequency of response type: 1) Enjoyment, 2) Fitness, 3) Friends, 4) New Experience, and 5) Other. Of those who chose to participate in the bike happening event, roughly 42% reported some type of friend interaction as a motivation to participate, such as “My friend told me to come” and “Peer pressure.” The second-largest motivator to participation was some description of enjoyment associated with biking or remembered from participation in past events, accounting for 39% of responses. Many respondents reported multiple reasons; each instance recorded in Figure 3.

While 85.1% of respondents said they were very comfortable on their bikes, a small number of individuals (14.8%) had a low level of comfort (Figure 2). Among those who were not comfortable on bikes, many were not drivers. As shown in Table 2, the cohort of those who were not regular cyclists was comprised primarily of walkers or transit users who were exploring the use of the bicycle for a variety of reasons—the most predominant reason being social. Most of these individuals owned cars (73%) and upon follow-up none had shifted their primary mode as a result of the event or any other reason.

Given these findings, in reviewing the analysis of the hypothesis that cycling events do educate and encourage mode shift with regression analysis, we find that the data runs counter to this. The events in our study did not show mode shift occurring in a correlated way. They do, however, seem to have a significant relationship with cyclist confidence. Table 3 represents the attributes of those who are primary cyclists—given the descriptive analysis showed they were the bulk of the participants in these events. As the table indicates, regular cyclists clearly have more confidence. At the same time, interestingly, the perception for safety in a group was not as expected (indicating that cyclists may feel less safe in a group environment).

How would you rank your abilities as a cyclist?

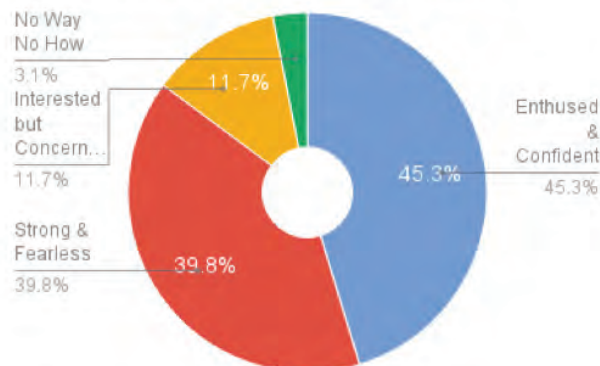


Figure 2: Degree of confidence of participants (N=130).

What factors motivated you to participate in this event today?

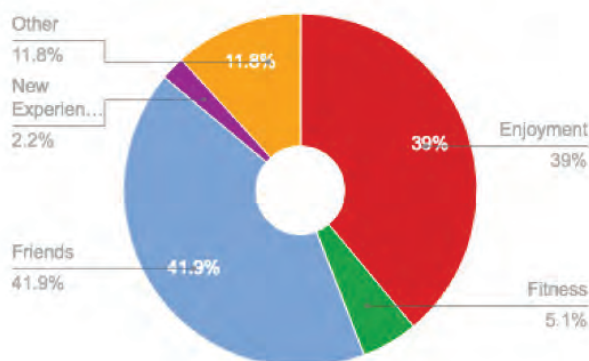


Figure 3 Motivation for participation (N=130).

Although some of these results are not significant at the 95% confidence level, they would be at lower confidence levels and warrant further investigation in the future.

Likewise, to support and underpin the findings of descriptive and preliminary regression analysis, we reviewed the hypothesis that an individual's confidence in cycling ability encourages a mode shift to cycling. To do this, we focused on those who classified themselves as “Strong & Fearless” or “Enthusied & Confident” as a population of confident riders. Considering the abilities of the cyclists as the dichotomous response variable, we conducted a logistic regression analysis on comfortable and confident cyclists—again, an indicator of more reg-

¹ The variable was rendered dichotomous by classifying responses “Strong and Fearless” and “Enthusied and Confident” as 1, and “Interested but concerned” and “No way no how” as 0.

Table 2: Reasons for participation for those less confident / comfortable.

Comfort Level	Mode	Reason Participated
Interested but Concerned	Bike	Wanted to go downtown and enjoy myself
Interested but Concerned	Drive Alone	Word of mouth
Interested but Concerned	Bike	Fun with friends
Interested but Concerned	Walk	Was asked by a friend
Interested but Concerned	Bike	meeting friends
Interested but Concerned	Walk	To experience new things and immerse myself into SLO culture
Interested but Concerned	Walk	Friends, good time
Interested but Concerned	Walk	My friend told me to come
Interested but Concerned	Transit	Friends, free night
Interested but Concerned	Drive Alone	I wanted to get exercise and be distracted from by ex break up.
Interested but Concerned	Walk	being spontaneous
Interested but Concerned	Bike	Hanging with friends while exercising
Interested but Concerned	Walk	Fun
Interested but Concerned	Drive Alone	Exercise, Bike Night, Yelling without consequences
Interested but Concerned	Other	Fun
No Way No How	Drive Alone	This is my first time, never done it before, wanted to try
No Way No How	Walk	Friend forced me. Also a SLO tradition so why not?
No Way No How	Transit	I've heard it's really fun!
No Way No How	Transit	Bucket list, enjoy the beautiful weather

Table 3: Regression of those who were primary vs. non-primary cyclists

	Unstandardized Coefficients <i>B</i>	Standardized Coefficients <i>Beta</i>	Sig.
(Constant)	0.252		0.126
Non-White	-0.132	-0.119	0.175
HH >Two	0.031	0.026	0.773
Confident	0.401	0.291	0.005
Safe in Group	-0.085	-0.064	0.502
Safety Alone	0.033	0.027	0.794
Car Ownership	-0.008	-0.007	0.936
R ^a	.311a		

a. Predictors: (Constant), Car Ownership, Non-White, HH >Two, Confident, Safe in Group, Safety Alone

ular participation.¹ The predictors used were the responders' prime mode of transportation as being via bike, their comfort levels riding alone, and their comfort level in riding in a group, whether they own a car or not, and their race. As shown in Table 4, there is a relationship between those who already travel via cycling and those who feel safe when riding in group or alone.

These results underscore that there is a positive and statistically significant association between individuals who are confident about their ability to ride, and those whose primary mode of transportation is riding a bike. This "captive audience" of cyclists is already confident of their ability as bikers and perceive the environment around them as safe—even if literature indicates that this may be overconfidence in actual roadway safety. While we looked at other attributes (such as household size, gender, etc.), this model represented the best fit consistent with generalizable theories of travel behavior. Given these results, we believe that exploration of the geographical layout/land-use of neighborhoods/streets and in-depth demographics of the respondents are worth further investigation (Riggs & Pande, 2016; Riggs, 2017b).

At the same time, it is worth evaluating how these trends of catering to already active cyclists is consistent in other larger and more diverse locations. To explore this, we analyzed user characteristics from two major bikeshare services during the same period, the 3rd quarter of 2016. As Table 5 illustrates, for both Los Angeles and Washington DC the large majority of bikeshare are active members who subscribe to the service as a part of their daily commute. And while bikeshare is not directly same as cycling events focused on TDM, this data underscores the broad trend in policy decisions built to drive increases in cycling behavior—that many reach an audience already inclined to cycle and already engaged in cycling regularly.

Discussion

Based on the results, this study does not support the hypothesis that cycling events in-themselves contribute to mode shift. We find that those participating in the event are more likely to be either 1) a regular or hard-core cyclist already, or 2) travel via another non-automotive mode and be an occasional cyclist. Furthermore, when looking at other systems—for example bikeshare in two larger and more diverse locations—we see that these trends may tell a broader story. As shown in our tables and figures, a large component of this participation was social in nature. Many individuals we spoke to felt that cycling was a part of their identity and the event was one way in which they could socialize with like-minded individuals.

While this social aspect may in itself be an important goal for cycling events and programs, it is inherently focused on an active cyclist. This brings up transportation policy questions. Could it be that events alone may focus too much on users who would bike or walk even if the event did not happen? If the goal of land use planners is to reduce VMT through "compact" land use and transportation development policy, as suggested in recent work by Stevens (2017), then how do such programs that target these users who we define as "hardcore" (because of their intense commitment to cycling as a part of their lives) help planners achieve this? These users may not be the ones that need intervention most. Directing policy and funding toward programs that target them may do little to increase cycling and achieve VMT reduction goals.

Furthermore, our results showed that the bulk of cyclists participating in group cycling events already classified themselves as a "Strong & Fearless" or "Enthusied & Confident" population of riders. In focusing on individuals who are already active cyclists, transportation professionals may be guilty of cognitive errors defined over 40 years ago, engaging in anecdotal

Table 4: Logistic Regression of those with a high degree of confidence in abilities.

	Estimate	Std. Error	z value	Pr(> z)	
(Intercept)	-6.3898	1.8527	-3.449	0.000563	***
Primary mode cycling	1.8111	0.8179	2.214	0.026815	*
Safe in Group	1.028	0.4859	2.116	0.034376	*
Safety Alone	1.0154	0.3829	2.652	0.008013	**
Car Ownership	0.7702	0.7835	0.983	0.325623	
Race	-1.4226	0.9711	-1.465	0.142936	

Significance level: *** $P < 0.001$; ** $P < 0.01$; * $P < 0.05$; + $P < 0.1$

substitution and becoming subject to the availability heuristic (Tversky & Kahneman, 1973). [We call this being “hampered by hardcoreness”, defined as the measurement of hardcore, e.g. a measure of extreme intensity or relentlessness.] With this we suggest that a planner’s ability to see the probability that the policy might have the desired effect may be affected by their affinity for that desired effect—in this case increased walking, cycling, and transit. It might be possible that the passion or excitement for promoting bicycles as a mode choice may cloud judgement when developing and implementing a TDM program. It might also be possible that programs targeting social events and community building are not the most effective at encouraging less reluctant cyclists to change their travel habits. Furthermore, if the bulk of travel incentives (and for that matter roadway improvements) focus on cyclists/riders who may otherwise ride (even if those events or incentives did not exist) then they may not be the most effective way of impacting modal change and VMT reduction in the urban environment. That money might be better spent in another way.

While the location and sample size of this study are limitations of this work, the results indicate an opportunity for further investigation (e.g. larger/more varied studies in different cities etc.). Moreover, our research suggests that city planners and engineers might do well to question the status quo—understanding the importance of thinking hard about how to reach audiences that may not be as comfortable with walking or biking. Our findings indicate that there might be other poli-

cies to provide more effective ways to motivate non-cyclists to become cyclists, and the casual cyclist to become an active cyclist. For example, existing studies suggest that direct, individual outreach/education (as opposed to events) can be an effective tool as it may provide information with a personal touch (Riggs & Kuo, 2014; Riggs, 2015; Riggs & Kuo, 2015). Likewise, the use of incentives or gifts has also proved to be effective (Heyman & Ariely, 2004; Riggs, 2016, 2017a). These incentives can include things like bike vouchers or freebies for individuals who commit not to drive/park (Allen, Lipton, & Brooke, 1999).

At the same time, results suggesting that bicycle community building programs may not be effectively attracting new riders, do not discount the importance of social norms. Many studies have illustrated the power of social norms to overcome perceived effort without tapping into financial market principles. Informal or social economies play a part in travel decisions, but our study suggests that they need to be presented correctly. Further research is needed on how social networks can be used for transport, as they many times are exclusive or create obstacles to participation. Education campaigns and support services that complement policy interventions (Riggs & Kuo, 2015) can be effective at tapping into social and cultural values.

Finally, there is a broader, cautionary lesson in this work relating to the availability heuristic and the tendencies for transportation and planners to be overly optimistic in the face of uncertainty. In her response to Stevens, Handy argues that

Table 5: User Characteristics of Los Angeles and Washington DC Bikeshare (2016).

Row Labels	Number	Percent	Average Duration (in minutes)	Standard Deviation of Duration	Variance of duration
Los Angeles Metro Bikeshare					
Flex Pass	4,431	8%	19.58	71.25	304,593.27
Monthly	33,216	60%	14.32	46.11	127,576.28
Walk-up	17,792	32%	43.00	124.47	929,599.82
Grand Total	55,439	100%	23.95	82.62	409,516.14
Washington, DC Capital Bikeshare					
Casual	281,124	27%	42.32	67.19	270,893.02
Member	767,451	73%	13.08	25.85	40,082.63
Grand Total	1,048,575	100%	20.92	43.21	112,030.18

Note: Member Type, indicates whether user was a "registered" and / or regular subscribing member (Annual Member, 30-Day Member or Day Key Member). A "casual" rider is one not register and taking a single / occasional trip (Single Trip, 24-Hour Pass, 3-Day Pass or 5-Day Pass).

Source: <https://bikeshare.metro.net/about/data/>; <https://www.capitalbikeshare.com/system-data>

his "...conclusion misses the key point: Compact development cannot reduce driving very much on its own, but we cannot reduce driving very much without it" (Handy, 2017, p. 28). Handy goes on to argue that programs are needed to make people "want to drive less." The key question is, what program?—especially given the dramatic need to address climate-related-missions. In a situation like this, planners may have a tendency to overestimate the impacts of programs and their impact on VMT reduction, based on availability heuristics. As we enter a period where theorists such as Flyvbjerg (2001), Hillier (2005) and Yiftachel (1998) believe that we have reached the limits of rational planning, it is essential for planners to keep their own biases in mind in order to not overestimate the impacts of related programs on others with a very different set of values, experiences, and motivations.

Conclusions

This work used participant surveys to evaluate a series of bicycling events before and after the events occur. Our data indicated that the bulk of participants were not new cyclists but already traveled via biking or walking. When we compared it to national data, the trend seems to hold.

These results question the notion that bicycling events can be effective transportation demand management tools, as they may not mobilize non-regular or novice cyclists to ride on a more regular basis. While it cannot be disputed that these events have social value—particularly at building awareness and community cohesion—they may not be the best tool to attract new users. It could be that those who participate in such events are partaking for social value, but if so, the question remains, how do we translate that social capital into meaningful behavior and travel habit change.

Furthermore, based on the results, we surmise that planners and transportation professionals can become blinded to the real impacts of programs, overestimating the odds of success in situations that are subjective. Our results serve as a reminder that thinking about policy goals and having a balanced approach is essential—especially in reaching audiences who may not be regular cyclists. Few of the cyclists who participated in the events were uncomfortable cyclists and were not regular bicycle commuters. While our data is limited by the small sample size, the lack of diversity in the participants, and the fact that it does not evaluate individuals who did not participate in the events, it does reveal the potential efficacy of group cycling events programs in a cross-sectional snapshot—that level of comfort and perceived safety continue to be an impediment to daily cycling behavior but that the majority of those participating are regular cyclists already.

There is an important lesson to keep in mind at both a small and large scale. At a small scale, planners need to rethink cycling events, particularly given the increasing focus on events like Cyclovia and Bike-to-Work / School days. Although many of them have been crucial in helping to raise awareness on street design and safety, it is unclear if they have longitudinal value in increasing the number of cyclists and how they relate to other policies that increase regular active communities. Little work has been done to understand how and if these programs contribute to changes in travel patterns over time; more is needed.

At a larger scale, planners should keep in mind land use and transportation goals. If the goal of urban policy is to change travel habits, reduce emissions and climate impacts related to driving, and "to make biking or using transit the 'cool' thing to do" (Handy, 2017), then a focus on community building for an existing constituency may not be the most effective use of public resources. The current methods of conducting TMD may be 'preaching to the choir' and not addressing the broader VMT reduction goals in the best manner possible. Planners may be over-estimating the impact of cycling programs just by relying on the ideological bias that bikes provide green travel because the information is favorable (Tversky & Kahneman, 1973), as opposed to thinking about the full implications of the usual practices and the change they might require—being hampered by hardcoreness.

• • •

References

- Aggarwal, P. (2004). The effects of brand relationship norms on consumer attitudes and behavior. *Journal of Consumer Research*, 31(1), 87–101.
- Akerlof, G. A. (1997). Social Distance and Social Decisions. *Econometrica*, 65(5), 1005–1027.
- Allen, G., Lipton, S., & Brooke, B. (1999). Unique Voucher Programs To Increase Alternative Commuting. *Transportation Research Record: Journal of the Transportation Research Board*, 1669(1), 136–142. <https://doi.org/10.3141/1669-17>
- Amir, O., Ariely, D., Cooke, A., Dunning, D., Epley, N., Gneezy, U., ... others. (2005). Psychology, behavioral economics, and public policy. *Marketing Letters*, 16(3–4), 443–454.
- Ariely, D. (2008). *Predictably irrational: The hidden forces that shape our decisions*. New York: Harper Press.
- Batty, M. (2007). *Cities and complexity: Understanding cities with cellular automata, agent-based models, and fractals*. Retrieved from <http://dl.acm.org/citation.cfm?id=1543541>

- Batty, M., & Torrens, P. M. (2001). Modeling complexity: The limits to prediction. *Cybergeo: European Journal of Geography*. Retrieved from <http://cybergeo.revues.org/1035?file=1>
- Bowles, H. R., Rissel, C., & Bauman, A. (2006). Mass community cycling events: Who participates and is their behaviour influenced by participation? *International Journal of Behavioral Nutrition and Physical Activity*, 3, 39. <https://doi.org/10.1186/1479-5868-3-39>
- Brock, W., & Durlauf, S. (2003). A Multinomial Choice Model with Social Interactions. In L. Blume & S. Durlauf (eds. (Eds.), *The Economy as an Evolving Complex System* (pp. 1-44). Oxford: Oxford University Press.
- California Office of Traffic Safety. (2019). OTS Collision Rankings. Retrieved from <https://www.ots.ca.gov/media-and-research/collision-rankings/>
- Capital Bikeshare. (2016). System Data. Retrieved from Capital Bikeshare Data website: <http://www.capitalbikeshare.com/system-data>
- Carrel, A., Ekambaram, V., Gaker, D., Sengupta, R., & Walker, J. L. (2012). *The Quantified Traveler: Changing transport behavior with personalized travel data feedback*. Retrieved from www.uctc.net/research/papers/UCTC-FR-2012-12.pdf
- Cervero, R., & Duncan, M. (2003). Walking, bicycling, and urban landscapes: Evidence from the San Francisco Bay Area. *American Journal of Public Health*, 93(9), 1478.
- Chataway, E. S., Kaplan, S., Nielsen, T. A. S., & Prato, C. G. (2014). Safety perceptions and reported behavior related to cycling in mixed traffic: A comparison between Brisbane and Copenhagen. *Transportation Research Part F: Traffic Psychology and Behaviour*, 23, 32-43.
- Claissse, G., & Rowe, F. (1993). Domestic telephone habits and daily mobility. *Transportation Research A*, 27(4), 277-290.
- Damant-sirois, G., Grimsrud, M., & El-geneidy, A. M. (2014). What's your type: A multidimensional cyclist typology. *Transportation*, 41(6), 1153-1169. <http://dx.doi.org.ezproxy.lib.calpoly.edu/10.1007/s11116-014-9523-8>
- DiClemente, C. C., & Prochaska, J. O. (1998). Toward a comprehensive, transtheoretical model of change: Stages of change and addictive behaviors. In W. R. Miller & N. Heather (Eds.), *Treating addictive behaviors (2nd ed.)* (pp. 3-24). New York: Plenum Press.
- Dijksterhuis, A., & Van Knippenberg, A. (1998). The relation between perception and behavior, or how to win a game of trivial pursuit. *Journal of Personality and Social Psychology*, 74(4), 865.
- Dugundji, E., & Walker, J. (2005). *Discrete choice with social and spatial network interdependencies: An empirical example using mixed GEV models with field and panel effects*.
- Ewing, R. (2005). Can the physical environment determine physical activity levels? *Exercise and Sport Sciences Reviews*, 33(2), 69-75.
- Ewing, R., & Cervero, R. (2010). Travel and the Built Environment—A Meta-Analysis. *Journal of the American Planning Association*, 76(3), 265-294. <https://doi.org/10.1080/01944361003766766>
- Ewing, Reid, & Cervero, R. (2001). Travel and the Built Environment: A Synthesis. Transportation Research Record: *Journal of the Transportation Research Board*, 1780(1), 87-114. <https://doi.org/10.3141/1780-10>
- Fernández-Heredia, Á., Monzón, A., & Jara-Díaz, S. (2014). Understanding cyclists' perceptions, keys for a successful bicycle promotion. *Transportation Research Part A: Policy and Practice*, 63, 1-11.
- Fiske, A. P. (1992). The four elementary forms of sociality: Framework for a unified theory of social relations. *Psychological Review*, 99(4), 689.
- Flyvbjerg, B. (2001). Beyond the limits of planning theory: Response to my critics. *International Planning Studies*, 6(3), 285-292.
- Forsyth, A., Hearst, M., Oakes, J. M., & Schmitz, K. H. (2008). Design and destinations: Factors influencing walking and total physical activity. *Urban Studies*, 45(9), 1973.
- Frank, L. D., Andresen, M. A., & Schmid, T. L. (2004). Obesity relationships with community design, physical activity, and time spent in cars. *American Journal of Preventive Medicine*, 27(2), 87-96.
- Frank, L. D., Schmid, T. L., Sallis, J. F., Chapman, J., & Saelens, B. E. (2005). Linking objectively measured physical activity with objectively measured urban form: Findings from SMART-RAQ. *American Journal of Preventive Medicine American Journal of Preventive Medicine*, 28(2), 117-125.
- Green, J. (2007). Stanford bets on new program to encourage walking, biking. Retrieved from MercuryNews.com website: http://www.mercurynews.com/ci_23271742/stanford-bets-new-program-encourage-walking-biking
- Guo, Z. (2013). Does residential parking supply affect household car ownership? The case of New York City. *Journal of Transport Geography*, 26, 18-28. <https://doi.org/10.1016/j.jtrangeo.2012.08.006>
- Handy, S., Cao, X., & Mokhtarian, P. L. (2006). Self-selection in the relationship between the built environment and walk-

- ing: Empirical evidence from Northern California. *Journal of the American Planning Association*, 72(1), 55–74.
- Handy, Susan. (2017). Thoughts on the Meaning of Mark Stevens's Meta-Analysis. *Journal of the American Planning Association*, 83(1), 26–28. <https://doi.org/10.1080/01944363.2016.1246379>
- Helbing, D., & Molnár, P. (1995). Social force model for pedestrian dynamics. *Physical Review E*, 51(5), 4282. <https://doi.org/10.1103/PhysRevE.51.4282>
- Heyman, J., & Ariely, D. (2004). Effort for Payment A Tale of Two Markets. *Psychological Science*, 15(11), 787–793. <https://doi.org/10.1111/j.0956-7976.2004.00757.x>
- Hillier, J. (2005). Straddling the post-structuralist abyss: Between transcendence and immanence? *Planning Theory*, 4(3), 271–299.
- Hopkinson, P., & Wardman, M. (1996). Evaluating the demand for new cycle facilities. *Transport Policy*, 3(4), 241–249.
- Hu, X., Chiu, Y.-C., Delgado, S., Zhu, L., Luo, R., Hoffer, P., & Byeon, S. (2014). Behavior Insights for Incentive-Based Active Demand Management Platform. Presented at the Transportation Research Board 93rd Annual Meeting. Retrieved from <http://trid.trb.org/view.aspx?id=1290032>
- Jacobsen, P. L. (2003). Safety in numbers: More walkers and bicyclists, safer walking and bicycling. *Injury Prevention*, 9(3), 205–209.
- Jones, L. (2015). Engaging More Women in Bicycling (p. 22). Retrieved from League of American Bicyclists website: http://www.bikeleague.org/sites/default/files/Womens_Outreach_Report_WABA_web.pdf
- Kahneman, D., & Tversky, A. (1972). Subjective probability: A judgment of representativeness. In *The concept of probability in psychological experiments* (pp. 25–48). http://link.springer.com/chapter/10.1007/978-94-010-2288-0_3
- LA Metro. (2016, October 13). Data. Retrieved from Metro Bike Share website: <https://bikeshare.metro.net/about/data/>
- Lorenc, T., Brunton, G., Oliver, S., Oliver, K., & Oakley, A. (2008). Attitudes to walking and cycling among children, young people and parents: A systematic review. *Journal of Epidemiology and Community Health*, 62(10), 852–857.
- Mandayam, C. V., & Prabhakar, B. (2014). Traffic Congestion: Models, Costs and Optimal Transport. The 2014 ACM International Conference on Measurement and Modeling of Computer Systems, 553–554. <https://doi.org/10.1145/2591971.2592014>
- Marchal, F., & Nagel, K. (2005). Modelling location choice of secondary activities with a social network of cooperative agents.
- McShane, M., & Meyer, M. (1982). Parking policy and urban goals: Linking strategy to needs. *Transportation*, 11(x), 131–152. *Transportation Research Record: Journal of the Transportation Research Board*, 1935(1), 141–146.
- Merugu, D., Prabhakar, B. S., & Rama, N. S. (2009). An incentive mechanism for decongesting the roads: A pilot program in bangalore. Proc. of ACM NetEcon Workshop. Retrieved from <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.208.6965&rep=rep1&type=pdf>
- Meyer, M. D. (1999). Demand management as an element of transportation policy: Using carrots and sticks to influence travel behavior. *Transportation Research Part A: Policy and Practice*, 33(7–8), 575–599.
- Peters, J. R., & Gordon, C. (2009). Results not guaranteed: A tale of road pricing in New York and London. *Journal of Urban Technology*, 16(1), 113–131.
- Piatkowski, D., Bronson, R., Marshall, W., & Krizek, K. J. (2014). Measuring the impacts of bike-to-work day events and identifying barriers to increased commuter cycling. *Journal of Urban Planning and Development*, 141(4), 04014034.
- Riggs, W., & Kuo, J. (2014). The impact of a 'soft sell' for parking mitigation on the UC Berkeley campus. *Transportation Research Board 93rd Annual Meeting*, 14–3513.
- Riggs, W., & Pande, A. (2016). Perceptions of Safety and Cycling Behavior Based on Traffic Data: Implications for Public Health and City Planning. Presented at the 2016 North American Travel Monitoring Exposition and Conference (NATMEC).
- Riggs, W., Rugh, M., Cheung, K., & Schwartz, J. (2016). Bicycling and Gender: Targeting Guides to Women. *Women in Sport & Physical Activity*, 24(2), 120–130. <https://doi.org/10.1123/wspaj.2015-0020>
- Riggs, William. (2014). Dealing with parking issues on an urban campus: The case of UC Berkeley. *Case Studies on Transport Policy*, 2(3), 168–176. <https://doi.org/10.1016/j.cstp.2014.07.009>
- Riggs, William. (2015). Testing personalized outreach as an effective TDM measure. *Transportation Research Part A: Policy and Practice*, 78, 178–186. <https://doi.org/10.1016/j.tra.2015.05.012>
- Riggs, William. (2016). A43-Testing Social Norms As an Incentive to Active Transportation Behavior. *Journal of Transport & Health*, 3(2), S30.
- Riggs, William. (2017a). Painting the fence: Social norms as economic incentives to non-automotive travel behavior. *Travel Behaviour and Society*, 7, 26–33. <https://doi.org/10.1016/j.tbs.2016.11.004>

- Riggs, William. (2017b). Reduced Perception of Safety for Cyclists on Multi-Lane, One-Way and Two-Way Streets: Opportunities for Behavioral Economics and Design (SSRN Scholarly Paper No. ID 3011680). Social Science Research Network website: <https://papers.ssrn.com/abstract=3011680>
- Riggs, William, & Kuo, J. (2015). The impact of targeted outreach for parking mitigation on the UC Berkeley campus. *Case Studies on Transport Policy*, 3(2), 151–158. <https://doi.org/10.1016/j.cstp.2015.01.004>
- Saelens, B., Sallis, J., & Frank, L. (2003). Environmental correlates of walking and cycling: Findings from the transportation, urban design, and planning literatures. *Annals of Behavioral Medicine*, 25(2), 80–91. https://doi.org/10.1207/S15324796ABM2502_03
- Schepers, J. P., Kroeze, P. A., Sweers, W., & Wüst, J. C. (2011). Road factors and bicycle–motor vehicle crashes at unsignalized priority intersections. *Accident Analysis & Prevention*, 43(3), 853–861.
- Schlich, R., & Axhausen, K. W. (2003). Habitual travel behaviour: Evidence from a six-week travel diary. *Transportation*, 30(1), 13–36.
- Shoup, D. C. (2005). *The high cost of free parking*. Washington DC: Planners Press
- Simone Fullagar, & Adele Pavlidis. (2012). “It’s all about the journey”: Women and cycling events. *International Journal of Event and Festival Management*, 3(2), 149–170. <https://doi.org/10.1108/17582951211229708>
- Stevens, M. R. (2017). Does Compact Development Make People Drive Less? *Journal of the American Planning Association*, 83(1), 7–18. <https://doi.org/10.1080/01944363.2016.1240044>
- Tversky, A., & Kahneman, D. (1973). Availability: A heuristic for judging frequency and probability. *Cognitive Psychology*, 5(2), 207–232.
- Tversky, A., & Kahneman, D. (1985). The framing of decisions and the psychology of choice. *Environmental Impact Assessment, Technology Assessment, and Risk Analysis* (pp. 107–129). Retrieved from http://link.springer.com/chapter/10.1007/978-3-642-70634-9_6
- Vandenbulcke, G., Thomas, I., de Geus, B., Degraeuwe, B., Torfs, R., Meeusen, R., & Panis, L. I. (2009). Mapping bicycle use and the risk of accidents for commuters who cycle to work in Belgium. *Transport Policy*, 16(2), 77–87.
- Weber, J., Azad, M., Riggs, W., & Cherry, C. R. (2018). The convergence of smartphone apps, gamification and competition to increase cycling. *Transportation Research Part F: Traffic Psychology and Behaviour*, 56, 333–343. <https://doi.org/10.1016/j.trf.2018.04.025>
- Weinberger, R., Seaman, M., & Johnson, C. (2008). Suburbanizing the city: How New York City parking requirements lead to more driving. Retrieved from <http://trid.trb.org/view.aspx?id=1153742>
- Winters, M., Babul, S., Becker, H., Brubacher, J. R., Chipman, M., Crompton, P., ... others. (2012). Safe cycling: How do risk perceptions compare with observed risk. *Can J Public Health*, 103(9), S42–7.
- Wright-piersanti, T. (2016, April 24). A Nervous Biker’s Guide to Cycling in New York City. *The New York Times*. <http://www.nytimes.com/2016/04/25/nyregion/a-nervous-bikers-guide-to-cycling-in-new-york-city.html>
- Yiftachel, O. (1998). Planning and social control: Exploring the dark side. *CPL Bibliography*, 12(4), 395–406.
- Zhu, C., Yue, J. S., Mandayam, C. V., Merugu, D., Abadi, H. K., & Prabhakar, B. (2015). Reducing road congestion through incentives: A case study. Presented at the Transportation Research Board 94th Annual Meeting. Retrieved from <http://trid.trb.org/view.aspx?id=1336629>

FOCUS 16

Essays



Keep the Lot: Housing Development on the Peripheries of Cities in Poland, Serbia and the United Kingdom.

