

Fall 2015, **Community Building**

Shouguang, China: **Union Chemical Factory (Re)development**

Sustainability and Change

Cities are fundamentally social spaces, places of exchange. When the scale of cities was modest in size, everything was accessible and the important institutions of society articulated the landscape. As cities grew rapidly, the capacity of the 'casual' infrastructure of the pedestrian city was overwhelmed. Speed and efficiency occupied the foreground of design, as opposed to the creation of places for social interaction and community building. This legacy of separated uses and circulation defining frameworks created the barren social landscapes defined by car transportation. Rather than a city defined by community institutions, it became a field defined by the circulation infrastructure. This more anonymous environment facilitated the separation of uses and the loss of the social structure of cities. As China's program of urbanization continues, the development of community space and the associated social service institutions will be critical to community building. To return the city to its original purpose, as a socially driven environment, a more integrated pattern of development is required where places to live, work, play and grow are all in close proximity to each other. These mixed use zones will build a more local understanding of dwelling facilitated by the slower pace of pedestrian movement. The need for speed can be addressed by digital technology, but living can slow to the pace of one foot in front of the other.

Context

The central government of China has decided to eliminate the Houkou system, allowing rural citizens to enjoy the same social services as those enjoyed by the urban population if they shift to the cities. This policy shift is a part of a more significant economic transformation of China. One that will mirror the demographics of the developed industrial nations of the world where seventy percent or more of the population resides in cities. To achieve this goal, the government is encouraging a second wave of migration from rural areas into the cities. The first wave primarily went to the targeted mega cities of China. These cities have been struggling to keep up with the environmental and logistical challenges caused by their rapid urbanization of the last two decades. In response to these problems the government is attempting to focus the next wave of urban growth into second and third tier cities. To manage this shift these cities will need to develop affordable housing and dramatically expand their community service facilities to accommodate the needs of the new arrivals. These new 'sustainable' communities are expected to have a more integrated development pattern avoiding the inefficiencies and problems plaguing the first wave cities.

Design Research

Migration into the cities from rural areas has been growing since the beginning of the industrial revolution in the developed nations. In China the pace of this movement has been accelerated in recent years. This circumstance has stressed both the physical and social infrastructure of these rapidly growing cities. The City of Shouguang has identified three former industrial sites in the city for redevelopment, with the Union Chemical slated to be the home of a collection of new schools. The studio took this opportunity to expand the scope of the plan beyond the elementary, middle and high schools to include affordable and market rate housing along with local commercial space. The idea was to explore the possibility of creating a walkable social city defined by the schools and community space. In addition to limit the pressure on the local infrastructure the project explored address the water, power and sewage needs of the development on site.

Fall 2014, Hybrid Density

Chongqing, China: Huguang Guild Hall Area

Sustainability and Change

Cities have been reinventing themselves throughout history. Ancient cities built on top of older settlements with each subsequent version expanding what had come before. This process has occurred over long periods of time, in an incremental fashion. Change, in this model, felt like it was a 'natural' progression. China, however has expanded the scope and pace of this process. Whole sections of cities have been erased and replaced in the span of years rather than decades. This radical form of (re)development has been criticized for its lack of sensitivity to the cultural landscape of the city. However, with the specter of global warming threatening human settlement, we are entering a period where energy efficiency, density and the integration of uses may require cities to incentivize the trading in of the architectural 'junkers' of the past to be replaced with more sustainable models of the present. In this process of reinvention, there will still need be the need to recognize and preserve value. As the inadequate models are erased, the preservation of the classics will be an equally important task. Continuity and change are two sides of the same sustainability coin.

Context

This studio explored the process of urban (re)generation in the (re)development in the transition from the lower city to the upper city on the bank of the Yangtze River in Chongqing, China. Chongqing is