Ivor Samuels

Architect and Planner, MSc., MRTP;
Honorary Senior Research Fellow, School
of Geography, University of Birmingham.

Anna Agata Kantarek

Architect, DSc., PhD.; Associate
Professor, Faculty of Architecture,
Cracow University of Technology.

Aleksandra Djordjevic

Architect, MArch.; Teaching Assistant, Faculty
of Architecture, University of Belgrade.

The development patterns generated by large landowners and developers are compared to the self-build lot by lot development by individual home builders. Based on their international comparative research on the determining factors of urban morphology, Samuels, Kantarek and Djordjevic, argue for the latter type of growth as more democratic, locally appropriate, varied, and individually responsive, while being at the same time inadequate for the development of a coherent urban structure.

This article discusses some of the recent findings from a collaborative project between Cracow University of Technology, Belgrade University, and the International Seminar on Urban Form (ISUF) that focuses on the transformations in urban form experienced by these two European countries since the significant changes in their political regimes started 30 years ago. As the early years of these transformations have been well documented by Hirt and Stanilov (2009), here we will concentrate on the most recent changes by comparing Cracow and Belgrade with cities in Western Europe in general and in the United Kingdom in particular.

It should be emphasized that before the dramatic regime changes of the 1980s, both Poland and Serbia had well established and respected urban planning traditions. For example, in the 1970s, the Polish system of threshold planning was advocated by the Scottish government, which published a manual on its use for local authorities (Scottish Development Department 1973). In the former Yugoslavia, the planning system was concerned with maximizing economic impacts while maintaining the quality of urban development and allowing public access to the natural environment which was protected against excessive development (Fisher, 1966).

As a basis of this comparison, an urban transect running from city centre to periphery was adopted and revealed that forces of globalization, often financed from overseas, are manifest in the all three cases (UK, Poland, Serbia). The new shopping centres in Belgrade and Krakow are the equals of anything in Western Europe - both in their negative and positive aspects. However, moving along the transect towards the edge of each of these cities, more significant contrasts emerge. The most

significant differences between the two cases and Britain occur in the peripheries (Figure 1).

Lot by lot development and urban sprawl

The difference in the development pattern on the urban peripheries of three locations is illustrated in Figure 2. In Oxford, the compact nature of the edge of city development is in contrast to the dispersed nature of both the Belgrade and Krakow cases.

In the cases of Krakow and Belgrade the development patterns are typical of urban sprawl, the general problems of which were identified in a research review by the European Environment Agency that asserts that "urban sprawl is synonymous with unplanned incremental urban development, characterized by a low-density mix of land uses on the urban fringe" (EEA, 2016, p. 5). While the examples in Figure 2 are by no means the most extreme examples of urban sprawl, Figure 3 shows an extreme example of such development beyond Krakow's periphery.

This pattern of development results in increased energy and land consumption and indicates that the southern, eastern and central parts of Europe, including Poland and Serbia are particularly at risk. It suggests that "...sprawl is the result of little planning control of land subdivision. Development is patchy, scattered and strung out, with a tendency for discontinuity" (EAA, 2016, p. 7).

In Poland, this pattern has been described as lot by lot urbanism; a term formulated to describe the development of Polish cities after 1994 when changes in the national urban law occurred (Kantarek, 2016). The Master Plan as an instrument for development control was replaced by a Study of Conditions, which

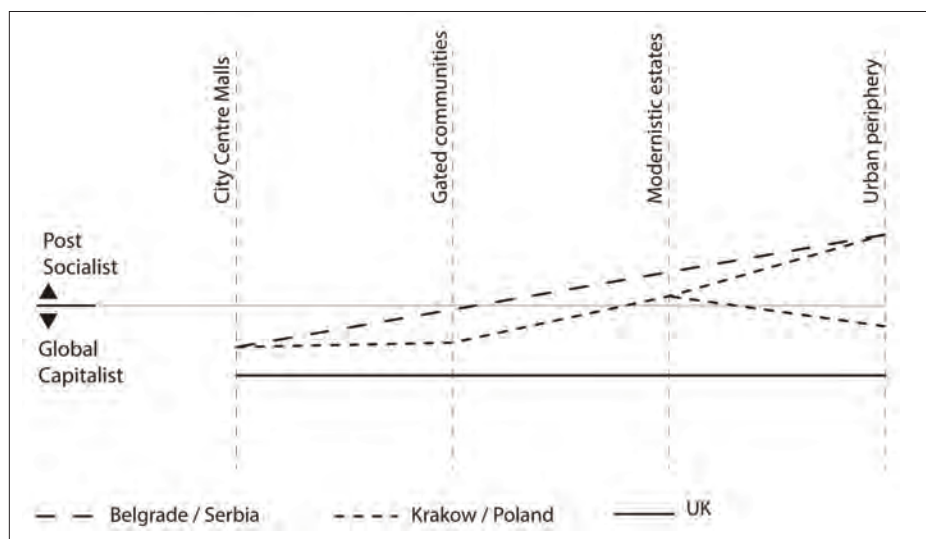


Figure 1: Comparison of new developments in the case studies cities according to the transect of New Urbanism.

Figure 2: Comparison of typical development patterns in the peripheries of the case studies cities. (photos and drawings by the authors)



does not have the force of law but provides only a general idea of the development that could be implemented in detailed plans: this instrument is not mandatory and can be replaced by administrative decisions which do not take into account spatial and functional factors. Thus, development is based on lot by lot individual investment decisions in a process that generates all the problems associated with urban sprawl and is often described as chaotic by architects and town planners (Djordjevic & Milojevic, 2018; Kantarek, Kwiatkowski & Samuels, 2018).

In Serbia, but not in Poland, these problems are exacerbated by illegal developments with an evolving professional activity for the legalization of illegal buildings. As homes are often built without any input from architects, planners or engineers, one can certainly question the role of these professions. However, there is undoubtedly a role for the design professionals in the more ambitious of these projects as can be seen in the design of dwellings along the Danube riverbank near Belgrade that exhibit an exceptional degree of creativity if not that usually acclaimed by architectural journals (Figure 4).

Despite its problems, the lot by lot process of building housing can be seen as a positive response of individuals to their needs. If the negative aspects of sprawl can be avoided and a balance achieved of bottom-up and top-down decisions then individual investments on a lot of land, provided it is within some minimal regulatory framework, can make a significant contribution to meeting local housing local demands. This is valid for both planned development, where a balance must be achieved between the different stages of development and infill, and



Figure 3: Urban sprawl and lot by lot urbanism in Krakow's periphery. (photo by I. Samuels)

also in organic, unplanned growth (Caniggia & Mafei, 2001).

How not to lose the lot

There are three major factors shaping urban form, and they vary in the three case studies discussed. They are the regulatory system (such as plans and codes), land ownership, and the structure of the development industry. The differences in the peripheral developments shown in Figure 1 can be explained by differences in these three factors.

Figure 4: Architectural creativity by individual home builders along the Danube, Belgrade. (photos by I. Samuels)



Concerning the urban regulatory system, in Serbia the existing urban regulations are not respected in practice, and a large percentage of development is carried out illegally. In Poland, there are no general rules that deal with spatial matters. In England, despite de-regulation, there exists fundamental political support for urban green belts preventing sprawl, as happens in the case of Oxford (see Figure 1). In Serbia and Poland, land ownership is in the hands of small proprietors with a dispersed division of property which makes comprehensive development difficult if not impossible. In England, on the other hand, land has been in the ownership of a limited number of proprietors since the eighteenth century, a situation that persists today. The building of housing in Britain is dominated by a half dozen of larger companies that operate throughout the country while in both Poland and Serbia it is in the hands of a large number of small local builders.

The imposition of a more rigid system of planning could be seen as an answer to the problems of dispersed development – in fact, a return to the planning systems of thirty years ago. However, in the current political and economic climate of de-regulation, this is unlikely to happen not only in the Central and Eastern European (CEE) countries but across the whole of Europe.

In the UK, the planning system is now being questioned. For example, a recent study blames the planning system for making inequality worse by increasing the wealth of those who own property in desirable areas against that of homeowners in less economically flourishing parts of the country (Breach, 2019). In the former areas, as the average cost of homes rises, the share of private housing that is owner-occupied is reduced. It is argued that this happens because the planning system does not allow the supply of housing to meet local demand.

A further factor against housing provision is the pattern of land ownership in Britain which has also been recently identified as a major factor in the current British housing crisis (Monbiot, G. et al, 2019). In contrast to Serbia and Poland, where urban peripheral land is owned by many small proprietors, in Britain the big landowners with a near-monopoly control the supply of land, and they will only build homes at the rate at which they can sell them for a profit, no matter what the planning system recommends. They have been accused of “land-banking” as they hold as much land as twice the number of houses they are building. Although the British government has a target of building 300,000 new homes every year, only 192,000 are being built while the large developers hold on to their land for which planning permission has been granted to build potentially 395,000 new homes (Shelter, 2019).

In CEE countries, where it has been possible for developers to acquire large land holdings, there is a tendency to build gated communities, such as on the edge of Krakow. Therefore, one key

to maintaining the democratic and social advantages of lot by lot development is the retention of a pattern of small ownerships and the adoption of some means of restricting the acquisition of land by large developers. This does not mean that the pattern of landholdings cannot be altered to produce more rational development from the point of view of service provision, but it should compensate small landowners by allocating to them buildable lots in a reorganized block urban pattern.

Another problem resulting from the dominance of large builders, as identified by a recent government report for Britain's Ministry of Housing, Communities and Local Government, is “the homogeneity of the types and tenures of the homes on offer is a problem on large sites in areas of high housing demand” (Letwin, 2018, p. 5). This report recommends rules requiring developments to provide a diversity of both types and tenures, a problem that does not exist in lot by lot development where, in fact, the resulting variety has often been described as chaotic when it imposes on the quality of life of neighbouring families.

It should be noted that in Britain plot by plot urbanism is now being promoted as an avant-garde solution to housing. In the rapidly growing town of Bicester for example, a large area has been allocated for self-build (Graven Hill, 2019). Graven Hill is the UK's largest self-build community. In this case, would-be house builders are given “passports” indicating the minimum requirements they must follow when building their own house (Figure 5). The big difference from the Polish and Serbian cases is that in Britain the land is owned by the local authority what enables this process to be implemented, in contrast to areas where the large landowners prevail. Ownership of land has allowed Cherwell District Council, the planning authority for Bicester, to enforce a design code with varying restrictions on individual dwelling designs according to their location such as Village Centre, Community Streets, Urban Lanes, etc. In doing so, the council established a system of character areas that is in accordance with the practice of design coding in England. The only difference is that in some locations it does not insist on an imposed local character and offers freedom for self-builders to choose their own construction materials with no restrictions.

Graven Hill is an unusual if not unique project in Britain where local authorities do not possess the means to buy land and are obliged to dispose of land that they may own because of the severe fiscal constraints of the last decade. Lot by lot development in Britain must, therefore, remain a marginal solution to the current shortage of affordable housing.

Conclusions

From the examples of peripheral housing development in Belgrade, Krakow, Oxford, and Bicester it is evident that the different structures of the development industry, of



Figure 5: Graven Hill, Britain's largest self-build planned development. (photo: n.a.; source: www.gravenhill.co.uk)

land ownership and of planning systems produce different patterns of urban form. Historically, the relatively stable UK political system as well as its urban laws, show an ordered development of urban fringes, while Krakow and Belgrade both have ineffective suburban strategies even though they result from different systems both in planning regulations and in the everyday practice of its execution. These differences can be summarized in the contrasting cases as a big plot of land with planned infrastructure provision versus the aggregation of individual lots with minimum design and uncoordinated infrastructure provision.

The expression “lot by lot development” can be used in two different situations. First, it can be used as a fundamental tool in both planned or organic development replacing the hierarchical systems of plans and urban rules. Secondly, in the absence of formulated plans, we call it “lot by lot urbanism” where individual ownership does not follow general rules but only expresses its own needs without respecting any neighbourhood or contextual rationale. However, the positive aspects of lot by lot development by individual self-builders must be acknowledged. It allows families and individuals of modest means to build their own homes and, in many cases, fulfil their dreams of living in a house with a garden – not unlike the dreams of many families in Britain.

Therefore, any reform of current systems in CEE countries needs to retain the democratic nature of lot by lot urbanism while avoiding its negative consequences and main disadvantages, such as the higher cost of infrastructure provision and of energy consumption. Simple rules should also be included, such as requiring individual builders to maintain the character of an area and to protect neighbourhood amenities, such as

preventing buildings much higher than the existing context. These rules do not need to be too concerned with the appearance of individual dwellings, providing opportunities for personalization and variety in the townscape (see Figure 4).

This would run contrary to the practice in many iconic housing developments such as the Crown Estate at Poundbury (Figure 6). Promoted by the Prince of Wales, this project is much admired as a model for housing developments in Britain which are concerned with the retention of local character. In this transatlantic transplant of New Urbanism, house owners need “the consent of his Royal Highness to paint or decorate the exterior of the property otherwise than in the same colour or colours as the Property here previously painted” (Poundbury Manco, 2019). To retain the advantages of lot by lot urbanism, future codes should be less obsessed with detail and more concerned with larger strategic issues, such as rationalising infrastructure provision, reducing the need for private transport, increasing small scale development opportunities and democratizing architectural production.

• • •

References

- Breach, A. (2019). *Capital Cities: How the planning system creates housing shortages and drives wealth inequalities*. London: Centre for Cities.
- Caniggia, G. & Maffei, G. L. (2001). *Architectural Composition and Building Typology. Interpreting Basic Building*. Florence: Alinea Editrice.
- Djordjevic, A. & Milojevic, M. (2018). Burgages and Partayas. *Urban Morphology* 22 (2), 157-159.



Figure 6: First phase of the new-urbanist masterplan for the Crown Estate at Poundbury. (photo: Jack Sullivan / Alamy Stock Photo)

European Environment Agency (EEA). (2016). Urban Sprawl. Retrived from https://www.eea.europa.eu/publications/eea_report_2006_10

Fisher, J. (1966). *Yugoslavia – a Multinational State*. San Francisco: Chandler.

Graven Hill, Bicester. (2019). Retrieved from: <https://www.gravenhill.co.uk/>

Hirt, S. & Stanilov, K. (2009). *Twenty years of transition: The evolution of urban planning in Eastern Europe and the former Soviet Union, 1989-2009*. Nairobi: United Nations Habitat.

Kantarek, A. A., Kwiatkowski, K. & Samuels, I. (2018). From Rural Plots to Urban Superblocks. *Urban Morphology* 22(2), 155-157.

Kantarek, A. A. (2016). Mass Housing Estates. Poland. What next? Presentation at the *Habitat III - Regional Meeting, Europe, Prague*; March 2016. Retrieved from <https://docplayer.pl/44898869-Mass-housing-estate-poland-what-next.html> 05.08.2019

Letwin, O. (2018). *Independent Review of Build Out. Final Report*. London: Ministry of Housing, Communities and Local Government.

Monbiot, G. et al. (2019). *Land for the Many: Changing the way our fundamental asset is used, owned and governed*. London: Labour Party.

Poundbury Manco (2019). Covenants and stipulations. Retrieved from <https://www.poundburymanco.co.uk/covenants-stipulations/>

Scottish Development Department. (1973). *Threshold Analysis Manual* Edinburgh: Her Majesty's Stationary Office.

Shelter (2019). *Planning Permissions and Completions. Research Note*. Retrieved from https://england.shelter.org.uk/__data/assets/pdf_file/0010/1812862/Research_note_Planning_permissions_and_completions.pdf

Urban Regeneration in Dublin, Ireland: Success, Failure, or Both?

Teal Delys

*B.S. in Architectural Studies, Master Urban & Regional Planning;
Research Assistant, Eastern Washington University.*

Urban regeneration has had a fundamental role in recuperating distressed historic areas in European cities, helping to launch them into new cultural and economic roles in the local, national, and international arenas. In this article, Teal Delys discusses such process in Dublin through the cases of Temple Square and the Docklands, noting that urban regeneration brings both negative and positive impacts that have to be well accounted for.

Dublin, Ireland's capital and largest city, has experienced a roller coaster of economic and cultural changes over the past forty years. These changes have been influenced by global trends as well as government policy and urban regeneration efforts. Like many other major cities, Dublin's regeneration has been grounded in private investment supported by government incentives. Through an economic lens, such efforts are applauded for the wealth they bring into the city. However, this type of process often results in gentrification that makes the regenerated district unaffordable and inaccessible to the initial residents and artists that gave the area its interesting character.

As elements of cities are increasingly used to attract important private investment, low-income populations that cannot compete with foreign corporations become even more vulnerable due to gentrification. Understanding the values and priorities that shape the urban regeneration process, as well as the unintended consequences, is critical for urban planners to improve communities in socially-inclusive ways.

This article is an assessment of the values that influenced urban regeneration in Dublin and the impacts of gentrification on the Temple Bar and Dockland districts. It begins with a brief history of Ireland as an independent nation and the approaches that the Irish government has taken to spur investment and urban regeneration. The global trends that influenced the shape of the urban regeneration are also considered, including global

standardization, the 'European city' and the 'superstar city' models. Finally, gentrification in Dublin's Temple Bar and Dockland districts is discussed in assessing the successes and failures of urban regeneration efforts.

Brief History of Irish Independence

Today, the Republic of Ireland is a parliamentary democracy that is part of the European Union (Department of Foreign Affairs and Trade, 2014). Today, the island contains the Republic of Ireland, an independent nation of 26 counties, and Northern Ireland, which is part of the United Kingdom but has its own parliament that runs the six counties within its borders (McGreevy, 2019). Over the 7,000 years it has been inhabited, the island of Ireland has experienced many invasions by different peoples, including the Celts, the Vikings, and the Normans (Department of Foreign Affairs and Trade, 2014).

The current split of the island reflects the long history of British colonialism that began with the British presence along the East Coast and took a firm hold of the island in 1541 upon King Henry VIII's claim to sovereignty (Stamp, 2014). In 1534, King Henry VIII had broken with the Catholic Church to claim Protestant faith, while most native Irish families remained Catholic (McGreevy, 2019). This split between Catholics and Protestants, which still colors division in Ireland to date, references those who desire independence from the United Kingdom (Catholic nationalists) and those who do not (Protestant unionists).

Wars and conflict over land have bloodied relations between Ireland and Britain for centuries, primarily stemming from the Great Potato Famine of the 1840s that killed an estimate of a million people and led to the emigration of two million more

Note: This article was initially conceived as an essay for the class Gentrification (Plan 596) in spring of 2019 at Eastern Washington University, instructed by Dr Laura Tate. The author thanks Dr. Tate for her helping to adapt the original work into the present article form.

(Stamp, 2014). Ireland gained autonomy with the Anglo-Irish Treaty of December 1921, but Northern Ireland remained a part of the United Kingdom (See Figure 1; McGreevy, 2019). Despite the treaty, clashes continued between Nationalists and Unionists and came to a peak in the latter 1900s, a time known as the “Troubles”. Guerilla warfare killed thousands of people up until the signing of the Good Friday Agreement in April 1998, which put a stop to the violence and opened up negotiations between the countries for compromise (McGreevy, 2019).

Initially, the independent Republic of Ireland sought self-sufficiency but turned to a liberal, more open economy in the 1960s (Kincaid, 2005). Since then, Irish economic policy has been known for welcoming transnational investment, what has driven change in Dublin, with results rising and falling with world economic conditions. Change occurred both in socioeconomic and physical conditions, with massive amounts of money poured into the planning and redevelopment of new roads, towns, industrial renovations, and housing complexes (Kincaid, 2005). These marked a shift from a “jaded rhetoric of cultural nationalism” to a more “ideologically objective, aspecific, and progressive urban space” that coincided with the broader European identity (Kincaid, 2005, p. 23).

The Celtic Tiger era was a period of Ireland’s rapid economic growth in the 1990s and early 2000s that developed into a full-fledged property bubble (Powell, 2016). Urban regeneration efforts began in the early 1990s and continued into the 2000s resulting in some of Dublin’s most prosperous districts. Gentrification put pressure on residents, especially artists, in popular city neighborhoods until the 2008 Global Financial Crisis which hit Irish banks especially hard. The Irish government accepted a €85 billion (\$95 billion) bailout package from international creditors as the rents in all sectors fell by more than 50 percent and property developers went bust (Powell, 2016). Although Irish banks and property owners suffered heavily from the crisis, Dublin’s property market

recovered as foreign firms and international investors were attracted by Ireland’s low corporate tax rates and educated workforce, beginning a new process of gentrification.

Urban Regeneration through Private Investment

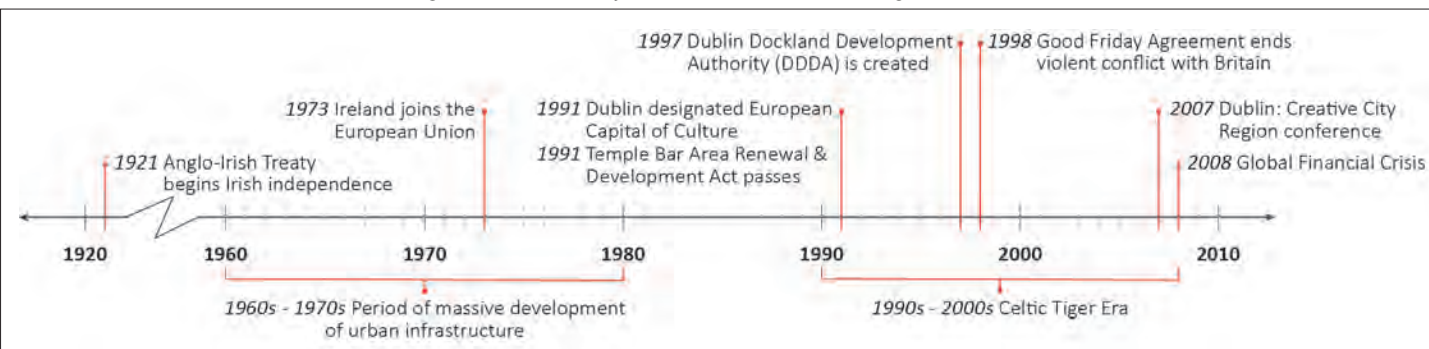
Post-recession policies in municipalities focused on the use of tools that may respond to a changing economy, specifically policies that attract money-making businesses to the city (Elmedni et al., 2018). The power to influence Dublin’s urban fabric was offered by the central government to businesses willing to invest in the city, particularly in low income and stagnated areas. Crossa and Moore (2009, pp. 84-85) describe this phenomenon in Dublin and other global cities, as follows:

“With the decreasing fiscal power of the national state, the changing order of economic competition and the new hypermobility of capital, cities are now organized and governed differently. Urban politics has shifted from a managerial form of government to an entrepreneurial form of urban governance... Whereas managerial forms of government focus on the provision of welfare and services to the local population, entrepreneurial forms of governance entail, among other things, a collaboration between city governments and urban elites to create the necessary conditions for attracting mobile capital”.

This shift in urban politics can be seen in the processes of urban regeneration in cities like Dublin, where urban regeneration efforts have been characterized as top-down approaches to urban renewal in which decisions are made by the central government, private development interests, and the City Council (Lawton & Punch, 2014).

Urban regeneration efforts in Dublin have been executed in similar ways to the Business Improvement District (BID) in the United States. A BID is a “designated or mapped subdivision of a particular neighborhood, where property owners are required to pay an additional tax or assessment toward the funding of

Figure 1: Timeline of major events in Ireland and urban regeneration initiatives in Dublin.



additional services within that designation or district" (Elmedni et al., 2018, p. 8). BID strategies focus on bolstering business and physical appearance in a particular area that is considered stagnant. Without conscious means of adaptation for low-income residents and businesses, BIDs often result in gentrification.

BIDs typically begin with improvements to the area's physical appearance, such as the streetscaping, that attract users and businesses interested in the accompanying tax incentives. Change can be dramatic with the physical transformations and businesses turnovers, leading to new people, new shopping experiences, and different architectural characteristics. Turnover in businesses and residential uses is catalyzed by an increase in commercial and residential rents, causing a faster appreciation of real estate what, in turn, leads to increased property taxes followed by further increases in commercial and residential rent (Elmedni et al., 2018). Renters tend to be displaced whenever landlords can increase rents – whether the landlord wants to cash in on the newfound profit of the area or he or she just needs to keep up with the increasing property taxes. As the once-blighted area goes through the turnover process again and again, new residents, businesses, and its overall character show the consequences of the gentrification process.

The Influence of Global Trends on Urban Ideals

Gentrification in cities like Dublin is happening against a backdrop of urban competition. As discussed by Crossa and Moore, city governments have become focused on attracting mobile capital, which relies on "transforming the image of the city from a centre of production and work to an attractive place for both local and global investment" (2009, p. 85). The image of Dublin as a city that attracts transnational investment has been shaped by global trends of urban standardization and the ideals of the 'European city' model and the 'superstar city'. These trends have especially shaped districts undergoing urban regeneration efforts funded by private investment.

One way in which cities are placed under the pressure of a global market is through the standardization of amenities. According to McNeill (2016), this standardization creates more "orderly" cities that normalize certain expectations of healthcare, infrastructure, air quality, and more. Cities then tend to become ranked by their levels of service for these standards. Nongovernmental transnational bodies play a significant role in this standardization and ranking system, seeking to create a "stable and reliable realm for transnational business to operate in" (McNeill, 2016, p. 11). Hotels are a staple of such standardization, where businesspeople can expect to have similar comforts and amenities in cities around the globe (McNeill, 2016).

Another way in which cities like Dublin have come to be ranked is through the idea of an 'European city', developed from a set of

political and cultural institutions seen as the basis for European urban society (Lawton and Punch, 2014). The 'European city' is often held as an "ideal socio-spatial form... [associated] with social harmony, a balanced class structure, high-quality urban form and design, and high-density and emphasis on public transport" (Lawton and Punch, 2014, p. 866). These goals are practiced in different ways throughout Europe but serve to stand in contrast to the model of ghettoization, urban sprawl and car-oriented modes of transportation that are perceived to dominate standardized, homogenous cities in the United States (Lawton & Punch, 2014).

As cities sought to follow this model, fundamental elements of classical European cities began to reappear since the 1960s. These elements include care in designing streets and squares, contextual and historical sensitivity, and respect to collective memory (Lawton and Punch, 2014). The most popular city became Barcelona that became a model applied to many other places. However, the implementation of some of the more concrete elements of the 'European city', such as walkability and contextual sensitivity were translated with varying degrees of success in other places.

Dublin experienced a myriad of changing architectural trends in the emergence of Ireland as a young republic. Lawton and Punch (2014, p. 870) note that "the mix of influence was eclectic, ranging from the 'Amsterdam School' apartments of the 1930s and 1940s... to the corporate-modernist buildings of the 1970s". While this mix of architectural trends both established identifying factors of Dublin as an evolving city, it also destroyed many of its historic Georgian buildings. The attitude towards Dublin's historical identity began changing in the 1980s and especially in 1991 when it was chosen as the European City of Culture, a designation given by the European Commission for European Capital of Culture for one calendar year to celebrate culture and urban regeneration (Lawton & Punch, 2014).

In addition to globalized standardization and the 'European city' model, Dublin's evolution has responded to Richard Florida's idea of the rise of the Creative Class and super-star cities. Initially, the City Council was influenced by approaches to city administration and governance from major European cities like Copenhagen, Helsinki, Lyon and Barcelona (Dublin City, 2005, p. 9). As Dublin sought to compete with other European cities, "the cult of individual 'personalities'" also became a factor in urban regeneration efforts (Lawton & Punch, 2014, p. 879). Florida's Creative Class concept, which corresponded well with the 'European city' model, took hold after the 2007 "Dublin: Creative City Region" conference where Florida was a keynote speaker (Lawton & Punch, 2014, p. 879).

The Creative Class is composed of professionals from a wide range of occupations that are thought to drive creativity and

innovation in commercial products and consumer goods. Specifically, Creative Class workers have special skills that they sell “to add economic value through their creativity” (Florida, 2002, p. 68). The Creative Class is not made up as much of artists and musicians like the name might suggest, but also computer programmers, engineers, graphic designers, and other professionals that drive technology and innovative businesses. The Creative Class prefers to locate in places with many high-paying jobs and a “vibrant quality of place” with excellent restaurants, cafes, music venues, and people to meet and date (Tranum, 2017).

The role of the ‘superstar city’ is to provide the urban spaces that the Creative Class wants to live in, which then attracts the companies that need this type of labor force. Many elements of the ‘superstar city’ relate to the ‘European city’ model, including tolerance, openness, diversity, and quality of life, as well as the physical manifestations of these qualities, such as walkable, pedestrian-friendly streets, bike lanes, parks, exciting arts and music scenes, and vibrant areas where people gather in cafes and restaurants (Crossa & Moore, 2009; Tranum, 2017). In the past, the city environment typically resulted from economic growth, but in a ‘superstar city’ the quality of urban spaces is a prerequisite to economic development (Lawton & Punch, 2014).

Ireland’s central government adopts corporate-friendly policies and many of the ‘European city’ and ‘superstar city’ techniques to attract and retain businesses such as Google, Facebook, and Airbnb. In the 2016 Dublin City Development Plan, city leaders envisioned the following:

“Within the next 25 to 30 years, Dublin will have an established international reputation as one of Europe’s most sustainable, dynamic and resourceful city regions. Dublin, through the shared vision of its citizens and civic leaders, will be a beautiful, compact city, with a distinct character, a vibrant culture and a diverse, smart, green, innovation-based economy. It will be a socially inclusive city of urban neighbourhoods, all connected by an exemplary public transport, cycling and walking system and interwoven with a quality bio-diverse green space network. In short, the vision is for a capital city where people will seek to live, work, experience, invest and socialize, as a matter of choice” (City of Dublin, 2016).

Much in this statement stands out in light of ‘European city’ and ‘superstar city’ models, including “distinct character”, “vibrant culture”, “diverse”, and “socially inclusive”, as well as urban features like public transport and a green space network.

Gentrification in Temple Bar and the Docklands

Although the European City and Super Star City models might

appear great visions for cities to aspire to, the questions remain of who has access to the amenities and how are they allowed to be used. In urban regeneration based on private business investment, the gentrification process often pushes out generational residents and artists while privatization of public space controls how people can use the new spaces. The regeneration of Dublin’s Temple Bar and Docklands districts are two examples of revitalization through private investments that had great economic benefits at the expense of who are the attracted residents and how they live.

Temple Bar was one of the earlier areas of gentrification in Dublin. The district was transformed from crumbling buildings that housed residents and small businesses to a major cultural hub following the Temple Bar Area Renewal and Development Act of 1991 (Stafford & Payne, 2004; Lawton & Punch, 2014). There, regeneration was initially led by local businesses who formed the Temple Bar Development Council. With no funding other than their own resources, this council sought to motivate and lift the morale of participants in the urban regeneration efforts as it “feared the process becoming grounded through excessive bureaucracy and meetings” (Stafford and Payne, 2004, p. 9).

Mutual interest between the Temple Bar Development Council and the Department of Taoiseach, a national entity that supports social and economic policy and development, led to the creation of a brand-new state agency, the Temple Bar Properties (Department of Taoiseach, 2018; Stafford & Payne, 2004). This new agency served as the implementing authority for urban regeneration in Temple Bar, bypassing the Dublin City Council. Although not intentionally, this ad hoc and informal style of management and the speed desired for the regeneration neglected key stakeholders in the process, especially those at the city government level (Stafford & Payne, 2004, p. 9).

Temple Bar area was redeveloped through design competitions inspired by the Barcelona model and the idea that design professionals could and should practice their skills as “defenders of the public realm” (Lawton & Punch, 2014). The redevelopment resulted in three distinct squares surrounded by pedestrianized streets and infill development, with a design respectful of the human scale. Although the design of these spaces was meant to foster spontaneous interaction among members of the public, two of the squares became increasingly dominated by private interests. Critics have noted that Temple Bar Square (Figure 2) can be overwhelmed by the seating of surrounding restaurants and the use of Meeting House Square (Figure 3) is limited by a gate that is closed off at night (Lawton & Punch, 2014). Furthermore, Meeting House Square has become less of a public square as a venue space for festivals, performances, product launches, and other cultural and business events (Temple Bar Cultural Trust). The Temple Bar



Figure 2: Temple Square is used by public and private groups. Here, people sit on the steps of a small plaza occupied by food vendors and surrounded by cafes and shopping. (photo W. Murphy / flicker.com)

area in general became an “uneasy juxtaposition of late-night revelers and homelessness” (Lawton & Punch, 2014, p. 874). Since this plan, policy changes have focused on social control and image rather than social justice and protection in the area.

Social control is not a new phenomenon to the post-colonial nation and to Dublin. In the past, for instance, poor residents were not allowed in some of the parks, such as St. Stephen’s Green due to wealthy residents’ concerns that they would cause “torchlight processions and political demonstrations” (Brück, 2013). The park became open to the public in 1880 but only for limited hours and under police supervision; several individuals were even prosecuted and sentenced to hard labor for damaging trees in the park (Brück, 2013). Literal and metaphorical policing of the parks was a visual landmark to residents through the elaborate railing, entranceways, and gate lodges that depict park boundaries (Brück, 2013). Today, policing continues through the privatization of public space, and spaces may appear to be public until the gates are closed or security guards send away visitors.

The Docklands is another urban regeneration district in Dublin known for the privatization of public space. Until the 1970s, the area was dominated by port activities and workers and contained several working-class residential communities (Wonneberger, 2012). With the creation of the In the Dublin Dockland Development Authority (DDDA) in 1997, the area became a major business district. The DDDA came up with the Docklands name as previously it was not considered a distinct area but was referred to by the names of the neighborhoods it contains. The DDDA considered renaming the area as “East-side” or “Eastland”, but the residents only accepted the name



Figure 3: The Meeting House Square used as a venue for public celebrations such as the Chinese New Year Festival. (photo W. Murphy / flicker.com)

Docklands as a reference to its history and the work of generations, which they wanted to be included in any rebranding of their collective identity (Wonneberger, 2012).

The activism of the Dockland communities, as well as a concern for social inclusion in planning in general, helped original residents be represented in the composition of the DDDA’s board. However, the agency, its actions and the physical changes that incurred were heavily influenced by private interests and the central government (Wonneberger, 2012).

Residents and visitors get confused over what is private and what is public space: their walking is continuously blocked by delivery trucks parked on footpaths and, not unusually, they are sent away by security guards for taking photos (Thomas, 2017). Although in the Docklands district there are nine designated civic or public spaces, only two of them are under Dublin’s City Council control while the rest are under private management (Thomas, 2017). Indeed, according to the Dublin City Public Realm Strategy, the city desires “publicly accessible areas to be privately managed” (2012, p. 33). This creates a contentious environment for both visitors and generational residents who lose former gathering places to privatization (plazas and parks) and gentrification (pubs and other small businesses).

In addition to the privatization of public space, residents have been uncomfortable with the change in architecture (Wonneberger, 2012). Historical buildings recognizable by their styles, such as the Georgian, were replaced by contemporary buildings with corporate-looking glass façades (Wonneberger, 2012). According to Leys, Slater and Wyly (2013), a hallmark of gentrification is the confluence of tastes from local traditions

with broader tastes of the city residents (and the Creative Class or transnational corporate employees) in a “postmodern landscape” that real estate agents use as a place-based commodity. Original residents see their neighborhood losing the character they had known and grew up with while the new residents are attracted to the developing landscape they recognize in cities around the world

The conflicts over aesthetic and cultural identity, as well as over the ownership and control of spaces in the Docklands and Temple Bar districts are similar to those over authenticity in BIDs (Kudla, 2018; Tate & Shannon, 2018). As noted by Kudla (2018), BIDs took on the role of urban regeneration, specifically “emphasizing local cultural tastes and lifestyles, drawing a diversity of people together in public spaces, and creating ‘hip’ and ‘cool’ spaces for people to hang out”; various groups began to make claims as to what is authentic. Business stakeholders often have power to brand a place into their own image of comfort and authenticity – or whatever features they think will increase economic growth – while longtime residents struggle to be a part of this process. In the Docklands, even the area’s name was up for debate in the DDDA. In some cases, the conversation on authenticity is used to not only provide an aesthetic identity but to justify who belongs in the space and the decision-making processes (Tate & Shannon, 2018).

The success of urban regeneration depends on the qualities by which it is measured. On one hand, in 2015 the Irish Times celebrated Dublin as the second best city for real estate based on low supply, employment growth and the improving economy. On the other hand, a report by Goodbody Economic Consultants evaluating regenerated areas in Dublin showed considerable inflation, intense speculation, and a failure to deliver meaningful social and community gains (Taylor, 2015; Lawton & Punch, 2014). When urban regeneration

efforts consider economic, social, and affordability measures, strategies often include financial inducements for property investments and commitment to ‘social mixing’ through the types of housing (Lawton & Punch, 2014). Social mixing, however, has consisted of building luxury housing alongside existing concentrations of social housing which, although it places people of diverse incomes in the same neighborhood, does little to guarantee affordability and eventual gentrification (Lawton & Punch, 2014).

Thus far, Dublin’s urban regeneration strategies have failed to consider the needs of the original residents who are displaced by the gentrification process. The city’s arts office reported that “at least 50 percent of all artist studios in Dublin have either closed or been displaced” from 2012 to 2016, following rents that doubled and tripled (Powell, 2016). The original residents that do remain may end up not having access to former gathering places or may not identify with their neighborhood’s identity. Claims to diversity unravel when, as stated by Lawton and Punch (2014, p. 870), “a predominantly design-oriented urban-space discourse [bequeaths] a planning model more attuned to reshaping and marketing city images and fostering a civic realm than dealing with the inequalities and tensions that also trouble cities”.

In 2017, fifteen years after publishing *The Rise of the Creative Class*, in his new book *The New Urban Crisis*, Florida describes the inequalities and tensions that ‘superstar cities’ struggle with (Florida, 2017). He describes five major factors contributing to this crisis: 1) the deep and growing economic gap between ‘superstar cities’ and other cities across the world; 2) high and increasingly unaffordable housing prices and staggering levels of inequality in most cities; 3) the disappearance of a middle-class; 4) the burgeoning crisis of the suburbs; and 5) the crisis of urbanization in the developing world (Florida, 2017, p. 6-8).

Figure 4: The Ha’penny Bridge at the River Liffey in Temple Bar. In this area urban regeneration preserved most of the existing historic architecture. (photo C. Chen / pixabay.com)



Figure 5: The Grand Canal Theatre in the Docklands area, is a striking example of contemporary architecture that diverges from the buildings of historic Dublin. (photo D. Mark / pixabay.com)



Dublin suffers in particular from what Florida calls the “urban land nexus”, a phenomenon in which the extreme economic success in a relatively small amount of land introduces competition among urban residents for space, creating winners and losers based on the amount of money individuals have (Florida, 2017, p. 9).

Through the lens Florida’s urban land nexus concept, the “winners” are large businesses and members of the Creative Class who have the financial means to reshape districts through real estate investments and urban regeneration. Those who do not have the financial means to participate in the new, transformed city are often pushed out through the gentrification process, moving to more affordable suburbs or smaller cities.

Conclusion

Urban regeneration in Dublin began in the 1990s as the government turned toward urban governance and private investment as methods of improving districts in the city. The Temple Bar and Docklands districts transformed with the energy of the Celtic Tiger era from blue collar, artistic, tight-knit neighborhoods to the cultural and contemporary centers of the city. The economic and cultural success of these regeneration efforts helped put Dublin on the map as a globally renowned ‘superstar city’.

The Temple Bar and Docklands districts were re-shaped according to global trends that include standardization, the ‘European city’ and the ‘superstar city’ models. Updated architecture and urban design elements were brought in responding to the expectations of global travelers, with an emphasis on historical, contextual, and community-oriented urban design. City policies adapted to changing economic conditions and embraced the rise of new businesses in technology and other “creative” ventures. Although economically successful, these policies resulted in making private investors the city gatekeepers, impeding affordable and accessible housing and spaces for low-income residents.

Without political will and clear policies and measures, the values, opinions, and needs of the full spectrum of Dublin residents can’t be respected, many of the problems caused by gentrification can’t be avoided (such as the conflict over public space) and, principally, low-income residents can’t be protected. Displacement pushes many residents from their original neighborhoods and those who remain no longer feel at home. Furthermore, an overabundance of privatized spaces leaves residents without places to gather, socialize, and even protest when they need to. Although urban regeneration in Dublin has brought in great economic benefits, the dominance of private interests threatens the diversity and identity of the districts that make the city special.

Dublin serves as cautionary tale of how centralized governments must balance the needs of transnational economic relationships, long-time residents of cities, and cultural identity. Major trade-offs must occur between big business and the professionals that work in transnational companies and the generational residents that have always called regenerated neighborhoods home. The competition induced by the urban land nexus sets up winners and losers based on wealth, but cities need the whole gamut of residents to function and prosper.

In particular, it is paramount for cities to manage the quantity and quality of affordable housing and truly public places and services that residents of all income levels and backgrounds benefit and thrive on. Regeneration of the Temple Bar and Docklands districts brought about thriving cultural centers, contemporary architecture, and international recognition to Dublin, but future urban planning efforts must focus on carving out more space for true public spaces and a diversity of residents to protect and enhance equity, inclusion, and city identity.

• • •

References

- Brück, J. (2013). Landscapes of Desire: Parks, Colonialism, and Identity in Victorian and Edwardian Ireland. *Spring Science + Business Media New York*, 17, 196-223.
- Crossa, V., & Moore, N. (2009). Innovating to Compete: Dublin as a Smart and Creative City. *Building Material*, (18), 84-88.
- Department of Foreign Affairs and Trade. (2014). Ireland in Brief. Retrieved June 12, 2019, from <https://www.dfa.ie/our-role-policies/trade-and-promotion/about-ireland/>.
- Department of the Taoiseach. (2018). About the Department of the Taoiseach. Retrieved July 20, 2019, from <https://www.gov.ie/en/organisation-information/0f55fb-work-of-the-department-of-the-taoiseach/#introduction>.
- Dublin City Council. (2005). *Dublin City Development Plan 2005-2011*. Retrieved July 29, 2019, from https://www.dublincity.ie/sites/default/files/content/development_plan/2005Plan.pdf.
- Dublin City Council. (2012). Your City Your Space Dublin City Public Realm Strategy. Retrieved July 20, 2019 from <http://www.dublincity.ie/sites/default/files/content/Planning/Documents/YDYVPublicRealmFinal.pdf>.
- Dublin City Council. (2016). *The Dublin City Development Plan 2016-2022*. Retrieved April 24, 2019, from <http://www.dublincity.ie/sites/default/files/content/Planning/DublinCityDevelopmentPla/WrittenStatementVolume1.pdf>

- Elmedni, B., Christian, N., & Stone, C. (2018). Business improvement districts (BIDs): An economic development policy or a tool for gentrification. *Cogent Business & Management*, 5 (1), 1502241.
- Florida, R. (2002). *The Rise of the Creative Class*. New York: Basic Books.
- Florida, R. (2017). *The New Urban Crisis*. New York: Basic Books.
- Kincaid, A. (2005). Memory and the City: Urban Renewal and Literary Memoirs in Contemporary Dublin. *College Literature*, 32 (2), 16-42.
- Kudla, D. (2018). Urban Authenticity as a Panacea for Urban Disorder? Business Improvement Areas, Cultural Power, and the Worlds of Justification. In Tate, L., & Shannon, B. (eds), *Planning for AuthenticITIES* (pp. 19-48). New York and London: Routledge.
- Lees, L., Slater, T., & Wyly, E. (2013). *Gentrification*. London and New York: Routledge.
- Lawton, P., & Punch, M. (2014). Urban Governance and the 'European City': Ideals and Realities in Dublin, Ireland. *International Journal of Urban and Regional Research*, 38 (3), 864-885.
- Temple Bar Cultural Trust. Meeting House Square. Retrieved from <http://www.meetinghousesquare.ie/index.html>.
- McGreevy, R. (2019). A history of Ireland for outsiders: From Henry VIII to the Troubles. *Irish Times*. Retrieved June 12, 2019, from <https://www.irishtimes.com/news/ireland/irish-news/a-history-of-ireland-for-outsiders-from-henry-viii-to-the-troubles-1.3816898>.
- McNeill, D. (2016). *Global cities and urban theory*. Thousand Oaks, CA: Sage.
- Parkinson, A., Scott, M., Redmond, D. (2017). Revalorizing colonial era architecture and townscape legacies: memory, identity and place-making in Irish towns. *Journal of Urban Design*, 22 (4), 502-519.
- Powell, N. (2016, June 06). The Dublin Property Boom and Its Disappearing Artists. *CityLab*. Retrieved April 24, 2019, <https://www.citylab.com/equity/2016/05/the-dublindocklands-propertyboom-and-its-disappearing-artists/484172/>
- Stafford, P. & Payne, D. (2004). The politics of urban regeneration in Dublin. *Urban Development Debates in the New Millennium: Studies in Revisited Theories and Redefined Praxes*, 91.
- Stamp, G. (2014). Neighbours across the sea: A brief history of Anglo-Irish relations. *BBC News*. Retrieved June 12, 2019, from <https://www.bbc.com/news/uk-politics-26883211>.
- Tate, L., & Shannon, B. (2018). Introduction: Planning for AuthenticITIES. In Tate, L., & Shannon, B. (eds), *Planning for AuthenticITIES*. Routledge.
- Taylor, C. (2015, January 15). Dublin is second best city for real estate investment. *Irish Times*. Retrieved April 24, 2019, from <https://www.irishtimes.com/business/commercial-property/dublin-is-second-best-city-for-real-estate-investment-1.2066009>.
- Thomas, Cónal. (2017). Less of the Docklands is Public Space Than You Think. *Dublin Inquirer*. Retrieved July 20, 2019 from <https://www.dublininquirer.com/2017/06/14/less-of-the-docklands-is-public-space-than-you-think>.
- Tranum, S. (2017, May 31). The New Urban Crisis, Reviewed. *Dublin Inquirer*. Retrieved April 24, 2019, from <https://www.dublininquirer.com/2017/05/31/the-new-urban-crisis-reviewed>
- Wonneberger, A. (2012). Diving Bells, Viking Street Names and Campshires: The Meaning of Locality Amidst Waterfront Renewal in Dublin. *Sociologus*, 143-170.

The Demand for Affordable Housing in US Cities: Considerations Towards Closing the Gap.

Allan Cooper

*Architect; Emeritus Professor, Architecture Department, Cal Poly San Luis Obispo.
Former member of the City of San Luis Obispo's Planning Commission and
president of the Save Our Downtown volunteer organization.*

Every US city is facing a growing and unsolved demand for affordable housing. This demand causes strong economic and social impacts that reflect on equity, sustainability, and the quality of life. Based on his long experience as an architect and an active member of San Luis Obispo's planning community, Allan Cooper reflects on how planning can respond to the housing crisis in more effective and environmentally appropriate ways.

Sixty-four percent of American households own their own home. Monthly mortgage costs for the typical U.S. home require seventeen and a half percent of the median household income. However, salaries needed to afford median home price mortgage payments in cities like San Jose or San Francisco exceed \$200,000 per year. Thirty-six percent of heads of households rent in the U.S. and more than 1/2 the nation's renters are cost burdened, i.e. pay more than thirty percent of their income on rent. There are nationally 9.4 million affordable housing units with an unmet demand for 2-3 million additional affordable housing units.

The price of city life

The price of city life is determined mostly by factors over which we have little control. The price of city life is primarily driven by the cost of raw land, the cost of construction and by what the market will bear. Construction costs are driven by the cost of labor and materials and the cost of complying with the life safety provisions of the building codes. Development costs are driven by the cost of consultants and the costs incurred through building permits, zoning and planning review.

But this is not a complete list of factors contributing to the high cost of living in cities. I will begin by listing additional considerations that contribute to the high cost of housing. I will follow this up with a list of housing types and funding strategies that ultimately fail to lower the cost of housing. I will refer to some time-tested models that do actually bring down the cost of housing. I will describe the zoning restrictions that currently make living in cities difficult. And, finally, I will end on a list of ways that zoning and good planning in our cities

can contribute to the healthy development of children and to a family-friendly environment.

What contributes to the high cost of housing?

Housing growth demands placed on infrastructure (water, sewer, roads, schools, parks, etc.) can be paid for through increased property taxes, a community services district or by raising the developer's impact fees. However, higher taxes increase the overall cost of living in a city and the developer's impact fees are often passed onto the buyer or renter. Job growth that outpaces housing production also increases the cost of housing. A regional approach to economic opportunity would result in locating jobs where there is already sufficient housing and infrastructure to support these jobs.

Climate change as it relates to land use and development can be addressed in five effective, albeit cost-intensive, ways:

- 1) Promoting compact urban form while avoiding the heat island effect. Getting to net-zero energy is extremely difficult for buildings higher than four stories. Tall buildings consume more energy to build and operate (for instance, elevators, air-conditioners, etc) and their design is inherently energy inefficient: more surface area is exposed to the sun and the rooftop space for solar photovoltaic cells (the cheaper solution) is proportionally smaller.

It should be noted that high densities can be achieved without building overly-tall buildings (i.e., exceeding four stories). However, housing costs rise with increasing density: one percent increase in density pushes renters' housing cost by 21 percent.

2) Climate change dictates that we must reduce pressures to build on undeveloped, agricultural, and forested land. These are important to protect wildlife, guarantee crops, recharging the aquifers, and carbon sequestration. Nevertheless, infill housing costs more than housing built on raw, flat land, particularly arable farmland.

3) With climate change in mind, we should choose to reuse existing buildings and infrastructure rather than demolish them to be replaced with new buildings. Not only do existing buildings contain irreplaceable embodied energy, but they are already served with existing infrastructure. A study found that the construction of a new house generated 50 tons of CO₂, but the renovation of an existing house emitted only 15 tons. However, adaptive reuse (as opposed to restoration) can be more expensive than new construction. Relative to new construction, renovation generally has a higher proportion of labor expense though there is a lower proportion of material expense.

4) Discourage growth in areas that are vulnerable to impacts related to climate change. However, housing built in flood plains and low lands is usually cheaper.

5) Stop removing carbon-sequestering trees when making way for new development. Stripping away vegetation can alter drainage patterns, increase runoff, pollute ground water and pollute the air with particulate matter causing health problems. However, designing development and buildings in a manner to avoid trees is more costly.

Nevertheless, we must assume these short-term cost burdens because the long term costs of ignoring climate change will be prohibitively high.

Housing types and funding strategies that fail to lower the cost of housing

There are eight popular strategies designed to reduce the cost of housing, though most of them are not achieving that goal.

1) Tiny homes on wheels, whether owned or rented, are placed in qualifying backyards. However, the cost per square foot for tiny homes on wheels is generally higher than for conventional home construction. Moreover, tiny homes on wheels are a poor investment as they depreciate (like R.V.'s) over time.

2) Live-work lofts combine offices with residential and are usually located in commercial/manufacturing zones. However, these can be costly because these units must adhere to stricter ADA and fire codes.

3) Single room occupancy or efficiency units claim to be affordable-by-design though they are hardly family-friendly.

4) Homeshare housing facilitates matches between elderly home providers and those needing a room. However, this housing form will appeal to a very narrow user group and is, again, not suitable for families.

5) Up-zoning promises to increase housing supply by virtually eliminating all single-family zoning. However, new housing seldom caters to moderate income earners and usually promotes gentrification or (as in college towns) "dormification" in the form of single room occupancy units.

6) Affordable housing incentives offered to for-profit private sector developers:

- *Relaxing parking standards.* This is designed to reduce the developer's costs. However, there is no guarantee that these cost savings will be passed on to the consumer. Also, families with children often depend on easy access to cars.
- *Increasing building height limits.* However, buildings higher than 3 stories are neither environmentally sustainable nor are they family-friendly.
- *Waiving environmental studies and traffic impact studies.* However, significant environmental negative impacts will be overlooked and will remain unmitigated.
- *Increasing densities through density bonuses and reducing setbacks.* Offering density bonuses to the private sector will undercut funding earmarked for housing authorities. Increased height and density inflates the land values around the site as it sets precedents that increase development pressures on older more affordable surrounding housing stock
- *Accelerating permit approval time.* However, this invariably leaves out citizen engagement.
- *Inclusionary deed-restricted housing.* This mechanism requires most new residential and commercial development to contribute a low percentage of affordable housing. This housing is deed/resale price restricted, either by constructing affordable housing with the project or by paying an "in-lieu" fee to an affordable housing fund. However, the standard pro-ratio of affordable housing (for very low income, 5%) is set far too low to address the demand and rarely does this housing fit into the "missing middle" housing type that is more affordable and more suitable for families. Also deed-restricted housing is seen as a poor investment compared to market rate housing.

7) HUD rental assistance programs include subsidized Section 8 private sector housing which can be project- or tenant-based (providing 1.25 million renter households). However, developers resist participating in these programs because landlords dislike the scrutiny they receive and paperwork they're required to do.

8) Low income housing tax credits can also bring down the cost of housing. However, developers have found loopholes to evict low-income tenants and convert properties to market-rate apartments.

Models that bring down the cost of housing

We should be shifting our focus back to non-profit ownership and away from subsidies to for-profit private sector developers. Nonprofit ownership or control offers the best protection by ensuring that the property will always serve low- and moderate-income people.

Currently the government does not provide enough affordable housing and for-profit builders will not keep rents low. There are five time-tested types of strategies for bringing down the cost of housing.

- 1) The public non-profit housing authority where the housing is owned by a government authority.
- 2) The private non-profit (or non-profit/local government partnership) housing associations with a special focus on preserving and rehabilitating existing affordable housing. The advantage of these revitalization projects is that they tend to be politically viable, avoid local resident resistance, maintain the existing housing stock, and accomplish these objectives at substantially lower costs.

For example, a typical new construction affordable housing project in Southern California may cost \$110,000 to \$150,000 per unit while the typical revitalization project should fall in the \$50,000-\$75,000 per unit range because land costs are not factored in). This can lead to co-living, i.e., converting former commercial space or motels into co-living centers. Nevertheless, adaptive re-use can be costly.

- 3) Zoning more land to allow for the creation of new mobile/manufactured home subdivisions. This is a simple way to increase our inventory of affordable housing.
- 4) Major employers could be saddled with the responsibility of housing their employees (such as companies like Google, Facebook and Apple).
- 5) Rent control legislation may be coming through at the

California state level. We will be looking for a 2020 ballot initiative that will expand local government's authority to enact rent control on residential properties. Rent control addresses affordability without ignoring growth management (i.e. carrying capacity) objectives and without placing additional burden on existing infrastructure.

Zoning restrictions can make city dwelling difficult

Zoning and planning review costs comprise only 4.5% of the total costs of development passed on to the consumer. Zoning restrictions primarily address issues of safety, compatibility, privacy and density. Zoning restrictions are designed to make city dwelling less difficult, not more difficult. However, there are exceptions to this particularly with regards to affordability and convenience.

- 1) Cities are phasing out zoning set aside for mobile/manufactured home subdivisions in spite of the fact that mobile homes remain a viable option for affordable housing.
- 2) Community service districts and high development impact fees end up passing the costs for new infrastructure onto the buyer or renter.
- 3) Relaxing parking standards make it difficult for families with children who depend on easy access to cars. It can also result (particularly in small cities that lack adequate public transit) in increased traffic congestion.
- 4) Zoning that encourages "dormification" works against the concept of family friendly housing. This includes waiving density restrictions for efficiency or smaller units

How can planning contribute to a healthy, family-friendly urban environment

Zoning ensures that families with children have the services and infrastructure they need. An unregulated, free market approach to urban development will give short shrift to these much needed services and infrastructure as they are perceived by developers as unnecessary add-on costs.

According to UN demographic, today over a billion children are growing up in cities. The planning and design of cities and communities can impact the healthy development of children. Planning for vulnerable groups such as the disabled and elderly should also include planning for children. The following is a list of services and infrastructure that families (including children) require:

- Walkability;
- Bicycle friendly;

- Accessible and efficient public transit;
- Comfortable sidewalks;
- A network of neighborhood parks, greenways and community gardens;
- Car-free urban spaces buffered from vehicular traffic;
- Fine-grained mixed-use;
- Housing that accommodates day-care, play areas, and communal spaces;
- Housing stability (fewer renters, more home ownership);
- Medium density housing (3 stories or lower);
- Safe environments (eyes-in-the-street, lights, etc);
- Citizen engagement: residents included in local decision-making. Include children, retirees, minorities, etc.

In conclusion, what we do know is that increasing the supply of housing by infusing the market with market rate rentals does not lead to affordability. In fact, it worsens the affordability crisis and exacerbates displacement of low-income, long-term tenants. California cities are being held hostage to a pro-ratio allocation system that supplies a paltry number of workforce housing units in return for too many high-end housing developments and too many tall buildings housing mixed use commercial development.

Experts in housing agree that, given the global financialization of housing and the way real-estate investments operate, the private sector will never adequately address our cities' chronic shortage of work force or affordable housing.* This is particularly true in the US and in California where the shortfall would have to be primarily met through public assistance.

• • •

* See the reports on adequate housing by the United Nations Human Rights Commission at: www.ohchr.org. This was the main point made by Rachel Rolnik, special rapporteur on adequate housing for the UN (2003-2007), in her presentation to the San Luis Obispo's section of the American Planning Association (08/22/19) (her presentation features in Special Events section of this FOCUS).

The Challenge of Attracting Good Design in a Suburban Environment: The Case of Oviedo, FL.

Teresa Correa

*Architect and planner, PhD., AICP;
Development Services Director, City of Oviedo, Florida.*

One of the most challenging goals of planning is to promote appropriate architecture and good design, not least for the subjectivity and changing nature of this fundamental quality in cities. Teresa Correa, planning director in Oviedo, Florida reflect on her experience and the city's efforts in implementing a process and appropriate planning instruments that may allow the city to move away from its suburban-type of environment towards more a design that promotes better aesthetics and a stronger sense of place.

When I became the Development Services Director for the City of Oviedo in 2013, I was surprised to learn that the city's civic gathering place was the parking lot at the local mall which, like other suburban malls in the US, was not doing so well. I was also astounded that the new local (chain) gas station was considered an icon and a design benchmark in the city, with its gas pump canopy pillars covered by a tacky stone veneer (Figure 1).

From talking to local politicians and other staff planners, I realized that there existed a clear desire and an interest to enhance the city's aesthetic qualities. However, the challenge was how to attract good design projects in an environment where the *status quo* encourages plans that are familiar to developers and builders? How to invite good projects in a typical suburban community that currently attracts chain brand stores and fast-food restaurants, which are typically committed to investing the minimum and adopt the same architectural projects for practically everywhere in the country? How to incentivize developers to step up their game while the land is still cheap and in an environment that does not seem to value design?

Introducing the City of Oviedo, Florida

The City of Oviedo is located in Seminole County, Central Florida, housing a population a little shy of 40,000 residents. It is within the metropolitan region of Orlando, on the east side, forty minutes away from the Orlando theme parks, one hour from the Space Coast, and twenty minutes from the University of Central Florida (UCF), the third largest in the country. Oviedo was incorporated in 1925 and has been traditionally a bedroom community.

Since the 2008 recession, the city has been attracting more commercial development and is working towards shifting the 80% residential, 20% commercial ratio to a more sustainable 60% residential, 40% commercial ratio.

The city is also attempting to attract more mixed-use development and change from a traditional suburban community to a more urban environment. Oviedo city limits encompass an area of 16 square miles, roughly half of which is comprised of planned unit development neighborhoods (PUD), with the typical suburban design of residential cul-de-sacs and strip malls along the arterial roads.

Figure 1: This gas station and its tacky stone veneer was one of Oviedo's a design benchmarks in 2013. (photo by the author)



The First Attempt to Address Architectural Design

The City of Oviedo's first attempt to enhance the city's architecture quality was to approve a new section in the Land Development Code (LDC) regulating architectural standards for office and commercial development in 2006. This LDC section established requirements over several design elements, such as massing, wall articulation, fenestration, roof modulation, the prohibition of certain finishing materials, and the maximum allowable number of colors in a façade --although no color palette was included. For each of these elements, the LDC defined the requirements to be met in each type of façade, suggesting how the architect could address them. For instance, the section required that a main façade needs three articulation elements, and presented a range of options to comply which the architect could pick from.

At that time, since there was no particular review process specifically for architecture, architectural plans were approved in conjunction with the site plan. Review was conducted by city staff through the regular project application process. If the requirements were not met, a "deviation process"¹ needs to be requested and evaluated by the city, and mitigations can be proposed. The LDC has some flexibility that allows creative designs upon proper justification.

Project approval would be provided by either the staff or the City Council, depending on the level of deviation requested by the applicant. Staff has the authority to administratively approve up to 20 percent of deviation from any quantifiable requirement; above that, the proposal has to be considered by the City Council for approval. It was no uncommon, however, for City Council members to influence the process informally by requesting or even attempting to require design elements and materials that were not supported by the LDC. Staff would frequently be placed in an uncomfortable position since they could only require compliance to standards in the code. Additionally, if the project was submitted to City Council approval, there was always the risk of Council members "designing" the project during a public meeting. There was a great deal of stress and uncertainty in the approval process.

The Limits of City Regulations

Although the idea of establishing architectural standards in 2006 helped trigger a discussion on architecture and design, the LDC's standards were too general and restricted only to commercial and office development, and the code's impact was limited. In practice, some projects were submitted and built in compliance with the code but fell short of providing

the expected results or, in other words, good architecture. This was our first hard lesson: mandated architectural standards can help influence projects to be more aesthetically appealing, but good architecture really comes from good design professionals and clients that are committed to designing projects with good form and function that are sensitive to their context and that are meant to last.

Another realization was that it was necessary to establish two sets of standards: one of a qualitative nature defining the intent of the LDC's standards, and the other of a quantitative nature establishing measurable standards by which to fulfill the LCD's intent. Therefore, if a project deviated from the quantitative measure but met the qualitative measure (the intent of the Code), Staff could recommend the deviation and, consequently, the project. The office building in Figure 2, approved in 2007, demonstrates that a project could comply with the LDC's architectural standards but still not meet its intent, which was to encourage good design.

Rethinking the Standards

When City Council Members decided that the city needed to revise the LDC architectural standards, the first step was to invite residents to provide feedback on architectural character and urban design. A visual preference survey was used to solicit input and preferences on architectural style, building scale, height, colors, urban furniture, and so on.

A total of 540 residents submitted their responses during a two-month period. After the results were compiled, residents had an opportunity to provide comments which were also shared with the City Council. The survey showed a general concern that Oviedo was growing too much and too fast. There were also suggestions that the city should be guiding development

Figure 2: This office building, approved in 2007, complies with the guidelines but it is not a good design. (photo by the author)



¹ In the City of Oviedo, a variance to a measurable zoning standard is called a deviation.

to redevelop vacant building/lots before allowing new areas to be developed, as well as additional comments requesting specific land uses in certain locations, such as upscale restaurants and retail. Residents expressed both a desire to welcome urban amenities and, at the same time, to keep the small-town character of the city. No particular architectural style was preferred, although a less traditional character with more articulation and materials was preferred. The survey also showed that the residents were ready to welcome different housing typologies, such as townhomes and mixed-use development.

After the results were compiled and analyzed, staff organized one-on-one meetings with each City Council member. Although these meetings revealed the different levels of engagement toward design of each individual member, some common themes were identified: City Council wanted to have control over the approval of the project, and that the design included minimum percentages of what they perceived to be a more upscale choice of materials—essentially, brick or stone on primary and secondary façades.²

The Surprise: Zoning in Progress and Staff in Panic

After the individual meetings with City Council members, staff organized work sessions with the Land Planning Agency and the City Council to brainstorm standards for specific development types: townhomes, multifamily, office and commercial, mixed-use and parking garages. These sessions' goal was to wrap up the results of the visual preference survey, the individual discussions, and the existing Code and discuss ideas for a new direction and proposed standards.

A total of three work sessions were organized with the City Council. They were open discussions on the proposals in general terms, followed by specific discussions on issues that the previous individual meetings had identified as sensitive. Staff fundamentally sought for directions from the City Council and raised various questions. Should the Code relax some of the parking requirements to stimulate a more urban environment, or even provide for maximum parking standards? Should gated communities be prohibited? Should parking be allowed in front of buildings as it increases the distance that pedestrians have to walk to reach the building entrance? Should the Code provide for specific ways to mitigate deviations from the quantitative standards? To help in the discussions, staff presented some ideas for standards in draft format only and definitely not ready to be applied and enforced. For instance, some of the draft standards were

proposed as a range, and some had not yet been tested in a city similar to Oviedo in scale and character.

After the last work session, the City Council members were so excited about the proposals and draft standards that they declared them to be zoning in progress (ZIP) in December 2015. The ZIP is an instrument used when the city has urgency in applying a standard or a new land use use, and declare it to be in effect temporarily, before the proper code amendments are finished and proposed by staff, reviewed and approved by the appropriate channels with the associated public hearing processes established by the Statutes. Staff then had to deal with and enforce fluid standards, some of which already appeared too bold to implement.

Parallel to the discussion on standards, Staff managed to approve a new review and approval process, streamlining applications, as well as the Architectural Design Order (ADO), an application form that required approval by the City Council even if the project was compliant with the Code and no deviations had being requested.

Panic was in the air, not only among staff who had to review plans with two sets of standards (one from the Code in effect and another from the work sessions, declared ZIP), but also among the development community who did not have clear idea of which were the rules. The duration of the ZIP was a little over a year, longer than originally planned. During this time staff had to reassure developers and applicants that the review was a collaborative effort. It was a hard but interesting process to have staff and developers/applicants discussing the projects and not focusing so much on a standard itself, but on the Code's intent.

However, what initially seemed to be a problem actually became a great way to test, in practice, if a standard would work or not. It also allowed staff to finetune how to present the standards in the Code and led to the decision that more graphic and visuals representations were needed. While the ZIP was in effect, ten projects were submitted and approved. Not a single one of them was controversial and all of them were approved by City Council without any public opposition.

Standards that Communicate the Importance of An Attractive Environment

Places send messages to people, both through natural and built environments. It is the quality of the built environment and its relation to the natural environment that makes places attractive. As cities cannot recreate nature, the most they can do is to protect and enhance the natural environment. But they can steer the built environment. The design of our built environment is one of the most dominant influences on

² The code defines primary façades as those facing the right-of-way or where the primary entrance to the building is located. Secondary façades are those that have secondary entrances to the building and/or are not visible from the right-of-way.

the quality of life. We perceive our physical environment by experiencing streetscapes, parks, sidewalks, trails, intersections, plazas, and their relationships to buildings. All these elements help shaping the public space.

The typical images of suburbia, with their big-boxes, single-use malls, car-oriented design, and lack of connectivity, generate anywhere places that lack identity, vibrancy and appeal. These are not places that most people perceive as worth caring about. Considering this, one of the exercises that staff had to undergo before working on proposals for new standards was to identify which specific features of suburban design needed to be addressed.

The suburban environment poses some interesting design challenges: buildings are usually set way back into the property, separated from the street by several rows of parking. Buildings are freestanding in the lot with all or most elevations visible from the street or from the parking lot, even though not all of them get the same level of architectural care as the main façade. Business signs, usually not very aesthetically appealing, tend to be huge and compete with one another. Sidewalks, squeezed between wide thoroughfares and parking lots, are devoid of pedestrians and have no vibrancy. Fake architecture elements try to disguise the buildings' huge mass, blank walls, and flat roofs. The absence of window-shopping and the focus on vehicular access, generate an architecture of with limited fenestration and buildings oriented to the parking lot. Malls, office parks, and drive-throughs are plenty but there are few places where you can park your car and walk leisurely to different uses. These are important challenges to consider because they go well beyond traditional architectural standards. Therefore, in order to reach for a more appealing design, standards have to go beyond the building itself.

Figures 3 and 4: Projects for the Sanford Brewery and an office building. (images courtesy City of Oviedo)



On January 7, 2017, the City Council approved Article VIII of the LDC, which provides for urban design and architectural standards for every new development excluding single-family homes, duplexes, and institutional uses. It defines where the standards are applicable, the deviation process, and a list of policies from the City's Comprehensive Plan that may serve as mitigations. The Article deals with site design (streets and alleys; open space; landscape; lighting; parking; and signage); building siting (building orientation; lot dimensions; and parking); building form (articulation and design; roof modulation; fenestration; massing; materials; colors, and height), and accessory structures (fences, service areas; mechanical equipment; and solar panels). Each Code element offers different ways to achieve its intent and the number of requirements for each façade depends on its classification.³

The Domino Effect

Although the approval of the Code's architectural standards was preceded by a lot of apprehension, the positive effect of the new architectural and urban design standards was visible right away. As soon as the first projects were submitted, it became apparent that they reflected an increase attention to design quality. Although it is hard to single out the standards as the main or only reason for attracting better design, it certainly helped, since it promoted a discussion about architecture. Once the new projects started to be approved, the market then played its course, since staff could show developers what they were competing against. Figures 3 to 6 show examples of the new projects approved and/or built in Oviedo after the adoption of the LDC Article VIII.



³ The City of Oviedo LDC can be accessed at municode.com. Article VIII is the one regulating Architectural and Urban Design guidelines.

Concluding Remarks

The commitment to promoting good design is an ongoing daily journey. The City of Oviedo is dedicated to inviting new developments that protect the natural environment and enhance the built environment, creating places that are meaningful and possess aesthetic quality. The following is a list of takeaways from the city's perspective on the process of developing and applying the new architectural and urban design standards.

Takeaway 1: Making time for design is the first rule for improving design. That means taking time to discuss the different aspects of a good design and examples of good projects with Staff, Board Members, Developers, Builders and Residents. These conversations are crucial in pre-application meetings, when Staff and potential applicants discuss ideas for projects. During the review process, Staff not only identifies areas of concern, but also proposes possible solutions, to applicants. At the Development Services Department, boards depicting approved projects on the office walls illustrate to future applicants what is expected from them.

Takeaway 2: Acknowledging that good design comes mostly from good architects standing behind good projects, encouraged by good City standards. In the City of Oviedo, we stress this to everyone, particularly City Council members. The city's intent in having architectural standards is not to design projects for the applicants. We rely on the applicants' professionals. The main message that the LDC article on architectural and urban design standards conveys to the public is that design matters to the city, so developers/builders have to bring good architecture to the city.



Figures 5 & 6: The Outback restaurant, and the Stonehill plaza. (photos by the author)



Figures 7 & 8: The Food Factory project, and the Strand II mixed-use development. (images courtesy of the City of Oviedo (7) and photo by the author (8)).



Takeaway 3: Local rules should be structured to embrace both qualitative and quantitative standards. This is important because no set of standards will be able to encompass the complexities and subjectivity of good design. So, if a particular standard is not respected but the intent of the Code is, Staff feels comfortable in recommending a deviation and the project's approval.

Takeaway 4: Design standards should embrace more than the building envelope. Urban design elements, such as building orientation, parking location, public or semi-public spaces, landscape buffers, landscape parking islands, pedestrian circulation, signage, urban furniture and public art are crucial elements to achieve a vibrant, inviting and attractive place.

Takeaway 5: Standards should prioritize the pedestrian as the main final user as opposed to the car. This seems like an obvious concept but it is particularly important in suburban communities. It is a needed paradigm shift. Good design is not only good for the soul; it also affects people's life style, their health and safety. Safe access points, crosswalks, sidewalks, benches, pedestrian lighting, and landscaping (crucial in hot climates like Florida's) are important aspects in considering a change of habits. For years, Orlando metro area has been ranked by Smart Growth America as the region with the most dangerous environment for pedestrians. And according to the 2019 Dangerous by Design report, it still is number one. Design that values pedestrians, bikers and scooters along with a good education campaign can help provide a safer and healthier environment.⁴

Takeaway 6: City Staff needs to be prepared to negotiate with architects, developers, and builders. It is important to keep the final goal in mind: good design. So, if one elevation is hidden from the public view but the code has specific architectural requirements, Staff should keep the big picture in mind and be ready to trade for elements in façades so that are visible from the public realm, the focal point of the review.

Takeaway 7: Cities should be strategic about what mitigations to require to possible deviations requested from Code standards. One possibility, in cases of requirements that are hard to implement, is to request from the applicant something that is encouraged by city's policies. In the City of Oviedo, for instance, the LDC allows a contribution to the public arts fund as mitigation to deviations. The idea is to enhance the public realm to compensate for a missing design element in the project. Staff's recommendation should be based on the bigger picture and on special projects conditions.

Takeaway 8: Codes should allow flexibility for creative designs. If the design is creative and good, but was not anticipated by the Code, it should be considered for approval. The goal is not to have all buildings complying with the Code and looking the same, but to implement the Code's intent: innovative and good design.

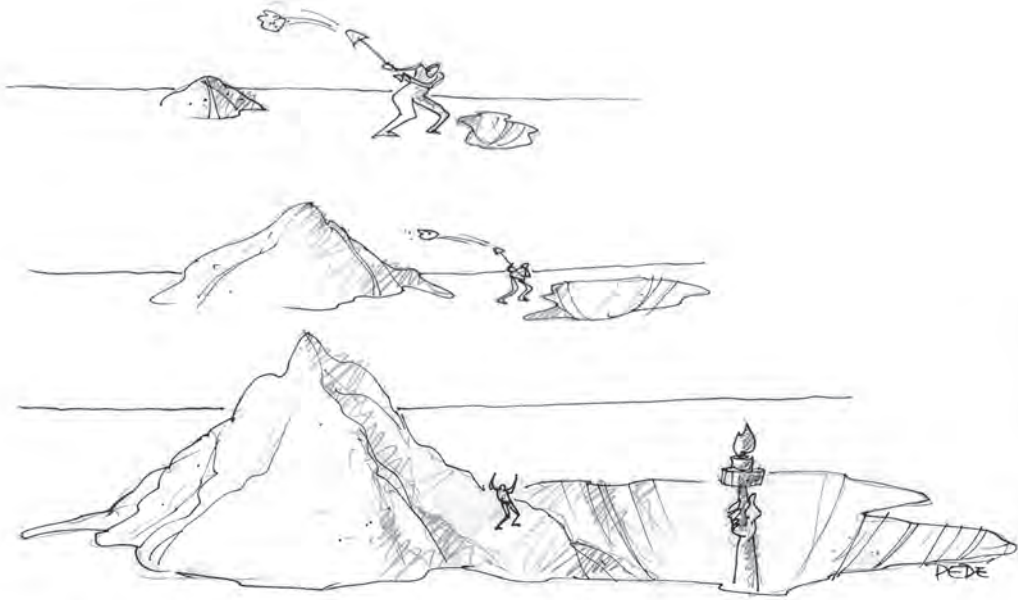
Takeaway 9: There is the ideal, and there is the possible: as in many other aspects in planning, one should aim for the ideal but work with what is possible. Sometimes changing a culture seems like an overwhelmingly difficult task, but we have to start somewhere. It is important to keep moving in the right direction, even if one needs to start small.

Takeaway 10: It is crucial to invest in having design professionals as City Staff. Cities need to have architects, landscape architects and urban designers in their teams or, at least, planners with some design background if design is going to be valued and pursued. The City of Oviedo had two architect planners in its team when developing the architectural standards, and also hired an architectural firm for a peer review of the proposed standards as well as to provide all the graphics in the Code.

To conclude and to illustrate how difficult is the challenge of promoting good design in cities, which ultimately creates value, while this article was being written, a proposed Florida House Bill (House Bill 459) was being drafted by state legislators, proposing to preempt cities in Florida from being able to regulate urban and architectural designs. Hopefully, this will not move on...

• • •

⁴ See the Dangerous by Design report at <https://smartgrowthamerica.org/dangerous-by-design/>.

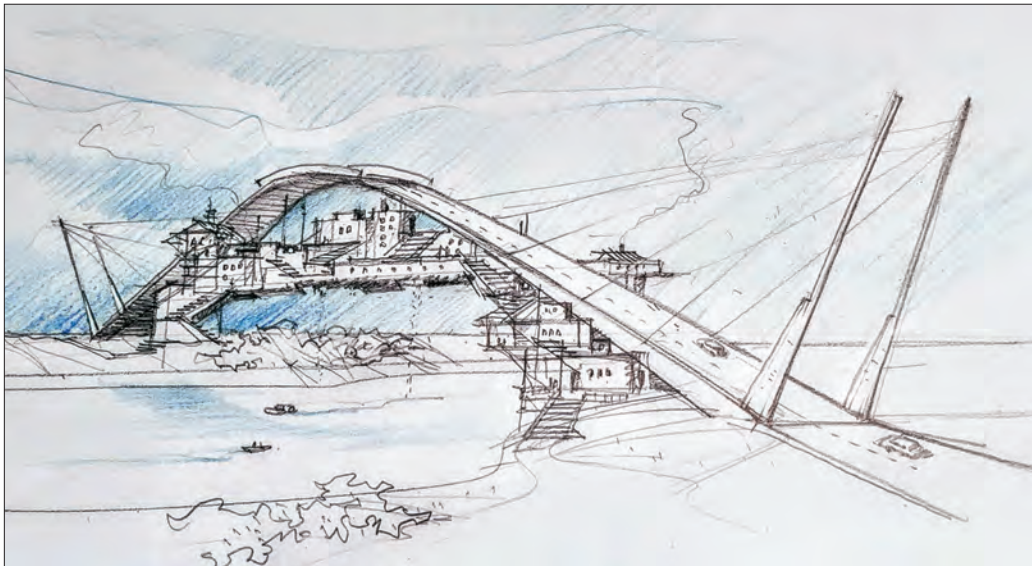


"Archeological Dig"

by **Eduardo (Dedé) Rocha**

Architect and professor at the School of Architecture and Urbanism, Federal University of Rio de Janeiro, Brazil. Dedé teaches drawing and design, and is an accomplished artist and illustrator. Seeing architecture and urbanism with a satirical eye, he constantly collaborates with FOCUS.

"Impromptu Housing"



FOCUS 16

CRP Faculty and Student Work



Rethinking Downtown Glendora, CA: Linking the Village to Route 66 as Light Rail Comes to Town.

Vicente del Rio

PhD., Professor, City and Regional
Planning Department, Cal Poly.

Hemalata C. Dandekar

PhD., AICP, Professor, City and Regional
Planning Department, Cal Poly.

In the Spring Quarter 2019, CRP's Urban Design Studio III was engaged by the City of Glendora to conceptualize future development between Glendora's historic Route 66, the future Metro station, and the Old Village. Professors del Rio and Dandekar report on this learn-by-doing process, the final student proposals, and their utility for community engagement and the city's planning efforts.

The City of Glendora, located in north-eastern Metropolitan Los Angeles, expects significant changes in a couple of years when the extension of the Metro Gold Line light rail to Montclair and its station in downtown Glendora are finished. When completed, Glendora will be connected by rail to Downtown Los Angeles and several other cities. The area surrounding the station is predicted to receive new vehicular traffic from commuters needing to park and ride. An increase of development pressures for denser uses in the immediate vicinity of the station is also anticipated. In Spring Quarter 2019, the City of Glendora Planning Department, under the directorship of Jeff Kugel, charged Cal Poly's City and Regional Planning Department third-year urban design studio (CRP 341 Urban Design III) to develop a concept plan for the area between the historic Route 66, south of the station, and Glendora's Old Village, to its north (Figure 1). The area includes a mix of public and private properties and land uses. The class was to come up with alternative design visions for the area so that developments around the new station could benefit the city and the community, support and encourage activities and connections to the new station, and enhance linkages between the Old Village and Route 66.

The studio, consisting of twenty-four students supervised by Professors Vicente del Rio and Hemalata C. Dandekar, took place from April 3 to June 7. The student work consisted of a pre-planning phase, a rich and broad-ranging visioning exercise in which the students' developed creative and dynamic options for this area of Glendora. The hope was that the student would



Figure 1: The project site in Glendora.

¹ For details of the Metro Gold Line and the Glendora Station, see https://foothillgoldline.org/cities_stations/glendora/ (retrieved October 14, 2019).

generate alternative development visions that might capture the imagination of the community and different stakeholders, particularly those who would be using the station and help stimulate development commitments and direct investments.

The final report, "Rethinking Downtown Glendora, CA: Linking the Village to Route 66", is a compilation of the work completed by the students during the quarter. During this time students engaged in rapid information collection and data gathering, an assessment of the city and the project area's development potential, conceptualization and visioning, and the development of a set of planning and urban design proposals to contribute to the city's long-range planning efforts. The diagram in Figure 2 depicts the ten-week process delineating the discrete activities the students engaged in and identifies key points of contact with the City of Glendora staff, community, and planning commission. The purpose of these contacts was to obtain comments to student findings, concepts, and final visions.

The students organized into six teams of four to develop discrete urban design concepts for the project area. A key common goal in all alternatives is the strengthening of the link between Glendora Old Village to Route 66 while providing the area with its own character and dynamics. An array of possibilities rather than implementable plans were provided, that stakeholders, community, and city might assess and judiciously select from for further exploration and development.

Background Research and Site Assessment

After a week of in-class studies of existing documents, plans and projects for Glendora, the class went on a two-day visit to the city and the site to complete several site-related tasks, including:

- Meeting with City Planning staff, representative of the City Planning Commission, and the transportation department;
- Windscreen survey of the whole city, focusing on four major factors: imageability, identity, linkages, and humanscape (social and economic);
- Walkthrough survey of the project site focusing on land-uses, circulation, social and environmental factors in addition to the windshield survey described above.
- Detailed lot-to-lot survey and photographs on developmental conditions and potential;
- Prearranged meetings with stakeholders, including administrators at Foothill Presbyterian Hospital and a group of students at the largest public high school;
- Participation in the popular City-sponsored Easter Egg Hunt at two city parks to display posters, and complete surveys and in-field interviews with community members.

An 18-questions survey on community preferences for development in the project area was designed using Survey Monkey. The students completed hardcopies during their meetings with stakeholders and encouraged community participants in the Easter Egg hunts to complete them on site or on line. During the event, posters announced the class work and fliers were distributed for those who would prefer to complete the survey on-line later. The city's official website displayed an announcement about the survey with a link to it during a two-week period. The level of response obtained—a total of 488 responses were collected—was excellent and exceeded expectations.

The information collected through these various methods was carefully reviewed by student teams on their return to the

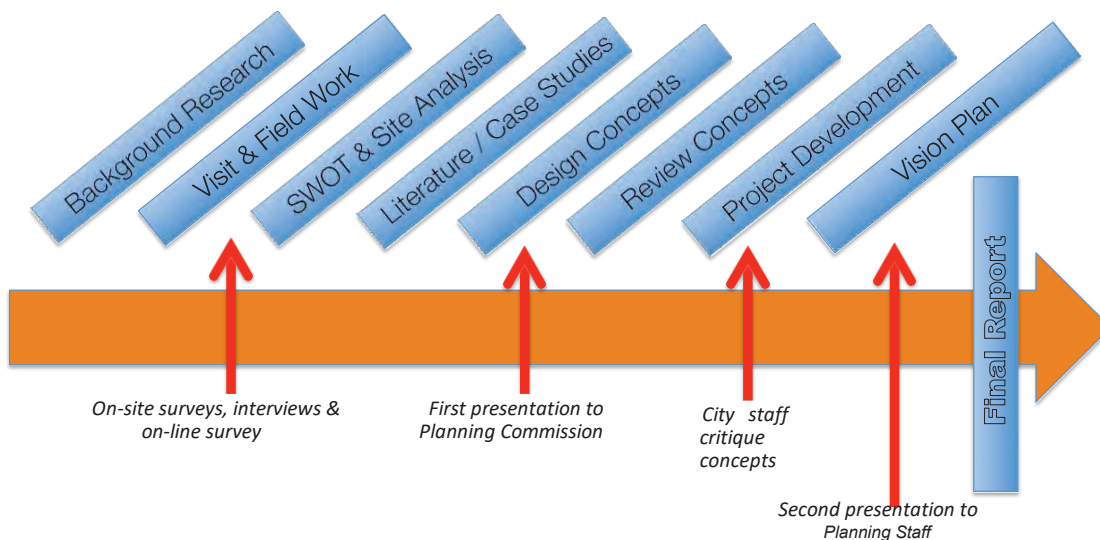


Figure 2: The studio process.

studio. The field visit provided a holistic sense of the quality of the city in physical terms and mingling with, and hearing from, residents and visitors whilst interviewing and surveying provided a people-oriented perspective. A SWOT (strengths, weaknesses, opportunities, and threats) analysis was then developed in class utilizing the same urban design qualities used to structure the field studies (imageability, legibility, linkages, and humanscape). The SWOT chart was translated into a map format indicating specific areas, key nodes, interaction points, development potential, points with significant views of the mountains, existing and potential linkages and circulation. This was a fundamental step towards informing the students on possible directions for their visions, goals, and concepts for the project area.

Vision and Concept Development

This phase started with a discussion around what urban design principles should be considered as the framework for visioning and project development. It was followed by the student teams procuring and analyzing comparable successful projects, often in cities of similar size and characteristics, that could provide lessons and inspirations. A total of 12 case studies were analyzed through the lens of the adopted urban design principles. All the teams addressed the whole project site to develop their proposals for. A concept development phase started with each team identifying alternative visions, goals, objectives, and design concepts and coming up with alternative concept plan diagrams and preliminary proposals for physical development, distribution of land-uses, and a basic circulation network.

Team concept work and diagrams were presented to Glendora's city planning staff through the video conferencing platform Zoom. Staff provided immediate comments and reactions following each team's presentations. They followed up with detailed written comments, overarching and specific to all six teams and specific comments to each team. The comments were extremely useful in guiding development and evolution of alternatives in the next phase. Students reflected and revised their proposals based on the feedback and the collected community opinions.

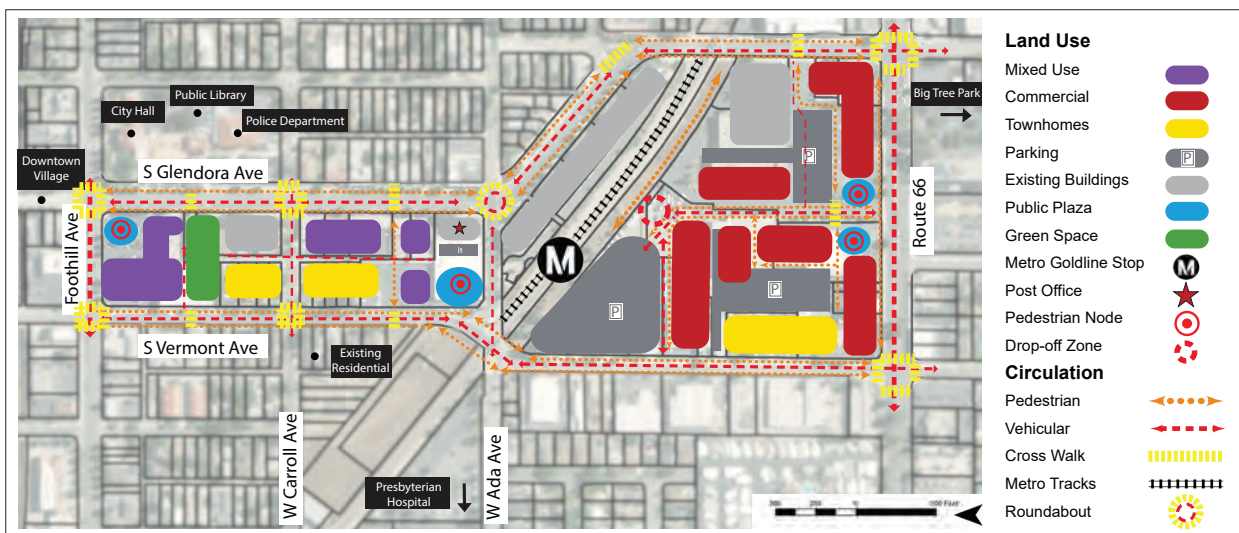
Plan Development

In the studio's final phase, the six teams developed proposals represented through a written report, plans, illustrations, and 3D renderings (see figures from the six proposals). These included the following elements: a) schematic illustrative site plans; b) indication of a phased development approach (description and plan views); c) land-use map and development pro-forma; d) vehicular, bicycle and pedestrian circulation; e) street typology

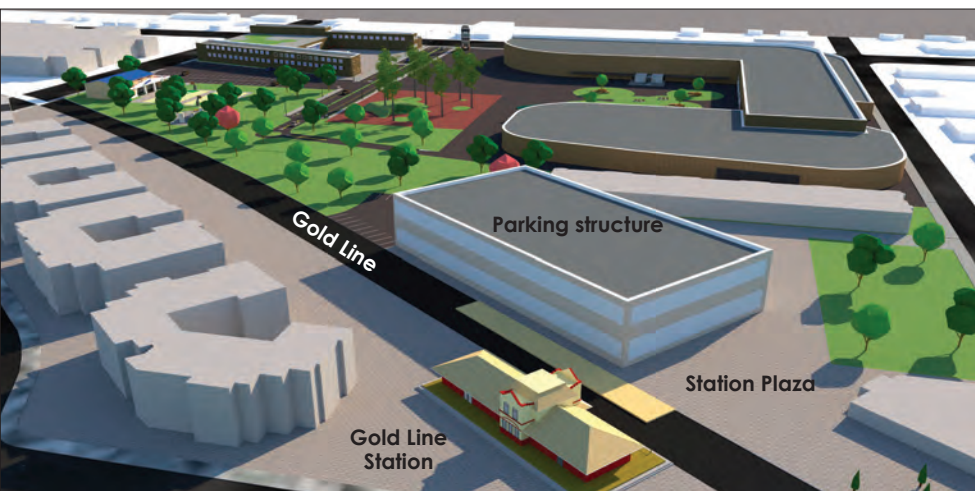
(with sections); f) open spaces; g) design ideas for the public domain; and h) design ideas for the private domain.

Although the six alternative student projects were substantially different from one another, the following key design issues emerged as major common themes and ideas:

- Redesigning Glendora, Vermont, Foothill, and Route 66 to increase walkability, pedestrian safety, and bicycle infrastructure. This include: wider sidewalks; bulb-outs at pedestrian crossings; more lighted intersections and yield signs; and comfortable sidewalks with trees, seating, and pedestrian lighting.
- A well-designed signage system for pedestrians and motorists. This would facilitate: wayfinding; identity and placemaking; and implementation of gateways.
- Developing the south-west corner of the intersection at Foothill and Glendora, at the southern end of the Historic Village, to generate a gateway and enhance connectivity to the south along Glendora Avenue. Alternatives suggested include: creating a public plaza echoing the one fronting City Hall, enclosing the site corner at the intersection with three-story commercial building with residential on top to echo street fabric along Foothill, installing a monument or a fountain, and an informational totem.
- Addressing the development potential of the block occupied by the US Post office, to connect Glendora to Vermont and facilitate crossing the rail line on Vermont to access the planned Metro Gold Line station. Alternatives suggested include: moving the Post Office to the East of the Site and opening up the south west corner of the parcel as a public plaza; relocating the post office to a smaller building in the south area and creating a plaza on this site; replacing it with a commercial complex or with a small hotel and conference center.
- Consider activating and continuing the midblock alleyway as a pedestrian and bicycle connection between Ada Street and the station to Foothill and the Historic Village.
- Consider ways to insert open spaces and pocket parks in private redevelopments in response to the existing need in the downtown and to the community aspirations as identified in the survey.
- Creating a strong axis entry to connect Route 66 to the station. This includes: developing well-planned drop off and pick-up points at the station; providing more than one access to the station parking lot/structure; developing the new street as boulevard fronted by mixed-use commercial with residential above; including plazas at the corners of the boulevard at Route 66.



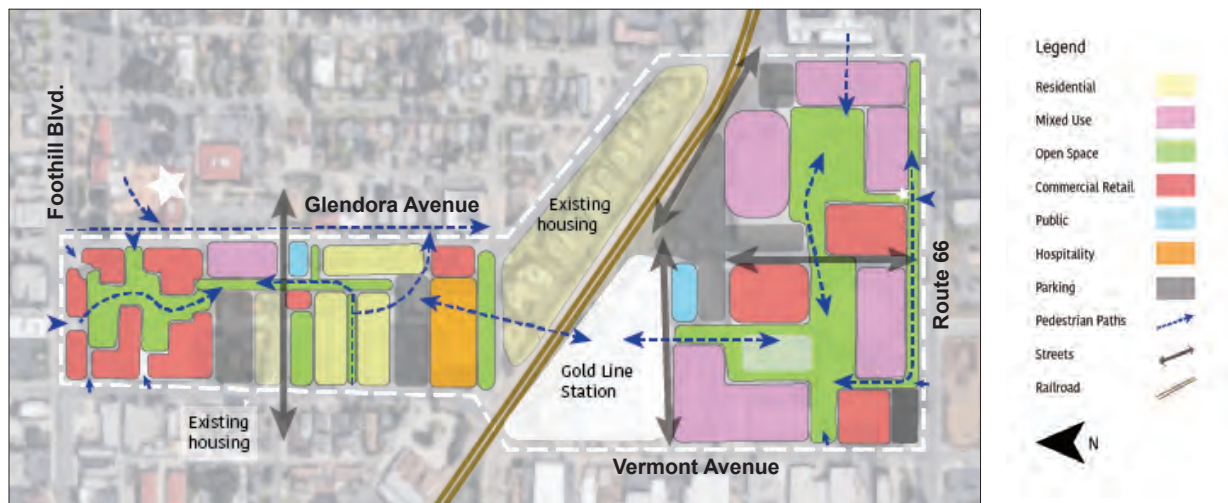
Concept diagram of the **Glendora Transit Village**. Team 1: Jack Balfour, Melina Schelstrate, Sheridan Nansen and Valeria Diaz.



Partial view looking south of **The Link at Glendora Station**. Team 2: Brendan Norton, Camille Frace, Erik Valentine and Madison Driscoll.



Aerial view from the South-West of **The Citrus Village**. Team 3: Chris Cortez, Clarissa Florez, Nick Johnston and Paul Chytla-Hynze.



Concept diagram of **The New Village at Glendora**. Team 4: Ally Lee-Gardner, Camille Kelem and Elizabeth Farin; with Steve Chon.

The Glendora Village Axis.

Team 5: Chloe Evans, Chris Dedo, Lane Sutherland and Shayna Gropen.



Mixed use development and plaza proposed for the corner across from the Old Village at **The Village Axis**. Team 6: Jeremiah Rodgers, Kyle Courtney, Oscar Gake and Tess Houseman.



- Creating a mix of housing types within the project area to introduce new types to the housing mix currently prevalent in the city. Units suggested include multifamily, smaller size units, workforce units, micro-units, townhouses and other housing types that have been identified as needed in the city. Solutions that conform to the three stories preferred by the community but provide denser unit configurations yielding pedestrian-friendly walkable environments around entry axes to the station from the north and the south.
- Implement a vibrant mixed-use and dense community in the area south of the tracks, responding to the redevelopment potential set by the future station and by the vehicle-oriented historic Route 66. The nearby hospitals and colleges are potential clients. Dedicate one of the buildings in this area to a Citrus College initiative, such as an incubator or student housing, was also suggested.
- Consider implementing a pedestrian and bicycle connection along and south of the tracks, providing a connection between Glendora Avenue, the Metro station and Vermont Avenue. If the new street from Route 66 to the station is implemented, the pedestrian and bicycle paths could also run along it.
- Consider redeveloping the Albertson's building. This would include getting it closer to, and turning its main facade towards, Glendora Avenue or Route 66; include two to three stories of apartments above it; share parking needs with the Metro parking structure.

Final Remarks

Final schematic designs were presented to the Glendora Planning Commission and city staff on Tuesday June 4, 2019 at a special session of the planning commission. The presentation involved a powerpoint presentation, a brochure/handout summarizing each alternative, and six large-format (36" x 48" posters) summarizing all elements of each of the six schematic design alternatives. Some of the teams presented their 3D computer model by means of fly-through animations.

The posters were on display at the Glendora library for viewing by the Glendora community. The student presentations as well as their powerpoints and following discussion were

transmitted live on the city's public cable TV channel, videotaped, and made available for viewing on the Glendora city meeting archives. All the work done during the quarter including the complete six alternative design proposals was compiled into the "Rethinking Downtown Glendora, CA: Linking the Village to Route 66" report and made available to the City and the community.

The projects were presented to the City Council at their October 8, 2019 meeting by Glendora's Planning Director Jeff Kugel, who pointed out the main ideas from this process and highlighted one of the student group projects. The city is already using the document in conjunction with the plans by the Metro Gold Line, and gearing up to prioritize and estimate the cost of public right-of-way projects. The city strategy now is to develop the bike, pedestrian, and traffic lane standardization projects that will establish a framework for development on private property. In moving forward, Director Jeff Kugel plans to use the report to stimulate and inspire the development of private property as well as of public and park spaces.

The Cal Poly BSCR Third Year Design Studio 2019 and their instructors appreciated the opportunity to plan and develop urban designs for this site and to offer ideas for the Glendora community to consider. The exercise allowed the class and the instructors to understand on-the-ground realities that community planners must address when major transportation infrastructure is anticipated to introduce significant change and development in the city. It enabled the students to project forward and shape alternatives that might sway public opinion and move future developments so that they serve all the communities and groups that reside in the City of Glendora. They thank the City of Glendora Planning Department for their cooperation, advice, and support throughout this design process. This project is a good example of Cal Poly's "learn by doing" philosophy translated into the community-outreach pedagogical approach that typify efforts in CRP's urban design studios. The goals of these studio is to address grounded community-based needs, project future visions that meet these needs, and, push the boundaries of what is seen to be possible.

• • •

² For minutes of the meeting on Glendora City web site see: <http://sirepub.ci.glendora.ca.us/sirepub/cache/2/eqoelua4m0ayac4nkzqvndid/35952410162019025152955.PDF>

³ For a video recording of these presentations see Glendora City web site at: <http://sirepub.ci.glendora.ca.us/sirepub/mtgviewer.aspx?meetid=2107&doctype=AGENDA>

Redevelopment Visions for the Paso Robles Boy's School Site

Hemalata C. Dandekar

PhD., AICP, Professor, City and Regional Planning Department, Cal Poly.

Eric G. Azriel

MCRP student, City and Regional Planning Department, Cal Poly.

The Paso Robles Boy's School is a state youth correctional facility that has been closed up and vacant for several years. Professor Dandekar and MCRP student Eric Azriel discuss the work by a first-year graduate studio and the resulting four proposals to reutilize the facilities, transforming it into a local and regional asset. This studio responded to the call and the need of the City of Paso Robles Planning Department.

Think “outside the box” was the advice given by the City of Paso Robles Community Development Director Warren Frace when briefing the Cal Poly's 2019 MCRP first-year graduate students. Their task was to envision creative alternatives for the redevelopment of the Paso Robles Boys School site, a State-owned and run youth correctional facility. Closed in 2009, its various buildings, facilities, and surrounding land remained vacant. The twelve graduate students in CRP 553 2019 Project Planning studio, taught by Professor Hemalata Dandekar, embraced Director Frace's challenge with enthusiasm and were eager to contribute to the city's long-term planning efforts.

Located on the edge of tourism-rich Paso Robles, the 155-acre project site lends itself to a multitude of redevelopment possibilities (Figure 1). The site's eastern edge fronts Airport Road leading to the close-by Paso Robles Municipal Airport, and is surrounded by advanced manufacturing, wineries, and recreational and service facilities (Figure 2). Cuesta Community College's North County Campus is very close to the project site on Buena Vista Drive off CA-46 E. The City of Paso Robles hopes that the development of the site will help diversify and stimulate the local economy, create new jobs, and maintain the regional resource base.

Paso Robles Population and Economy

Paso Robles, population 31,000 (U.S. Census Bureau, 2017), is in a rural area of San Luis Obispo County near the intersection of US-101 and CA-46 E, approximately 30 minutes by car north of the City of San Luis Obispo. The city's current racial makeup is more diverse than the county of San Luis Obispo, but less

diverse than the State of California. 56% of the population identifies as white alone, compared to 69% for San Luis Obispo County, and 38% for California. There is a local perception that people from the Bay Area and elsewhere are moving to Paso Robles, often to escape high costs of living or to retire to a quieter, scenic, location.

Paso Robles specializes in manufacturing, construction, retail, and accommodation and food services. Wineries generating both trade and tourist activity form a growing portion of Paso Robles' economic portfolio. The growth of wine-related jobs is perceived as both a community asset and as a potential constraint. Agriculture and agriculture technology involved in wine production generate well-paying jobs, and wine tourism generates welcome revenue. But the draw of the local wine industry and other tourism-related activities tend to create jobs in the hospitality, restaurant, and retail sectors —jobs that typically pay less than head-of-household wages.

While the city has a robust manufacturing sector, considerably more prominent than California's, it experienced a slow decrease in manufacturing jobs from 21.5% of employment in 2005 to 17.8% in 2015 (U.S. Census Bureau). The city's median household income is \$61,000 compared to \$67,000 in the County. Therefore, developing higher-wage job opportunities is perceived to be critical to continue Paso Robles' vitality and ability, to diversify and drive local and regional economic growth, and to attract families and professionals to the area.

These economic and demographic factors informed and guided the Cal Poly graduate planning students in their concept-creation-process for the Boys School site.

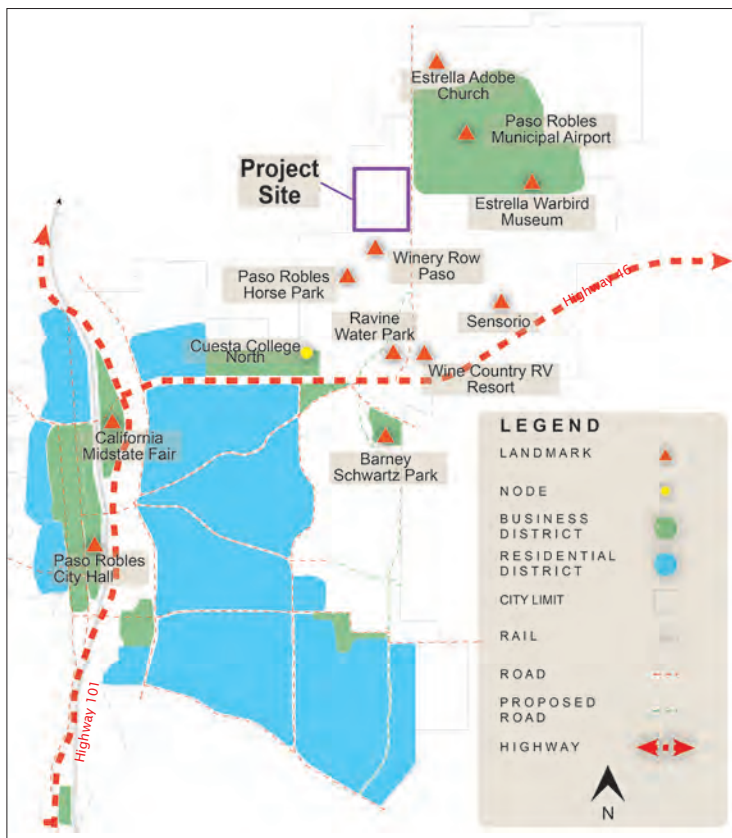


Figure 1: Site location and Paso Robles assets map.
(map by James Jimenez, edited by Eric Azriel)

Figure 2: The Paso Robles Boys School site.



Site Potential

Organized into four teams, the students conducted a windscreen survey of Paso Robles and a site walkthrough, and identified several exciting possibilities. The site is relatively flat with unimpeded views to Paso Robles' hill country to the west. Although the vacant buildings, facilities, and non-native grasses cover much of the site, there are several mature Valley Oaks scattered throughout. The existing buildings, typical of mid-century modern institutional architecture, are relatively well-maintained and several could be adapted for new uses. A major CalFire facility abuts the northeastern corner of the site.

Although the nearby airport is a community asset, it serves only a limited clientele because it has no commercial passenger flights. Air traffic mostly consists of wealthy visitors and residents on charter flights or personal aircraft. Commercial air carriers are not expected to serve the airport in the future. Furthermore, the proximity of the airport prohibits construction of new housing on the project site and restricts building heights.

RV sites and winery facilities already exist around the site and more have been approved. Existing facilities to the south include the Paso Robles Horse Park, Cuesta College North Campus, Ravine Water Park, Barney Schwartz Park, and the Estrella Warbird Museum. Until, at least the end of the year, a nearby site is presenting the Sensorio Field of Lights, a landscape lighting art installation by international artist Bruce Munro. On the adjacent property to the south of the site, the city has approved a permit for Winery Row Paso, a complex to include production and retail centers for multiple wineries, a hotel, an outdoor amphitheater, and bed and breakfast "treehouses."

The students also conducted 26 in-depth interviews with Paso Robles business owners (16) and individual community members (10), mostly conducted face-to-face with some by telephone. The interview responses helped to shape an internet-based Business Survey designed to obtain information about the relationships to and perceptions of the Paso Robles Boys School site from the business community. It consisted of 14 questions, 8 of which asked for open-ended responses to elicit knowledge based on personal experience. The approximately 750 business members of the Paso Robles Chamber of Commerce were invited by email to respond to the survey. The on-line survey was made available from May 8th through 20th, 2019, and 64 members responded. Opinions expressed in responses to the survey informed the student's understanding of the site.

The Proposals

Following the initial studies, the SWOT analysis, and the site assessment, the four student teams identified a total of 15

case studies from around the United States and the world, to serve as inspiration in the development of their own programs and ideas. The students then developed design schematic proposals and final concept plans including phasing and implementation strategies. The following descriptions include the case studies that inspired each of the teams as well as the major aspects of each final proposal.

The following four quite distinct concepts for redeveloping the Boys School site build on its strengths and leveraged local opportunities. They addressed two key goals: 1. creating head-of-household jobs, and 2. increasing the number of mid-week visitor stays. Each concept is designed to stand alone and use the entire site. Collectively they provide several interesting ideas that can be selected, mixed, and matched as the city, the community, and the developer interests warrant.

VinoTech (Figures 3 to 5)

(by Nicole Brown, James Jimenez, and Jade Kim)

Inspirational Case Studies:

Airpark 599 Stockton, CA: A public-private partnership mixed-use retail, office, and industrial facility situated near Stockton Metropolitan Airport.

Stapleton Business Center, Denver, CO: A public-private partnership creating an industrial business park in the US Interstate 70 corridor.

Chophouse Row, Seattle, WA: A mixed-use development creating distinct pedestrian alley and courtyard spaces.

One North Portland, OR: An energy-efficient office and retail mixed-use development situated around a public courtyard with natural influences.

Proposal:

VinoTech concentrates on the South Eastern corner of the project site to create a vibrant and flexible work enclave to capitalize on the beautiful rural environment around the site. The site plan delineates an office and industrial park that is designed to stimulate connections and invite pedestrian activity. Office and industrial spaces and commercial areas define and surround alleyways that create cozy human-scale retail environments to draw visitors to lively outdoor spaces.

Adaptive Reuse Park (Figures 6 to 8)

(by Alistair Fortson, Dylan Stafforini, and Rebecca True)

Inspirational Case Studies:

Coachillin', Hot Springs, CA: A 160-acre development wholly involved in industrial cultivation, testing, wholesale, and retail of cannabis.



Figures 3 to 5: The Vino Tech proposal: site plan, an agrihood-style restaurant reflecting the region's wineries and agriculture, and an alleyway in the commercial area offering retail opportunities in intimate outdoor spaces.





Figures 6 to 8: The Adaptive Reuse Park proposal: site plan, multimodal transit stop along Airport Road in front of renovated classrooms in mid-century modern style, and redesigned gateway and entry plaza.



Lincoln Redevelopment, Whittier, CA: Conversion of the Fred C. Nells Youth Correctional Facility into housing, commercial, and retail.

NOMA 2.0, Copenhagen, Denmark: Reuse and recreation of existing brick façade blended with native flora to create a sense of place.

Ferntree Business Park, Melbourne, Australia: A brick manufacturing center refurbished using the existing building shells to construct state-of-the-art office space.

Proposal

This project adapts the existing mid-century structures for new industrial and commercial uses. Possibilities range from a full-campus cannabis manufacturing facility to mixed office and light industrial uses. Multiple ways were identified for this reuse to meet businesses' needs, including building innovative pedestrian spaces and a gateway to attract visitors. The site plan outlines zones for these various possibilities in the South East corner of the and proposes future expansion on site to the west and north.

Soccer Complex (Figures 8 to 10)

(by Dan Canella, Graham Bultema, and Troy Lawson)

Inspirational Case Studies:

Lancaster National Soccer Center, Lancaster, CA: A publicly owned 126-acre center home to 35 fields and one of the largest soccer complexes in the country.

Hagerman Sports Complex, Santa Maria, CA: A 22-acre multi-use sports facility hosting a multitude of activities including softball, soccer, baseball, festivals, exhibits, art shows, and special events.

Maggie Daley Park, Chicago, IL: An experiential park with a focus on the local community and a unique tourist destination designed to draw people from the entire region.





Figures 9 to 11: The Soccer Complex proposal: site plan; eastern soccer fields, dog park and playground; and area for food vendors next to the main soccer fields.

Proposal:

The Soccer Complex utilizes the entire site to create a regional and state destination. Twenty full-size and 5 youth-size soccer fields are complemented by food services and other recreational facilities, such as a climbing wall and a playground. A small medical facility is planned to serve visitors and participants in large soccer tournaments. The complementary facilities are housed through adaptive reuse of existing buildings.

Gateway Conference Center (by Eric Azriel, Liz Golden, and Brian McGinnis)

Inspirational Case Studies:

Conference Center Market Study, San Luis Obispo County, CA: A study commissioned by Visit SLO CAL considering the need for a conference center in SLO County.

Conference Center Economic Analysis, Paso Robles, CA: A study that examines the suitability of a conference center for Paso Robles, including jobs and hotel considerations.

Great Lakes Center for the Arts, Petoskey, MI: A 527 seat

state-of-the-art rural performing arts center in an area sized similarly to Paso Robles.

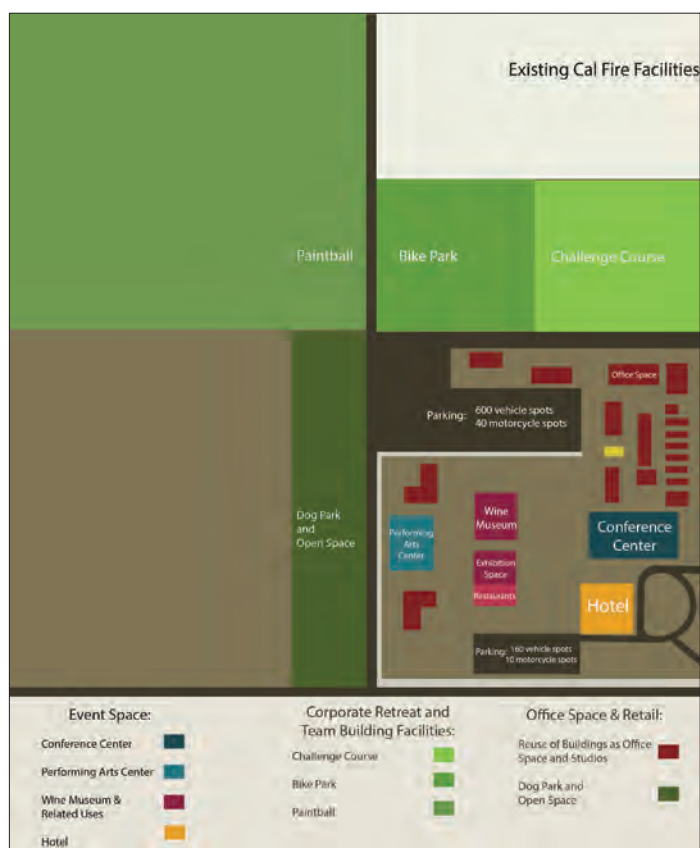
La Cité du Vin, Bordeaux, France: A popular museum celebrating the wine history and culture of Bordeaux.

Proposal:

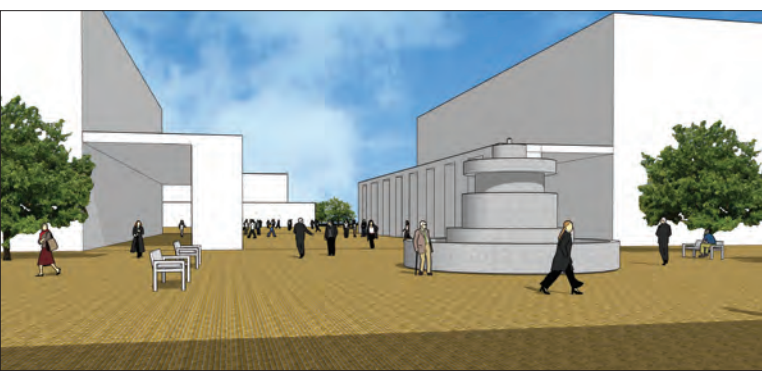
The Gateway Conference Center concept builds on the need for a conference center in the county. It integrates a conference center with a performing arts center, a wine museum, a hotel, and retail and office facilities in the southeast corner of the site. A challenge course, paintball course, and bike park occupy the northern portion of the site. Collectively these facilities create an attractive destination to residents, local groups, businesses, and tourists.

Next Steps

The four alternative concepts for redevelopment of the Paso Boys School Site were presented in a public meeting of Paso Robles' Planning Commission and were well received. The studio's final report, summarizing the process and the various ideas, is proving useful to the City of Paso Robles in



Figures 12 to 14: Convention Center proposal: site plan, view of the event center spine, and courtyard between the conference center, performing arts center and the wine museum.



communicating with, and eliciting the interest of, potential investors and developers. The city hopes to stimulate acquisition of the property from the state by private sector actors and stimulate its development of uses that diversify the regional economy and create head of household jobs.

• • •

References

- Cross, J. (2019, May). Personal Communication. San Luis Obispo.
- Google Maps. (2019). Retrieved from <https://www.google.com/maps/@35.6668948,-120.6441447,1050m/data=!3m1!1e3>
- Google Maps. <https://www.google.com/maps/@35.6668948,-120.6441447,1050m/data=!3m1!1e3>
- U.S. Census Bureau (2017). *Table DP03 Selected Economic Characteristics 2013-2017 American Community Survey 5-year Estimates* [Data set]. Retrieved from <http://factfinder.census.gov>.
- U.S. Census Bureau (2017). *Table DP05 Demographic and Housing Estimates 2013-2017 American Community Survey 5-year Estimates* [Data set]. Retrieved from <http://factfinder.census.gov>.
- U.S. Census Bureau (2015). *Longitudinal Employer-Household Dynamics*. Retrieved from <https://lehd.ces.census.gov/>.
- U.S. Census Bureau (2017). *Table S0101 Age and Sex 2013-2017 American Community Survey 5-year Estimates* [Data set]. Retrieved from <http://factfinder.census.gov>.
- Winery Row Paso, see <http://www.wineryrowpaso.com/>. Retrieved October 21, 2019.

Placemaking and Augmented Reality: A Theoretical Exploration

Erick S. Gomez

Senior, BSCR, City and Regional
Planning Department, Cal Poly.

Amir Hajrasouliha

PhD., Assistant Professor, City and
Regional Planning Department, Cal Poly.

Technological advances in computer applications are changing the way we conduct city and regional planning, particularly through new user-friendly interfaces for community participation, such as augmented reality. In this essay, Gomez and Hajrasouliha discuss the current trends and identify three potential applications of augmented reality in placemaking as well as their ethical implications.

Augmented reality is a technology that has the potential to greatly impact current approaches in placemaking. Place is an abstract term that refers to the ability of a physical space to have a deeper, more subjective level of meaning for an individual or group of people. Traditional placemaking strategies can impact physical space, but their adaptability is often limited to existing and predominant cultural trends and values. Augmented reality is a reactive technology through which people are able to manipulate their environments to more closely reflect personal values and communicate ideas. This essay explores current trends and potential applications of augmented reality in the placemaking process. A brief definition of place, placemaking, and Augmented Reality (AR) are presented below. Then, three potential applications of augmented reality in placemaking process is discussed with relevant case studies. And finally, some ethical considerations in this application is presented in the end.

Place and Placemaking

Place requires a connection between people and their environment. For example, there are multiple bridges that cross the Alabama River; however, the Edmund Pettus Bridge in Selma is considered a place due to the historically significant events which occurred on the bridge during the Civil Rights Movement. This bridge is a place for those individuals with strong ties to the Civil Rights Movement, some of whom go to visit the bridge annually. The value of this bridge as an artifact of the Civil Rights Movement by American society extends the longevity of its existence as a place for those who were there

as well as their predecessors, and anyone who can historically contextualize it. This is an example of an easily identifiable place. However, the abstract value of place does not need to be widely shared, nor does it need to be multigenerational. The other bridges along the river may also serve as a place for a single person or a small group of people. For example, if another bridge along the Alabama River served as a spot for a marriage proposal, then it will likely have value as a place for that couple. This value may pass within one generation or remain limited to the people who knew the couple.

Theoretically, this subjective meaning of place means that one space can be multiple places because it is perceived and valued differently among different groups. An example is the ways in which different groups experience historical spaces, like the Spanish Missions of California. Spaces like these may be experienced by some as places that connect them to California and United States history, complemented by memories from childhood projects and field trips. However, they may also be perceived as a place of suffering and cultural loss by the members Native American population. Existing places can also change or be lost, and new places can be created as time passes and people change.

Developed from the exploration of place in the planning literature (Cresswell, 2015; Lang, 2014; Lynch, 1960), for the scope of this research, place was defined as a physical space endowed with a greater symbolic or subjective meaning by an individual or group of people over time given the interactions that occur within it or the social context by which it is experienced.

Placemaking is the process by which people attempt to convert spaces to places. "Strengthening the connection

between people and the places they share, placemaking refers to a collaborative process by which we can shape our public realm in order to maximize shared value” (Project for Public Space, 2018, para. 1). The mention of “shared value” is crucial to a critical examination of placemaking and the levels at which it occurs. The value or value system emphasized by the individuals involved in the placemaking process is often engrained in the method of creation and resulting spaces. These values can manifest in the urban form, official documents, and across the arts (Stevenson, 2003).

Augmented Reality

There are currently five distinguishable models of augmented reality (iGreet, n.d.):

- Marker based augmented reality;
- Markerless augmented reality;
- Projection based augmented reality;
- Outlining augmented reality;
- Superimposition based augmented reality.

Marker based augmented reality is the most commonly used model across different industries followed by markerless augmented reality (Prabhu, 2017). Each of these augmented reality models provide different end products and are better suited to serve specific purposes than others. Notably, all of these augmented reality models augment mainly the visible environment and typically don't involve other senses.

Marker based augmented reality, also known as recognition augmented reality, uses an augmented reality marker to identify what space it will visually alter. Augmented reality markers may be specific to an application but often come in a QR or 2D code that is readable by a camera on the device being used. Once the application recognizes the marker, it will alter it using the assigned augmented reality component (RealityTechnologies, n.d.).

Markerless augmented reality, also known as location-based augmented reality, uses sensors on a phone including the geospatial navigation system, accelerometer, and compass to identify its placement and display augmented components through the screen on the device. This model is referred to as markerless augmented reality because it does not require the recognition of a marker to display an augmented component (RealityTechnologies, n.d.). Augmenting specific locations can offer more information based on a user's location. It can also create new experiences such as those exemplified by urban gaming and can allow users to digitally change a space by adding their own components. Two applications that are well

known for their use of location-based augmented reality are Yelp Monocle and Nokia City Lens. These applications augment real-world locations by overlaying visual information about nearby businesses when the camera is pointed at them.

Digital Placemaking

A significant consideration for the future of placemaking is the integration of technologies such as augmented reality in the urban design and planning practice. Digital place is a concept discussed by Tim Creswell (2015) that covers how emerging technologies add a layer of digital information to physical spaces. The existence of this data may positively and negatively influence how knowledge about places is created and disseminated. For example, research shows that the digital information about a location can often fall subject to information ranking that occurs on online search engines. The increasing influence of technology on physical spaces has led to the development of the digital placemaking model.

The Digital Placemaking Institute (n.d.) describes digital placemaking as follows:

In practical terms, it is the installation or utilization of digital technologies in the public space to enhance culture; facilitate urban regeneration programs; deliver education and cultural events; promote public participation, and the democratization of public space. (para. 6)

The term digital placemaking refers to a relatively new but growing field that addresses the implications of digital place in innovative ways. Digital placemaking can aide in establishing a nexus between emerging urban technologies and social issues that may not be thought to have technological solutions. In the context of this paper, it provides guidance in understanding the role of augmented reality in placemaking.

There are several examples of how augmented reality can be integrated into the practice of placemaking using various approaches and technologies to achieve their purpose. These case studies do not necessarily show the deliberate use of augmented reality for placemaking, but they do introduce new insights into their future relationship. To understand this relationship, one needs to comprehend the functions of emerging technologies and the ways in which they are being implemented in the placemaking process.

Identifying Applications for Augmented Reality in Placemaking

The research conducted for this essay suggests the following three main applications for the use of augmented reality in placemaking.

Application #1: Facilitate orientation.

Background. Orientation refers to the ability by which a person is able to navigate an environment without the fear of becoming lost (Lynch, 1960). Orientation helps people feel safe, especially in large, new environments. Facilitating orientation can lead to the development of a deeper spatial knowledge (Tuan, 1977) and the creation of a vivid environmental image. One-way people orient themselves is through the use of various wayfinding systems. Wayfinding allows individuals to navigate their environments by providing directory aides, such as graphic and architectural markers (street signs, building signs, directional signs, landmarks, etc.) (City of New York, 2001). Wayfinding and navigation have already been made more accessible through the use of global positioning systems and geolocation software. However, these technologies require the user to disengage from their setting what may reduce their spatial understanding of an environment (Milner, 2016). This is opposed to more traditional wayfinding features like signs or landmarks that are embedded in the real-world setting.

Application. The use of augmented reality features in emerging navigation applications and wayfinding techniques can further promote orientation by increasing interactivity and ease of use; promoting engagement with the physical environment; and promoting flexibility and adaptability to physical spaces and wayfinding systems. Inserting augmented reality would allow existing navigation technologies to encourage orientation rather than only providing direction. Utilizing marker based, markerless, and outlining augmented reality with camera and mapping features on a smart device could help individuals recognize and process visual clues in their physical environment (e.g. bus stops, roads, buildings, landmarks) by overlaying them with directory or supplemental information about their location. This would allow users to

increase their first-person frame of reference and later navigate their environment with minimal technological assistance. Projection-based augmented reality can be used to promote orientation by making spaces and wayfinding more visually impactful and therefore contributing to the environmental image. Projection-based augmented reality can also be used as stand-alone wayfinding system to create signage, and overlay visual features that may be more readily adapted to changes in the physical environment.

Relevant Case Studies. The Percipient Digital Labs design and technology studio exemplifies how augmented reality can be used to create navigation applications that promote orientation. They developed an augmented reality application to help facilitate the use of public transit within the City of Chicago. The application uses marker-based augmented reality to supplement Chicago Transit Authority's bus stops and allows viewers to switch between a traditional map mode and an augmented reality mode to help them visualize their route (Hasbrouk, 2019). Figure 1 shows what the application looks like on a smartphone.

Another example of how augmented reality is being used to promote orientation is through the use of three-dimension augmented signage. Technology company Burton, Inc. creates three-dimensional imagery and signage using an augmented reality known as laser plasma projection (Burton, n.d.). The ability for their models to exist in actual space would make it comparable to physical signage (Figure 2). However, this projected signage could potentially provide more flexibility because the light features could be reprogramed to relay a variety of messages. This adaptability makes augmented reality a particularly useful tool in redefining wayfinding and landmarks especially in terms of permanence.

Figure 1: Smartphone view of Percipient Digital Labs' augmented reality transit application. (retrieved from <https://blog.truthlabs.com/chicago-cta-augmented-reality-sign-detection-visualization-bus-data-application-design-7f8fe2f2f6b7>. Image used with permission from Percipient Digital Labs)

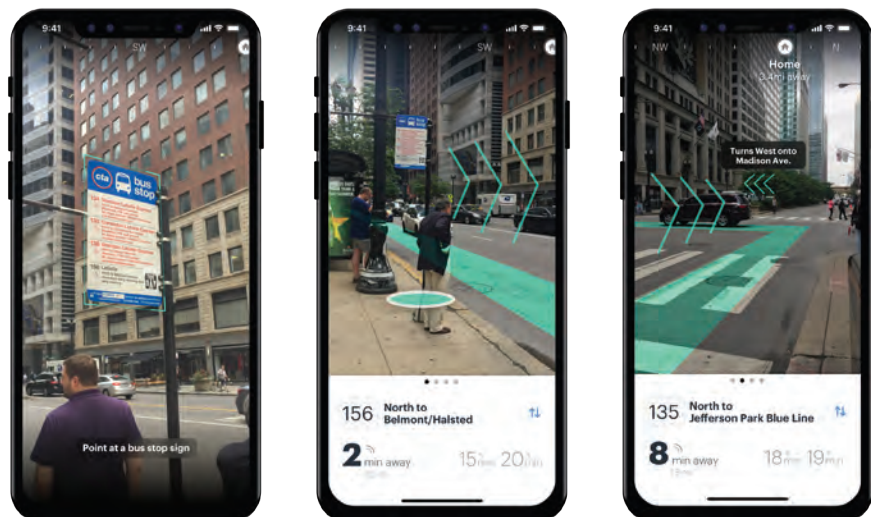




Figure 2: Laser Plasma projection of arrows for directing traffic. (Retrieved from <http://burton-jp.com/jp/VRen.htm>. Used with permission from Hidei Kimura / Burton Inc;)

Application #2: Promote personalization and participation.

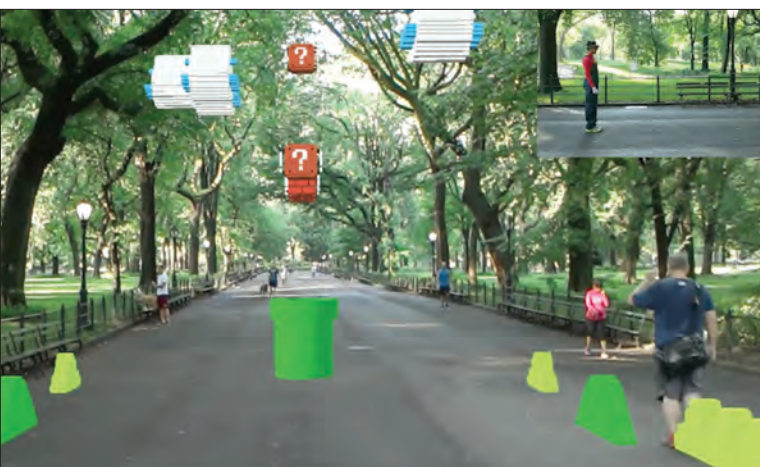
Background. Placemaking is a method by which community members might exercise their agency to transform locales and promote the creation of desired places. The word agency refers to the ability to exert one's individual power in everyday life. Agency often exists and is understood within parameters created by other social structures and stratification systems (e.g. economic class, race, education attainment, etc.) that influence how and when people use their power and the extent of its impact (Cole, 2019). Therefore, the placemaking process and tools used to implement it must also be understood within these parameters. Augmented reality, for example, requires a certain level of technical competence and resources. Thus the integration of this technology into the placemaking process should focus on inclusivity and access.

Application. One method by which augmented reality can be used to enhance placemaking is by offering more choices as

to how an individual uses a setting. Augmented reality can activate spaces by augmenting digital features that provide new activities or repurposes them altogether. For example, a park can be turned into a pop-up gallery or be used for virtual scavenger hunts. Individuals could also decide to replace and remove certain elements from public spaces based on preference. These preferences and uses could be simultaneously recorded using surveying technologies and provide user insight that can guide future capital projects. This would likely require a larger crowd-sourced platform where augmented reality can be contained, as well as improved connectivity with other data gathering devices (Warner, 2017).

Relevant Case Studies. Technology companies and individual developers have already begun moving toward this application of augmented reality. The growth of urban gamification can be seen as reflection of this trajectory. Urban gamification is defined as the use of the physical environment to provide a setting for videogaming by making use of surrounding buildings, streets, and landscapes (Qabshoqa, 2018). Since urban gamification uses augmented reality to change physical setting into ones that coincide with elements of game, it therefore also repurposes that space. Developer Abhishek Singh exemplified this application when he used augmented reality to transform New York's Grand Central Park into a game of Super Mario Bros. (Singh, 2017) (Figure 3).

Figure 3: Screenshot of a video showing developer Abhishek Singh playing an augmented Super Mario Bros. game on a walkway in Grand Central Park, New York. (Retrieved from <https://www.youtube.com/watch?v=QN95nNDtxjo>. Adapted from YouTube by Abhishek Singh, 2017; used with permission)



While the Singh example illustrates how a space might be reimagined to allow for new activities, other developers and companies have focused on showcasing specific environmental preferences. For instance, Re+Public Lab Inc. uses emerging technologies to take over spaces used for commercial advertisements and encourage new, artistic uses on them (Re+Public, n.d.). This campaign used augmented reality to bring attention to the perceived control that private entities can have over public areas in New York. The application provided users with the choice to digitally eliminate the presence of specific commercial advertisements from public spaces and replace them with art (Figure 4). The project aimed at show-

ing how these advertisements could affect city health and help residents psychologically invest in their communities.

Application #3: Convey the subjective meaning of place and use digital placemaking to promote storytelling.

Background. The definition of place includes the endowment of a space with subjective meaning to create a sense of place (Cresswell, 2015). The subjective nature of “sense of place” can be a source of conflict for individuals who attach different meanings to the same space. This is especially true within communities experiencing shifts in their demographic make ups. One example of this change is gentrification when the influx of new residents can result in changes to physical spaces and community character which influence the creation of place (Kennedy & Leonard, 2001). Additionally, it can be difficult for new residents to understand the meaning that long-time residents have assigned to a place. This contest over places requires a method for communicating and understanding the meaning and values that different people assign to them.

Application. Augmented reality allows for a new method to produce and complement traditional storytelling. The use of augmented reality for art is growing in popularity because it is an attractive and engaging method for artists and storytellers to address issues that matter to them and their communities. Assuming that accessibility to platforms enabling individuals to create their own augmented components improves, augmented art can be used as a method for community members to communicate their perspectives on a place and even protest the changes that affect them. Moreover, communication through augmented art or storytelling would likely face a less crowded regulatory environment, and be more affordable than physical changes to any particular setting. Additionally, augmented reality can serve to preserve meaning in locations where places once existed. They can communicate context and digitally symbolize the transition of ownership even when new physical qualities do not reflect the old places. This is important because meaning and context are subject to change and obsolescence, but augmented reality can help preserve the features and meanings that were once part of a place.

Relevant Case Studies. May artists and art organizations have already started to use art to communicate ideas about social issues and developments that impact their communities. One example comes from Los Angeles, where artist Nancy Cahill created an app to display augmented art along the Los Angeles River (Figure 4). While this project began as a concept for virtual art to bring attention to malpractices in urban development, it quickly evolved to include art pieces tackling various social issues including climate change and colonization (Furman, 2018). Another example comes from the augmented reality



Figure 4: A person augments an art piece over a subway wall advertisement using the RE+Public NO AD application. (Retrieved from <https://noad-app.com/press/>. Used with permission from Jondan Seidler, NO AD)

platform Artvive, which showcases how augmented reality can be used as a tool to teach and communicate unfamiliar ideas. The Artvive app is used by museums to help visitors better understand the art exhibits by providing visitors with more information about the artist and the context that influenced the art piece (Smith, 2018) (Figure 5).

Ethical Considerations for the Application of Augmented Reality in Placemaking

As discussed, augmented reality is not immune to the influence of social structures and contexts that contribute to its development. Thinking critically about who is included in the creation of augmented reality technologies--and associated hardware and software technologies-- will be crucial to understanding its capabilities and limitations for its application in placemaking.

Langdon Winner (1980) writes about the ability of any human-made artifact to be a manifestation and perpetuator of power arrangements in society. He observes that any technological artifact is inherently democratic or authoritarian. If applied to augmented reality technology, this idea brings attention to the importance of transparency and participatory design in its development and use. This is especially true considering that much of this technology is being developed and distributed by private companies. The creation and management of these platforms by private entities creates concerns over the types of data collected by their applications and how it may be used or distributed later on.

Those using augmented technologies should consider its limitations as a tool for placemaking, especially if it is being created or managed by someone who is not part of the community being impacted. Creating platforms that emphasize participatory development and open creation of augmented reality components can be one way of addressing this limitation. Lilian Warner, suggests that, in the near future "...users will also be able to easily create and share their own [augmented reality] content..." (Warner, 2017, para. 9). Allowing people to create their own augmented content means that they would be able to contribute to meaningful placemaking for their own communities. However, the emergence of multiple realities and their impact on the users' psychological wellbeing, especially children and youngsters are subject to further studies.

Crowdsourcing placemaking through individual contributions of augmented components will likely require the use of platforms that provide clear structure for the stored components, and ease of access for any user to retrieve them. The way platforms organize the different augmented components can have serious implications in understanding places. The algorithm behind ranking components has to be transparent and unbiased to provide fair access to the augmented reality contents.

Conclusion

Placemaking is continuing to grow in popularity as a foundational concept to intervene in sociocultural and economic environments, and ideally, change them for better. Augmented reality can be used as a tool to engage with the physical environment with an added layer of information. The four potential applications of AR, as discussed in this essay, have one common purpose: producing and delivering new form of spatial information to the public, with the hope of enriching

their living environments. This quality makes augmented reality a useful tool in placemaking, and participatory design process. The most likely city planning applications of this technology in the near future will be in promoting public engagement and outreach. However, if this technology is to encompass the roles discussed above, it will need to do so with careful consideration to periphery societal impacts and ethical implications. Developers and practitioners will need to consider financial accessibility to the technology, privacy concerns, and the political implications in the creation and use of augmented content. The future impacts of augmented reality on society will likely vary depending on the trajectory set by the continued support of and investment in the technology. Furthermore, it is important to note that the development of this technology will be strongly linked with developments in other technical disciplines.

The current uses of augmented reality show innovative approaches to placemaking. This technology has great potential to encourage meaningful connections between people and their environments. This role will continue to be defined as the practice of digital placemaking continues to develop, innovations in immersive technologies continue to occur, and creative individuals continue to find ways to augment the spaces they inhabit.

• • •

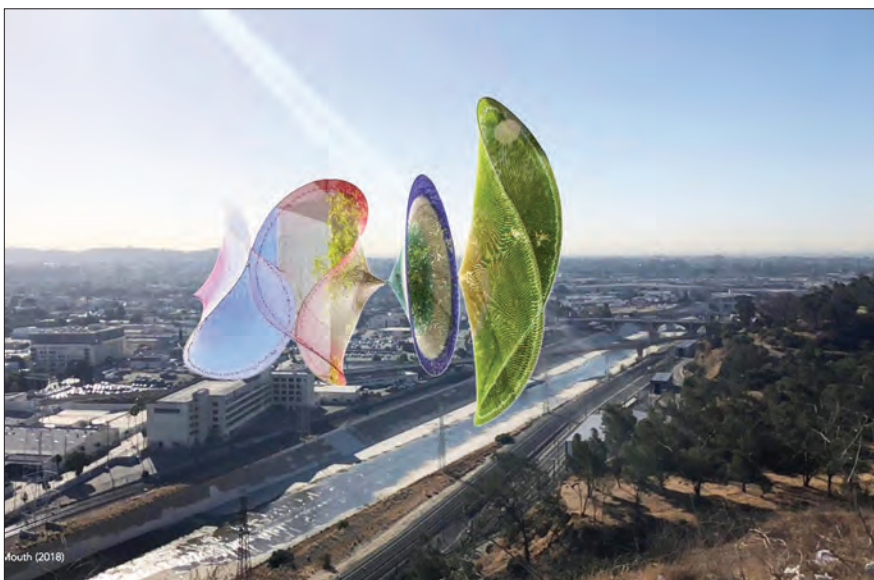


Figure 5: *Curative Mouth, a Defining Line* installation by Carolina Caycedo represents indigenous fishing nets over the Los Angeles River and speaks of the disparities in access to hydrologic resources. (Retrieved from <https://www.latimes.com/entertainment/arts/museums/la-et-cm-4th-wall-vr-art-nancy-baker-cahill-20181029-story.html>. Used with permission from Carolina Caycedo)

References

- Burton, Inc. (n.d.) [Laser Plasma augmented apple figure]. *Burton, Inc.* Retrieved from <http://burton-jp.com/en/producten.htm>
- CBRE Group (n.d.) Placemaking [Report]. Retrieved from https://owl.purdue.edu/owl/research_and_citation/apa_style/apa_formatting_and_style_guide/reference_list_electronic_sources.html
- City of New York Office of the Mayor (2001). Universal Design New York. Retrieved from <http://idea.ap.buffalo.edu/udny/Section4-1c.htm>
- Cole, N.L. (2019). How Sociologists Define Human Agency. *ThoughtCo*. Retrieved from <https://www.thoughtco.com/agency-definition-3026036>
- Cresswell, T. (2015). *Place: An Introduction*. Blackwell Publishing Ltd (Ed.). Chichester, SXW: John Wiley & Sons Ltd.
- Digital Placemaking Institute. (n.d.). What is Digital Placemaking [About us description]. Retrieved from <http://digitalplacemaking.org/>
- Eagle News. (2017). 'Augmented reality' brings art alive in Vienna. *Eagle News*. Retrieved from <https://www.eagle-news.ph/augmented-reality-brings-art-alive-in-vienna/>
- Furman, A. (2018, November 2). How virtual art appearing along the L.A. River tackles gentrification, immigration and environmental issues. *Los Angeles Times*. Retrieved from <https://www.latimes.com/entertainment/arts/museums/la-et-cm-4th-wall-vr-art-nanchhttps://www.latimes.com/entertainment/arts/museums/la-et-cm-4th-wall-vr-art-nancy-baker-cahill-20181029-story.htmlly-baker-cahill-20181029-story.html>
- Hasbrouke, C. (2019). How we enhanced Chicago's public transit with Augmented Reality: Automatic sign detection and routing visualization [Blog post]. Retrieved from <https://blog.truthlabs.com/chicago-cta-augmented-reality-sign-detection-visualization-bus-data-application-design-7f8fe2f2f6b7>
- Kennedy, M. & Leonard, P. (2001, April) Dealing with Neighborhood Change: A Primer on Gentrification and Policy Choices. Retrieved from <https://www.brookings.edu/wp-content/uploads/2016/06/gentrification.pdf>
- Kent, E. (2015). A Thriving Future of Places: Placemaking as the New Urban Agenda [Article]. Retrieved from <https://www.pps.org/article/a-thriving-future-of-places-placemaking-as-the-new-urban-agenda>
- Lynch, K. (1960). *The Image of the City*. Cambridge, MA: The MIT Press.
- Milner, G. (2016) How GPS is Messing with Our Minds. *Time*. Retrieved from <https://time.com/4309397/how-gps-is-messing-with-our-minds/>
- Qabshoqa, Mohammad (2018) Virtual Place-making - The re-discovery of architectural places through augmented play: A playful emergence between the real and unreal. In: Computing for a better tomorrow - eCAADe 2018, 19-21 September 2018, Lodz University of Technology, Lodz, Poland. Retrieved from http://papers.cumincad.org/data/works/att/ecaade2018_264.pdf
- Re+Public. (n.d.). NO AD. Retrieved from <https://www.republiclab.com/no-ad/>
- Singh, A. [Abhishek Singh]. (2017, June 21). *Super Mario Bros Recreated as Life Size Augmented Reality Game*. [Video File]. Retrieved from <https://www.youtube.com/watch?v=QN95nNDtxjo>
- Smith, N. K. (2018, August 10). 'There are boats floating above my head in Times Square'. *BBC News*. Retrieved from <https://www.bbc.com/news/business-45043859>
- Tuan, Y. (1977). *Space and Place*. Minneapolis, MN: University of Minnesota Press.
- Underscore. (2018). The future of Placemaking Trends 2018. Retrieved from <https://www.underscore.co.uk/uncovered/future-placemaking/>
- United Nations. (2018). 68% of the world population projected to live in urban areas by 2050, says UN [News article]. Retrieved from <https://www.un.org/development/desa/en/news/population/2018-revision-of-world-urbanization-prospects.html>
- Warner, L. (2017). This is What AR Will Feel Like When It's Ubiquitous [Blog post]. Retrieved from <https://blog.prototypr.io/this-is-what-ar-will-feel-like-when-its-ubiquitous-e1eee3334c8c>
- Winner, L. (1980). Do Artifacts have Politics. *Daedalus* 109(1), 121-136. <https://www.cc.gatech.edu/~beki/cs4001/Winner.pdf>

The Planner's Use of Information

Hemalata C. Dandekar

PhD., Professor, City and Regional
Planning Department, Cal Poly.

The third extensively revised edition of the popular book The Planner's Use of Information was published in 2019. Adapting the book's introduction for FOCUS, Dr. Hemalata Dandekar, editor and author, writes about her intent in offering an easy-to-use compendium of methods, from information collection to organization to communication. In this edition, contributing authors Vicente del Rio, Amir Hajrasouliha, Cornelius Nuworsoo, and Chris Steins are faculty at Cal Poly's CRP Department.

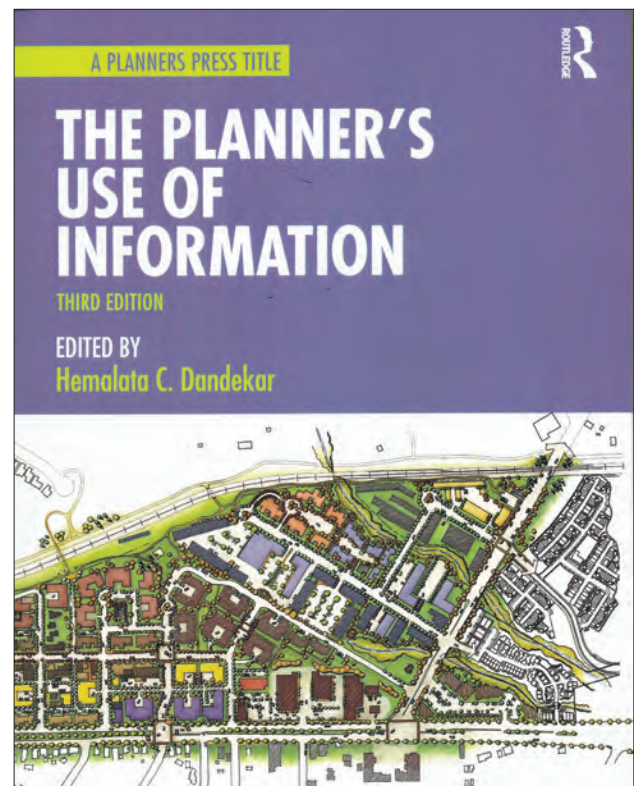
Addressing planning problems, particularly those affecting the everyday life-space of communities, generally involves working through problem assessment, data collection, analysis, community involvement, consensus building, budgeting, implementation and the monitoring of solutions. Each step requires: skillful listening to and communicating with a range of constituencies; systematically collecting and analyzing data; and, promoting understanding of spatial and economic consequences of decisions. In this work, effective communication and an ability to make judicious selections of methods and techniques emerge as key skills. Successful planners draw on interpersonal, communicative and analytic skills, and use an intuitive, qualitative process to take a large amount of disparate information and condense it so that it is useful for formulating plans and policies. The proliferation of information on social media has made these judgment skills ever more important, and, poor judgements known to, and felt by, an ever-widening audience.

Where and how do planner learn the skills to perform this critical, integrative task - to gather the kind and level of information needed, process it, and, effectively communicate findings and recommendations? Planning schools emphasize teaching substantive skills, theory and sophisticated analytical tools and advocate for formulating problems and solutions based on empirical research/data. But planning practice demands consideration of processes such as consensus building and selection of cost-effective methods from highly quantitative to completely qualitative and observational. Skills to do this are often learned on the job.

To be effective, planners must integrate theory and analysis with a planning process that is often externally governed, generally political, and outside their control. The planner's ability to convincingly communicate views, analyses and

ideas is crucial. Sophisticated conceptual models and complex analysis are insufficient if they are not made accessible to the audience by extrapolating the essentials and communicating them convincingly.

The book *The Planner's Use of Information* assists planners who might have "zoned out in methods classes," but now must decide whether a survey, focus group, content analysis of local publications, site reconnaissance, judicious phone



interviews, a large public meeting, an email blast or postings on various social media platforms is going to garner needed information and insight. Making context-appropriate choices from the wide range of now available tools, techniques and data sources can make a difference to outcomes. The concise overviews of practical methods for researching, analyzing and presenting planning problems and possible solutions that are provided in this book, will assist in this.

Use of the Book in Planning Practice

Planner must often formulate public policy based on information about socio-economic factors that is painfully inadequate and comes in many forms: straightforward; disguised or hidden; often outdated; and, frequently not directly applicable. They must obtain information as rigorously as possible, analyze it efficiently, and arrive at policy conclusions in short time frames, often defined by political considerations. Planners are also called upon to design, program, budget, administer, manage and persuade using such information.

In collecting, analyzing and disseminating information, planners may work in teams of specialists with diverse professional backgrounds and experiences. They need to provide leadership to such teams and address the task of turning a group of independent individuals into a synergetic team that produces required products on schedule. Besides the interpersonal skills needed in leading or contributing to such professional groups, planners must also communicate with clients and constituents affected by planning decisions. The audience or client group may change in composition over time and lack planning sophistication, but planners must establish and maintain strong channels of communication with it.

The appropriate mode of communication will vary depending upon: the actors involved in the process; the language, which must be common to or at least understood by all participants, is increasingly important as populations become ethnically and racially diverse; the preferred channels of communication; key points of contact rendered ever more complex with pervasive social media; the scale and nature of the problem; and available finances. On-the-job lessons such as knowing when, what and how to say something; deciding to write it and, when written, whether or not to send it and to whom, all require attention.

The Planner's Use of Information is organized into three parts, information collection, organization and communication. Needed information is collected from people, secondary sources including ubiquitous internet web sites, and on-site observations. It is analyzed, sometimes in groups. The findings and conclusions are tested on clients or recipients. On the basis of reactions to this, a second look at the context or new information

that is collected, additional rounds of analysis and exchanges of information occur. The process is usually iterative rather than linear. Experience teaches a professional about relative weighting and the importance of considering various tacks in problem solving and communications. Learning complementary skills, keeping a clear perspective of what is significant in decision making, assessing what counts, figuring out how to do it and acquiring the skills required to do it are all important.

Before deciding on the mode of presentation to use, planners must identify the decision makers and assess what will make the most impact on them. For example, if public verbal presentations are the major dissemination mechanism for a project, planners must hone their skills to become persuasive speakers; if mass media releases for social media are crucial, planners must learn how to write them. Compiling an elaborate report with in-depth, sophisticated analyses and complex graphics is not useful if decision makers will not read or understand it. The need to know and weigh alternative modes is important.

The Planner's Use of Information also assists the planner in anticipating, supplementing and amplifying experience. Hypothetical case studies of typical planning situations illustrate the weighting process underlying the choices made in techniques of information collection, analysis and communication. The text provides overviews supplemented with annotated bibliographies on topics such as using technology tools in planning, matching appropriate techniques for tasks at hand, thoughtfully analyzing and playing a constructive role in the small-group dynamics of work teams, and, dealing with key decision points in planning practice. It amplifies experience by providing guidelines useful to consider when a planning problem arises, an important presentation is nearing, a team of consultants is to be formed, or a report or graphic document is to be compiled. Thus, this is a practical book designed to be read in its totality as well as used for reference.

Book Content and Organization

The content of the book address three major planning tasks:

1. *collecting* and synthesizing information about the problem at hand;
2. *organizing* and analyzing the information to generate alternatives for action, and to formulate a strategy for intervention;
3. *communicating* these observations and findings to different groups and constituencies.

It assists planners by:

1. discussions of methods emphasizing techniques useful in information gathering, organizing and delivering;

2. discussions of processes such as public participation and small-group dynamics, and techniques to be effective facilitators.

The chapters include suggestions on problem definition and diagnosis that are helpful in the selection of technique, method or organization. The goal is to help planners choose the best way to set about a particular professional task. The techniques described are illustrative rather than all-embracing and the descriptions indicate the importance of careful choice among them. The book is organized into three parts, addressing three kinds of questions:

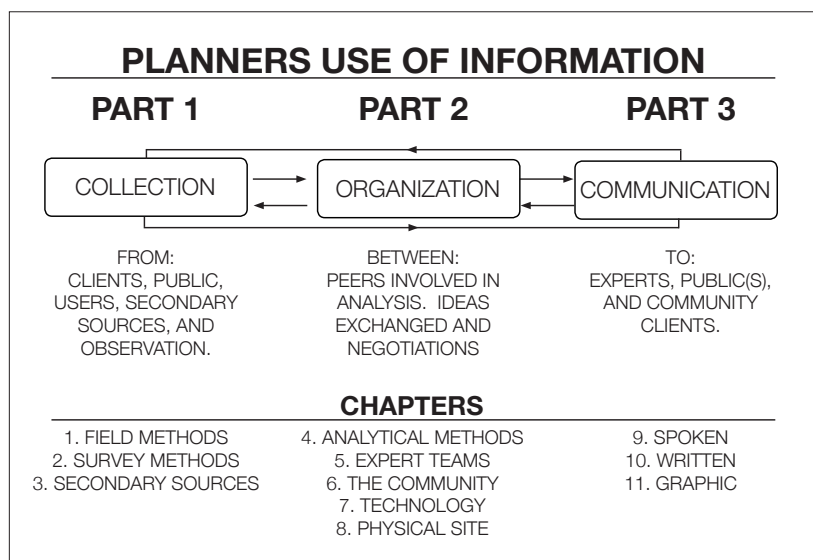
Part 1: What kinds of information do planners require, and where and how do they obtain it?

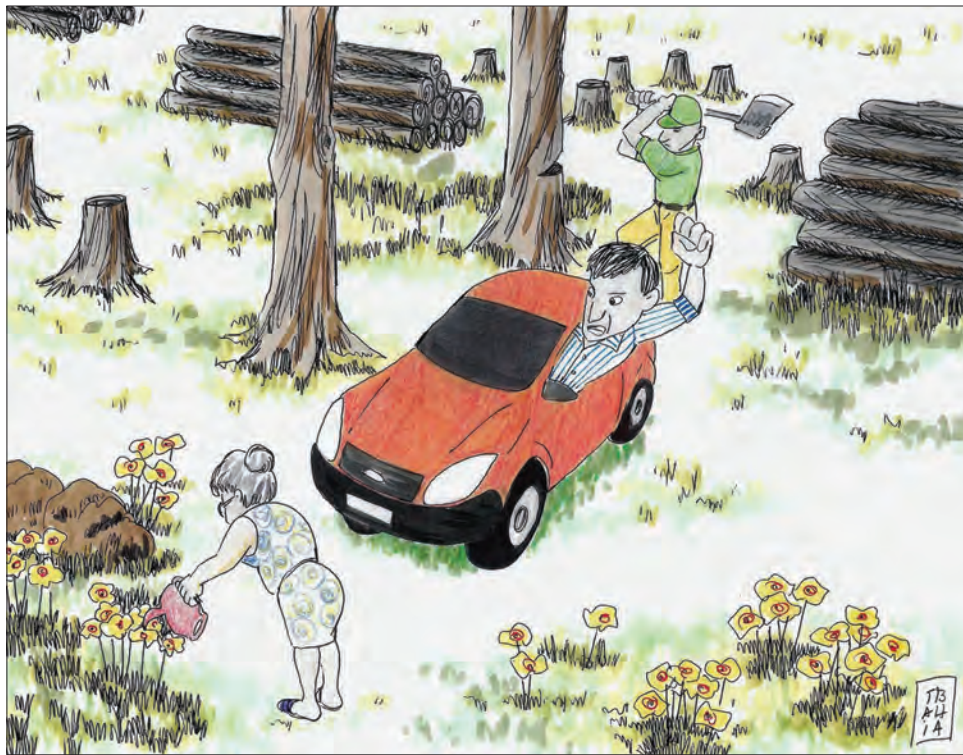
Part 2: How do planners organize this information so that it is useful to decision making?

Part 3: How can planners communicate information and ideas to inform and guide decisions and outcomes?

Case studies of planning situations at the neighborhood, city and regional scales provide hypothetical contexts to illustrate effective use of tools in practice. Chapters begin with a discussion of why and how the covered material is important and relevant to practice. They provide concise overviews of useful methods and refer, in annotated bibliographies, to specialized book-length, treatments that may be useful for gaining mastery. Consistent with the first and second edition, this completely revised third edition of *The Planner's Use of Information* emphasizes the importance—even urgency—of planners becoming better communicators and, more importantly, empowers practitioners to develop new skills to achieve this.

• • •





"Progress Advances..."

by **Tarcisio Bahia de Andrade**

Architect and professor at the Department of Architecture and Urbanism, Federal University of Espírito Santo in Vitoria, Brazil. Besides teaching and consulting, Tarcisio publishes a regular column on urban issues in the local newspaper, and founded the Vitoria section of the Urban Sketchers. He constantly publishes his drawings in FOCUS.

FOCUS 16

International



Walk to Plan, Plan to Walk: II International Summer Workshop in Urban Design, Lisbon - Summer 2019

Vicente del Rio

PhD, Professor, City and Regional Planning, Cal Poly.
Visiting Professor, Universidade Lusofona de Lisboa.

Diogo Mateus

PhD, Professor and Coordinator, Urbanism Program,
Universidade Lusofona de Lisboa.

In the Summer 2019, the authors coordinated an international two-week urban design workshop in Lisbon, Portugal with sixteen international students. The CRP Department has a long established relationship with the Urbanism department at the Universidade Lusofona, and over the years they have collaborated in various short-term programs and publications. This article briefly describes this successful program.

From June 24 to July 5, 2019, a group of seven Cal Poly's BSCRП students joined the II International Summer Workshop in Urban Design at the Universidade Lusofona (UF) in Lisbon. Coordinated and taught by professors Vicente del Rio (Cal Poly) and Diogo Mateus (UF), the group also included students from other parts of the US (3) and from Brazil (2), Portugal (4), and Russia (1).

Repeating the success of the first workshop in 2018, in 2019 we focused on walking as a fundamental method to learn about the qualities that make cities and places special and as a goal to make them livable and sustainable.¹ In the workshop's first part, the students were guided in walks through several areas in Lisbon, such as Alfama, Baixa, Rossio, Bairro Alto, Alvalade, and Oriente, each representing different historical periods and planning/design paradigms. They spent a couple of hours in each to wander around, observe, sketch, and analyze their urban design qualities. The method was inspired by Walter Benjamin's concept of the flâneur as he/she who wanders and experiences the city, immersed in the anonymity of its crowds and spaces, as a method of analysis of the urban condition. Students looked into and reported on seven specific urban design qualities: complexity and surprise, vitality and robustness, enclosure and linkages, transparency and vistas, legibility and coherence, architectural richness, and personalization and community values.²

The students used their findings as inspirations for the next phase when, divided into three teams with individuals from different backgrounds and nationalities, they had to come up with imaginative and feasible short/long terms development ideas for a site within walking distance of the UL Campo Grande campus, where we had our workspace (Figure 1). The 12-acre site, vacant due to a series of political battles, had been used as a popular fairground for many years and, before that, held the livestock market facilities and a large domed neo-classical building for the auctions. Surrounded by high-density development, the site is bound by important avenues and an elevated railroad line. A multi-mode station at its south side serves the trains, several bus lines, and a subway line that provides fast connections to the airport, the downtown, and the rest of the city. Facing this challenge-complex but full of potentiality-the student teams conducted a brief inventory and a SWOT analysis that led to programming decisions, development visions and goals, site plan diagrams, and design concepts (see the figures for selected examples of the teams' ideas).³

The 2019 workshop finished with the teams submitting final reports and Powerpoint presentations to faculty. The proposals for the site included smart, culturally and contextually sound design ideas, and envisioned feasible and sustainable development solutions. Having Lisbon as a learning laboratory with the city's multitude of fascinating and walkable places, together with the unique planning/design challenge and the international, interdisciplinary and multi-level mix, energized the student teams immensely, leading to a very successful workshop.

¹ On the 2018 workshop, see *FOCUS 15*, pp 123-124.

² del Rio, V. (2015). Urbanity, the Flâneur, and the Visual Qualities of Urban Design. *FOCUS 12*, pp. 66-72.

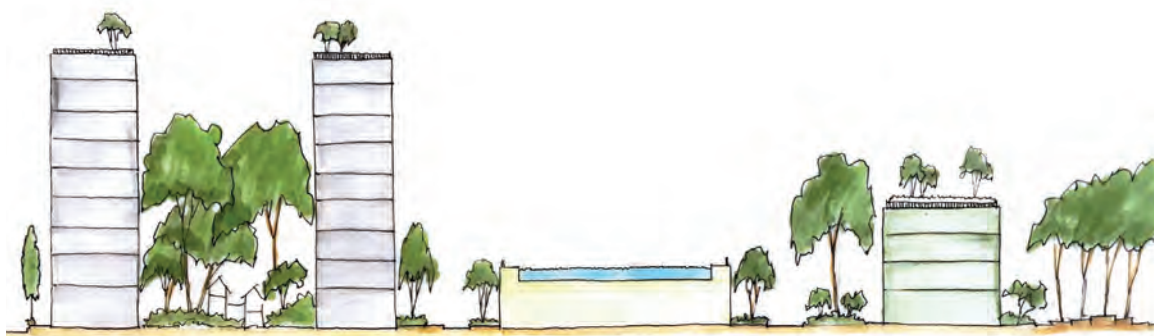
³ Details about the workshop and the student reports are available at: <https://www.ud-workshop-lisbon.net/>



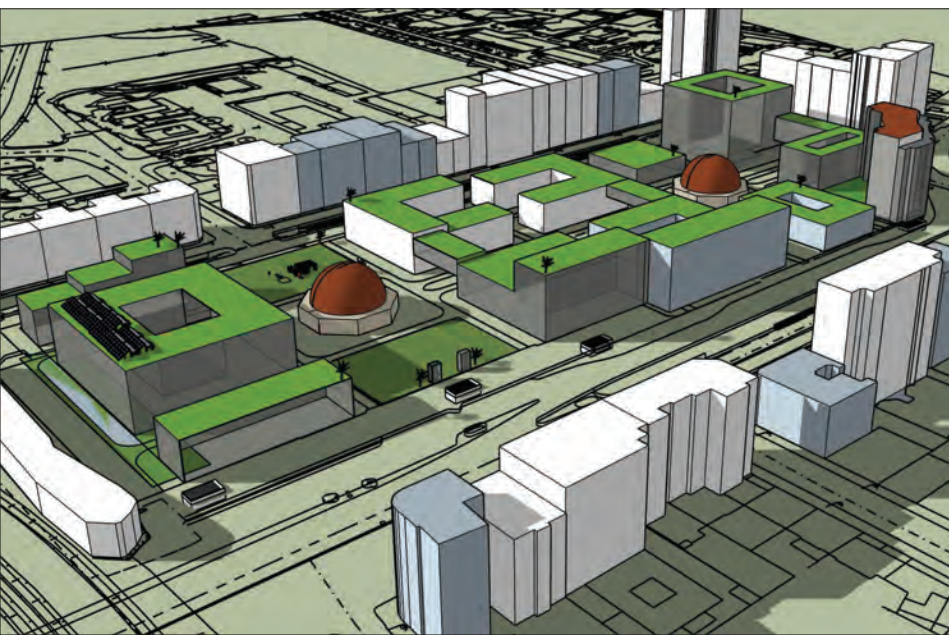
Figure 1: The 12-acre project area in Entre Campos. A train and subway station at its south boundary, and the Campo Grande park on north.

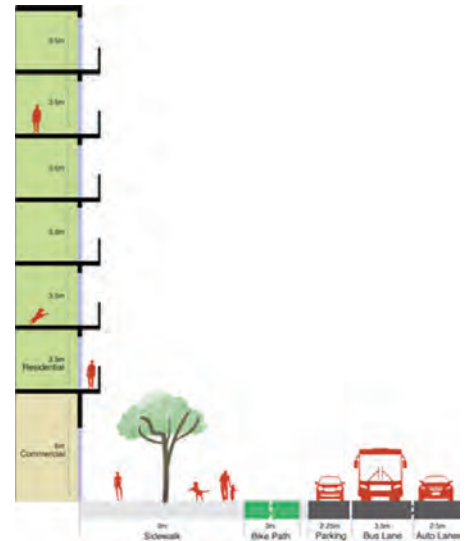


Figure 2: The students in front of a typical street car, during the study walk in Alfama.

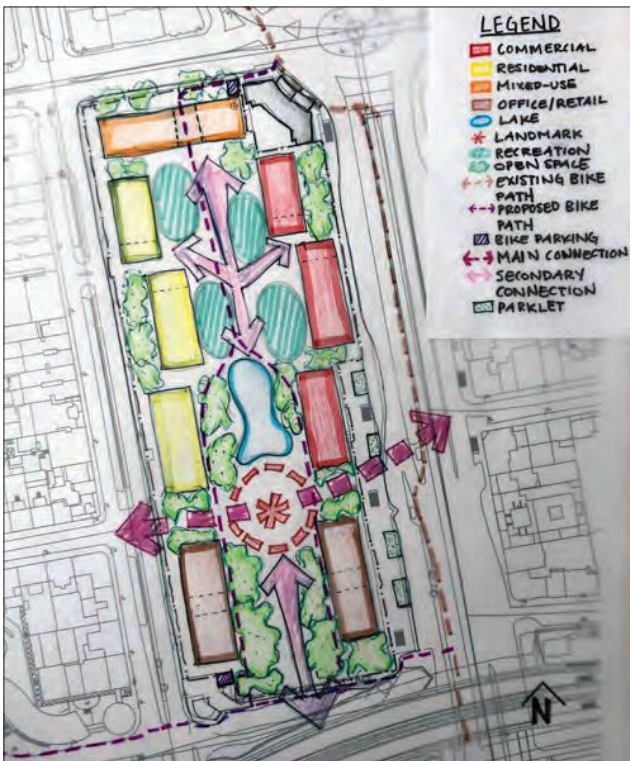


Figures 3, 4 & 5: Conceptual cross section, site plan, and SketchUp model of project by S. Aleksandrova, P. Arciniega, A. Hall, J. Giaramito, and E. Valentine.

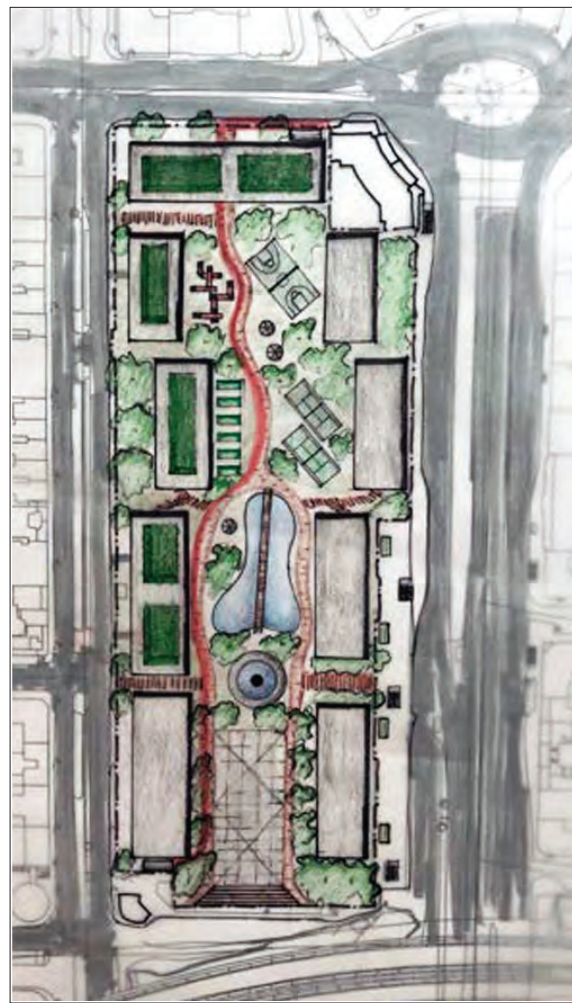




Figures 6, 7 & 8: General view, a proposed section for a surrounding street, and detail of internal space. Project by M. Driscoll, E. Huang, R. Miguel, B. Norton, I. Panetta & J. Richey.



Figures 9 & 10: Concept diagram and site plan. Project by F. Brasil, C. Evans, J. Fernandez, E. Samuel and M. Tietz.



FOCUS 16

Spotlight



Conversations with Alumni

Rachel Raynor

Bachelor of Science in City and Regional Planning, Cal Poly, 2016.

FOCUS: Why did you decide to become a planner, and in what year did you graduate?

I became a planner, actually due to a variety of reasons. One of which was I lucked out by having a mom who was a career counselor and, when I started thinking about going to college, brought to my attention Cal Poly's planning program. I had originally thought about doing architecture or landscape architecture but, after interviewing several such professionals in my hometown, I began to realize planning was the degree/profession for me. I graduated from Cal Poly San Luis Obispo in June 2016 with a B.S. in City and Regional Planning.

FOCUS: Can you talk a bit about your professional path: from being an intern to becoming a planner?

I was an intern at the City of Folsom and the City of Ventura. On the last day of my internship at Ventura, my supervisor suggested that I try out the private side. He said he always wished he had. From there, in my final year of school, I landed an internship at RRM Design Group in San Luis Obispo, and fell in love. I loved the variety of work I was getting to do and the span of geographies that the company worked in. Apparently, it was mutual and RRM extended to me a full-time job to stay on staff after graduating Cal Poly San Luis Obispo.

FOCUS: What is your current job? What are your primary responsibilities, and what type of work do you get involved with?

My title at RRM is Associate Planner I. My job description consists of writing a variety of planning and technical document, including specific plans, design guidelines, strategic plans, and feasibility studies. I also create presentation-ready graphics, including, but not limited to: base/site maps, graphic materials, site analyses, and investigations for specific/master/vision plans. I assist with design components and design refinement through close collaboration with RRM's planning principals and project managers, as well as the firm's architects, landscape architects, engineers, and surveyors. I often work directly with clients, assist with the community outreach process, and help with entitlement package submittals/coordination with a variety of agencies and review bodies.



FOCUS: What were the plans and projects you have been involved with and which were your favorites?

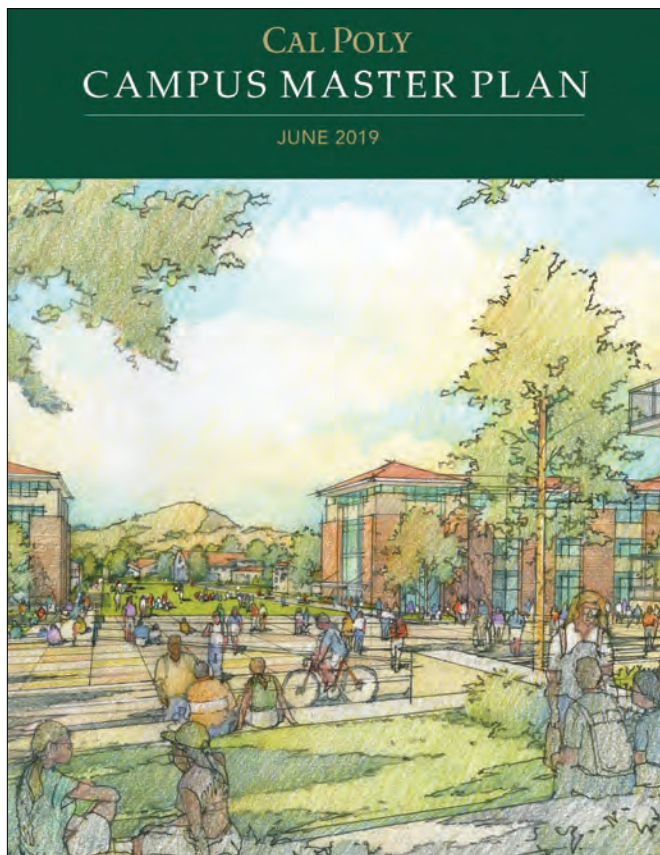
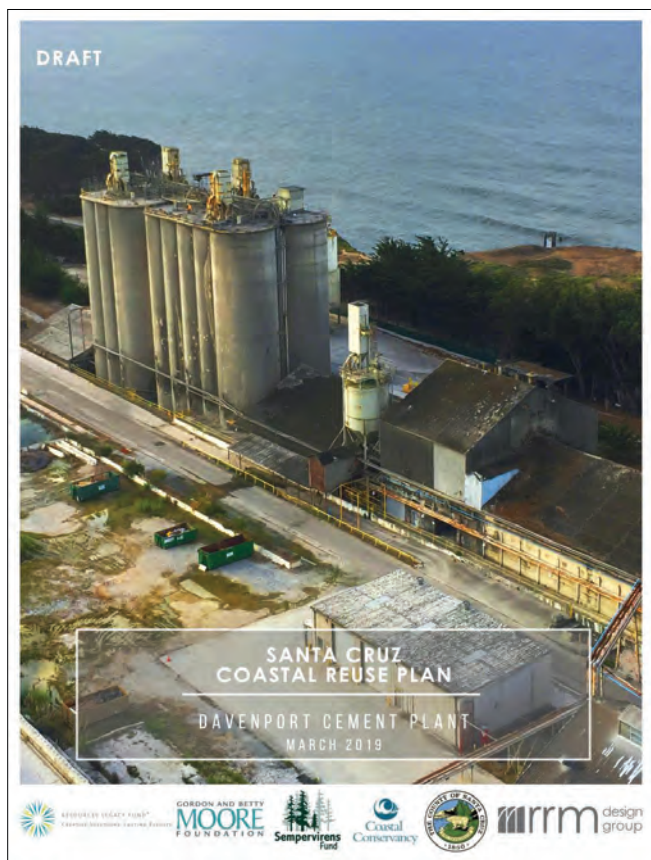
There are so many more projects and plans I have worked on over the course of the last 4 years! But some of my favorite are the Harbor Terrace Development in Avila Beach, Creston Road Multi-family in Paso Robles, Davenport Reuse Plan in Santa Cruz County, the Valley's Edge Specific Plan in Chico, CA, and the Santa Paula Youth Needs Assessment in Santa Paula. If I had to choose one, I would say the Cal Poly Master Plan update was one of my favorites, but maybe I am a little biased as an alumnus. (Check out Cal Poly's Master Plan here: <https://masterplan.calpoly.edu/>)

FOCUS: How does your Cal Poly education reflect in your work? Do you feel that the classes and skills you learned provided you with a good base for your professional practice? Do you wish any other fields should have been covered?

They definitely did not lie about the Learn by Doing motto that Cal Poly boasts. Sometimes I may not have all the answers, but Cal Poly taught me to just teach myself along the way. Actually, it turned out well for the areas I needed to learn a little more outside school, as it translated to my colleagues as being resourceful. The classes and skills at Cal Poly provided a great base, but it was not until getting my hands dirty, or so to speak, that it started to all come together. Since I have been working more in entitlements and construction phases, I would love to have taken more Construction Management classes or have its principles be integrated into the CRP undergrad program, or at least to have that as an option to take.

FOCUS: What are the strengths and weaknesses of Cal Poly's BSCR program?

I would love it if Cal Poly's BSCR program had a little more reality built into it. What I mean is budget, site constraints, and timing. Learning that, in the real world, you can't always stay up until 3am to finish a project – an "end of business day" deadline means you have to turn in what you got by 5pm. Budget is a huge issue! I mean both the money available for a project and what the client is willing to spend, and making sure you design



something that aligns with the cost assumed. I also mean budget for staff time allotted: not always do you get to spent countless hours on a task or a deliverable like we used to do at school. Typically, a set amount of time, and therefore a budget, is allocated for a specific item/deliverable.

FOCUS: From your perspective, what are the critical knowledge areas for aspiring planners?

From my perspective, I would say the key topics are technology and how that integrates into planning, the development process, and community outreach. I would also say that innovative housing solutions and transportation changes are fundamental topics.

FOCUS: What was the most challenging aspect of transitioning into professional practice?

To be honest, the most challenging aspect is realizing that it is still just like school, and its a group project where there is always one slacker.

FOCUS: Can you talk about your involvement with the APA? What is your role and how important it is for planners to get involved?

Since graduating I have been very involved with the APA Central Coast, which encompasses San Luis Obispo, Santa Barbara, and Ventura Counties. I have recently been elected the Section Director, what also makes me a voting member on the State's APA Board. I think young planners should get involved with the APA the earlier they can: you learn a lot and you build an important professional network.

FOCUS: What do you suggest to planning students who would like to follow a professional path similar to yours? What do you see as the big challenges for planners over the next 5-10 years?

Be open to networking and put yourself out there! Don't ever tell yourself you're not good enough. You never know who you will meet or what opportunities will arise. A big challenge I see arising is planners not adjusting to the trends sufficiently or aggressive enough to really address the changing times; for instance, not changing sufficiently the codes that regulate development.

FOCUS: Any final words of advice to the new generation?

My advice would be to enjoy your time in school, but to get excited about the real-world and getting to take what you are learning and doing and putting it into practice and implementation in the real world.

I would also like to say to the reader, if you haven't met me yet, please connect with me through the APA or LinkedIn, or send me an email to rcraynor@rrmdesign.com

Conversations with Alumni

Kevin Fang

Ph.D., Transportation, Technology and Policy, UC Davis, 2016.

MCRP/MSc in Engineering (Transportation Planning), Cal Poly, 2009.

FOCUS: What was your degree at Cal Poly and what year did you finish? What have you been doing since then?

I graduated from Cal Poly in 2009 after completing the transportation planning joint degree program and spending many, many hours in Cornelius' office. After leaving SLO, I decided to study transportation further and enrolled in the Ph.D. program at the UC Davis Institute of Transportation studies, which I completed in 2015. After finishing up, I surfed the temporary teaching circuit for a couple years before landing at my current position at Sonoma State University.



FOCUS: What is your current job?

I am an Assistant Professor in the Department of Geography, Environment, and Planning (GEP) at Sonoma State University, where we offer an undergraduate concentration in planning. We're a pretty small campus for a CSU, only around 8,500 students, so Cal Poly feels gigantic in comparison.

As for what I have taught, the short answer is a lot... At SSU, I have been teaching our yearlong senior planning capstone studio, Environmental Impact Assessment (e.g., CEQA), and a couple of geography classes on Global Cities and Social Geography. While these last two are not planning classes per se, we discuss a lot of underlying issues that planners care about. I really enjoy the opportunity to talk about these issues with non-planning students, who, while not future planners, will become part of the future public. Prior to starting at SSU, I taught a bit at UC Davis as well as San Jose State, in their Masters of Urban Planning and Masters of Transportation Management programs. Some of the classes I taught there included Intro to Planning, Quantitative Methods, Urban Growth Management, and Transportation Systems and Society. I don't know how many PowerPoint slides I've written over the last five years, but it's probably more than 10,000.

FOCUS: Can you talk a bit about some of the research projects you have been involved in?

I'm not exactly sure how I got here, but I've found myself as one of the first researchers exploring "micromobility" transportation, exemplified of course by the proliferation of electric scooter systems which have taken cities around the world by storm over the last couple of years. My research teams and I have looked into policy, safety outcomes, rider behavior, and parking of scooters and other "personal transportation devices." I was unusually well-positioned for the emergence of scooters as in my Ph.D. dissertation, I actually looked at something at least somewhat similar: skateboarding as a mode of transportation. I sometimes joke I got my doctorate in skateboarding, which is a real travel mode.

As I was finishing my dissertation I figured schools weren't really clamoring to hire a skateboarding expert. So, I branched out into a second, completely different thread of research, looking at CEQA and transportation. In particular, I've written a bit about the potential implications of the shift from Level of Service-based impact analysis to Vehicle Miles Traveled-based analysis as a result of SB 743. I was motivated to start looking at this because of my teaching. I realized that I didn't know what to tell my students anymore about how to measure transportation impacts under CEQA, and I wasn't sure anyone did else either.

FOCUS: How does your Cal Poly education reflect in your work? One of the ways Cal Poly has really made its mark around the state is through the great projects that studio classes have done over the years. Now having taught a few studios, I find myself asking what a Cal Poly studio would do? I also find myself doing some things in the classroom that CRP faculty did that I enjoyed when I was a student. For example, I occasionally present Paul Wack-style all-photo slideshows (although without the retro rotating slide projector, sadly). Come to think of it, I also copied (CRP professor) Paul Wack's "Village Homes" field trip with my students that he took my class on back in the day. Thanks, Paul!

FOCUS: What do you suggest to planning students who would like to follow a professional path similar to yours?

To get a job as a permanent, full-time college instructor, you're generally going to need a Ph.D. Schools do hire instructors with master's degrees, but these are generally later-career professionals for individual classes at a part-time level. Getting a PhD does require effort, but it's also enjoyable – people generally don't get PhDs in subjects they don't find interesting. That said, getting a PhD is not just studying the topics you're most interested in, you also will end up working a lot on fundamentals such as writing, statistics, and research methods. On a less happy note, Ph.D. programs don't typically tell their students this, but if you are interested in a full-time academic career, be aware that the academic job market is challenging. Universities are not immune to larger trends in the economy, such as the shift to more of a "gig-based" workforce. An increasingly large proportion of classes are taught by "adjunct" faculty – instructors who are hired on a class-by-class basis, with limited benefits and meager salaries.

This is not necessarily a huge problem for instructors with other full-time jobs who teach a class or two on the side. However, for the army of full-time adjuncts universities rely on, it can be tough sledding. A lot of adjunct faculty teach at two or three schools at once. Before landing at SSU, I was occasionally teaching at San Jose State and UC Davis simultaneously, despite being 100 miles apart. As much as higher education, labor practices leave much to be desired, even back when I was an adjunct, I enjoyed the teaching itself. So, if an academic career is something you want to pursue, I don't want to tell you not to go for it. But if you do, know what you're getting yourself into. Have an idea of what working conditions you are or are not willing to tolerate. I knew I was playing a long game – know how long you're willing to play it. Have a Plan B if it doesn't work out. There are opportunities to do something else with a Ph.D. other than teaching, especially in an applied field like planning.

FOCUS: What do you see as the big challenges for planners over the next 5-10 years?

Housing, housing, and did I mention housing?... As planners, like the APA slogan says, we like to think we are helping create greater communities. However, any success we have in creating more enjoyable places for people won't matter to the segments of the population that will no longer be in our communities because they have been displaced by runaway housing costs. Younger people, and middle- and lower income workers, who the state is increasingly losing, are all necessary for our communities to function now and into the future. It does feel a little weird to answer a question about challenges, and not start with climate change. However, particularly here in California, housing is of critical importance when we think about climate change. High housing costs, which cause workers to live increasingly far away from their jobs, result in long driving commutes. This is problematic, as transportation is the single-largest contributor to GHG emissions in the state. Some say EVs will solve our problems, but new technology is insufficient to meet our GHG reduction goals – we need to reduce driving, too. Thus, housing policy is, actually, a transportation policy and a climate policy.

A question I pose to my students, especially relevant when we talk about housing, is who are the public we serve as planners? Let's say you work for a city: is the public only the existing homeowners who want ample parking and are afraid that infill development will ruin their zucchini gardens? Or, is it also the kids in your community who won't be able to survive on their own in your city once they graduate from high school? Is it also people who work in your city, in jobs that serve the residents but cannot afford to live anywhere near your city? Is it also the people who live in other cities who are impacted by local decisions in your city that have regional impacts? Figuring out how to inclusively represent all groups in our communities, and not just the most established or the most politically powerful or the most brash, I think is another great challenge for planners moving forward.

FOCUS: Any final words of advice to the new generation?

For the MCRP students out there, finish your theses! Kind of a funny story, like many grad students, I left town without having officially submitted my thesis. A few weeks later, while I was on vacation, I got an email from the registrar about a deadline to file which, if I missed, meant I would have to pay more fees to file. So, I spent a couple of days in my hotel room doing my last edits. In the grand scheme of things, that was a minor inconvenience. Ten years later though, having now advised some masters projects, I have seen students find themselves under a lot of pressure to try and finish their reports before the seven-year deadline where your classes expire. Life comes at you fast.



Learning from California: Highlights from CRP Studios 2018/2019 AY

Planning and design studios are fundamental for the CRP department mission and both the undergraduate and graduate curriculae. As the best vehicle for Cal Poly's learn-by-doing pedagogy, the studio experience allows students to engage in quasi-real projects and work with real cities and their officials, stakeholders and communities, helping them to become better prepared for professional life.

Undergraduate: CRP 202 Urban Design Studio I (Winter 2019).
Instructors: Amir Hajrasouliha and Beate Von Bishopink.

An Urban Design for Collaboration and Innovation at Cal Poly.

The two sections of this studio collaborated in designing the core of Cal Poly campus according to the university long term plan. Students proposed new academic and service buildings with restaurants and coffee shops, and an innovation center at the heart of Cal Poly campus. The common goals of the proposals included encouraging interaction between students of various disciplines and faculty members of the Cal Poly community, creating a walkable and vital campus throughout the day and year, and encouraging outdoor learning and social activities with the help of green roofs, and various types of plazas and open spaces.

Undergraduate: CRP 203 Urban Design Studio II (Spring 2019). Instructors: Vicente del Rio and Beate Von Bishopink.

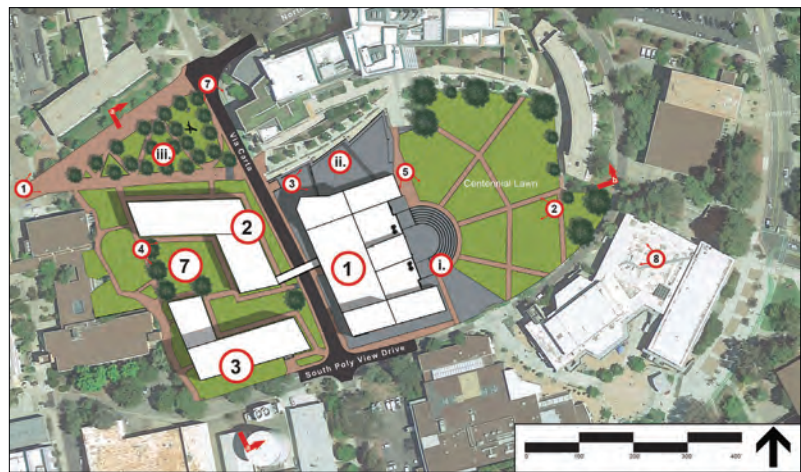
Gateway Site Development in Paso Robles, CA.

Both sessions in this studio got involved in contributing to the City of Paso Robles Community Development Department by envisioning development alternatives for an 8-acres site located at the corner of Spring and Fourth streets. Currently, the site is partially occupied a low-income apartment complex scheduled for redevelopment in the near future. Based on the site's excellent location and easy access to the downtown, Highway 101 and the Salinas River, the student teams presented several alternatives which included ideas for mixed-use development, affordable apartments, high-density townhomes, and public open spaces.

Undergraduate: CRP 341 Urban Design Studio III (Spring 2018). Instructors Vicente del Rio and Hemalata Dandekar.
Client: City of Glendora Planning Department.

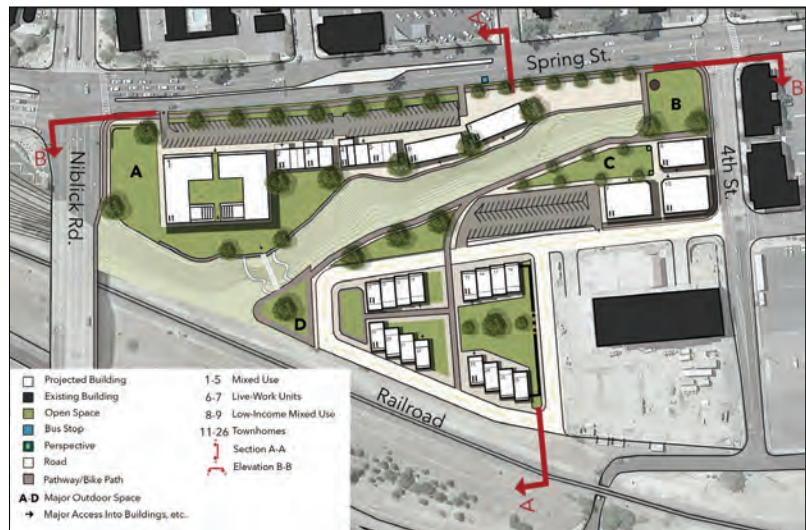
Rethinking Downtown Glendora, CA

This third-year undergraduate studio contributed to the City of Glendora long-range planning efforts by developing an urban design vision to strengthen the linkage between the Old Village, the future Metro's Gold Line Light-Rail Station, and Route



CRP 202: project by Liam Cromley and Henry McKay.

CRP 203: project by Vinson Kwan, Ian Madrigal, Henry McKay & Trisha Tran.



66. Although the project area is located in the heart of Glendora, but holds a hodgepodge of underutilized land, commercial and office uses, warehouses, small industries, as well as town homes and single-family residences. It is expected that, when the Metro line and the station are ready they will cause significant impacts on the project area. Divided into nine teams, the students developed different alternative plans, with medium and long scenarios, for public and private development as well as circulation and streetscape concepts. The proposals were present to the planning commission and the city council, and are helping the planning department to educate developers on the possibilities and to help direct public investments. (*Read about this experience in the Faculty and Student Work Section*)

Graduate: CRP 553 Project Planning Lab (Spring 2019). Instructor: Hemalata Dandekar. Client: City of Paso Robles Community Development Department.

Redevelopment Visions for the Paso Robles Boy's School Site.

The task addressed by students in the first year MCRP design studio was to envision "outside the box" creative redevelopment alternatives for the Paso Robles Boys School site. Located on the edge of the city the 155-acre site fronts Airport Road, is close to Paso Robles Municipal Airport, and, until 2009 housed a State youth correctional facility. Advanced manufacturing, wineries, and recreational and service facilities surrounded the site for which four options were developed: 1) *VinoTech*: a vibrant and flexible office and industrial park, a connected pedestrian-active complex designed to capitalize on the beautiful rural environment; 2) *Adaptive Reuse Park*: using the existing mid-century modern structures for new industrial and commercial development, such as cannabis manufacturing, mixed office, and light industrial; 3) *Soccer Complex*: a regional/state destination-soccer-facility with 20 full-size 5 youth-size soccer fields, food services and a climbing wall; 4) *Gateway Conference Center*: a center that also includes a performing arts center, a wine museum, a hotel, and retail and office facilities. (*Read about this experience in the Faculty and Student Work Section*)

Undergraduate: CRP 410/411 Community Planning Lab (Fall 2018 & Winter 2019). Instructor Keith Woodcock. Client: City of Parlier.

City of Parlier General Plan Update.

The studio's client for Fall Quarter 2018 and Winter Quarter was the City of Parlier, population 14,500. Located in the Central Valley approximately 20 miles southeast of the City of Fresno, the City is primarily supported by the surrounding agricultural operations. The City has high aspirations yet is severely financially constrained.

The City's General Plan Elements have not been updated for a considerable number of years. One of the challenges faced by the students was developing policies and implementation measures that recognized the City's limited resources yet



CRP 341: project by Chris Cortez, Clarissa Flores, Nick Johnston & Paul Chytla-Hinze.

CRP 553: The Soccer Complex project by Dan Canella, Graham Bultema, and Troy Lawson



advanced the vision expressed by the residents and Council. Four community outreach activities were held including meeting with the students at Parlier High School. The students also held a working session with Department Heads and Councilmembers.

In March of 2019, the students presented their recommendations to the City Council, who were very appreciative of their work.

Graduate: CRP 552/554 City and Regional Planning Lab (Fall 2018 & Winter 2019). Instructor Cornelius Nuwursoo. Client: Oceano Community.

Oceano Community Plan Update.

This pro bono studio included 20 graduate students who prepared a comprehensive revision of Oceano's Community Plan. Oceano is a small coastal non-incorporated community in San Luis Obispo County located about 13 miles south of the City of San Luis Obispo. Surrounded by fertile agricultural lands, Oceano has a small local airport and 1,500 acres of its coastal sand dunes is dedicated to the only state park where visitors can drive recreational vehicles in. Its 8,262 residents (2016 U.S. Census) share a median household income of \$52,259, well below the County's and California's state median.

The studio collaborated with the county and Oceano residents and stakeholders in formulating the plan and a development scenario to accommodate aspirations for growth in population, housing, and jobs by 2040. The plan allows Oceano to improve its residents' quality of life, provide diverse housing options, generate economic vitality, and enhance its attraction as a coastal community with tourist potential and one of the relatively more affordable places to live in the county. The work was so well received that garnered coverage on KSBY, a local television station affiliated to NBC.

The work involved a thorough analysis and comprehensive update of the existing Community Plan guided by extensive research on community characteristics, opportunities and constraints for development, as well as by public feedback. The plan includes detailed long-term goals, objectives, policies, and programs to inform future development, in thirteen Elements: Land Use; Circulation; Conservation; Housing; Environmental Justice; Economic Development; Public Facilities; Safety; Health; Open Space; Noise; Community Design; and Air Quality. Three distinct alternative growth scenarios were presented to the community who preferred the scenario that includes a variety of changes to land use in designated growth areas to accommodate infill development for housing and commercial growth; repurposing of a sparsely-used airport area into vibrant, mixed-use, and regional open space; and redevelopment of the Industrial neighborhood.

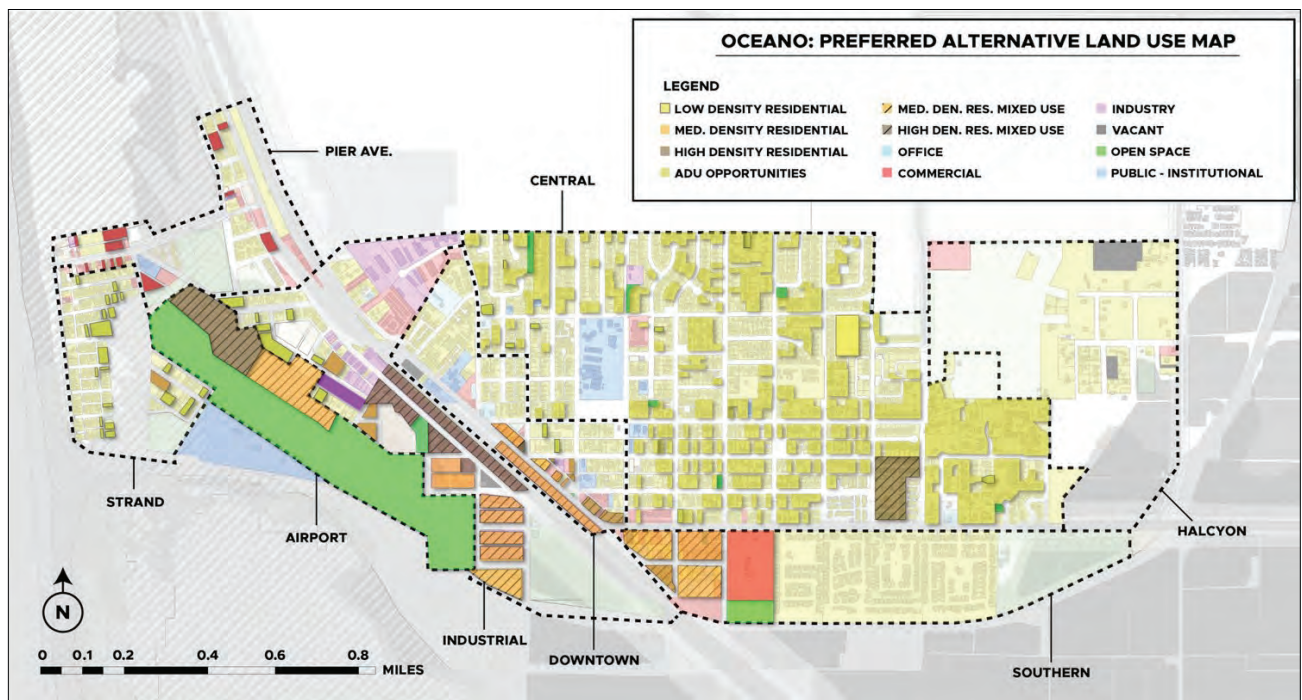


CRP 410/411: Working session with Parlier Mayor and City staff.



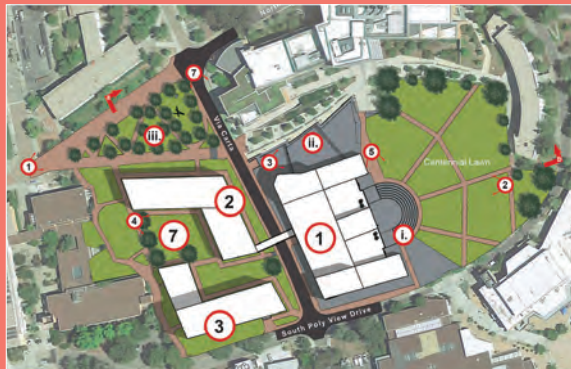
CRP 552/554: Vision for the Oceano Airport redevelopment which includes clustered housing and mixed use to accommodate the most aggressive population and job growth with regional and community open spaces.





CRP 552/554: Proposed Land Use Map. Development is focused in six key areas of growth: (1) Pier Avenue; (2) Airport; (3) Industrial Area; (4) Downtown; (5) Southern Oceano; and (6) Central Oceano. The key areas focus on: (a) neighborhood commercial centers to create compact, walkable, and accessible neighborhoods with multi-modal connectivity; and (b) major employment locations to boost economic development.

FOCUS is a professional-oriented yearly journal. It highlights the work promoted, discussed, and produced in the City and Regional Planning Department, Cal Poly San Luis Obispo.



The Practicing Planner
Special Events
Peer-Reviewed Articles
Essays
Faculty and Student Work
International
Spotlight
Cartoon Corner

ISSN: 1549-3776

ISBN: 9781673718973



CAL POLY
City & Regional Planning
COLLEGE OF ARCHITECTURE
& ENVIRONMENTAL DESIGN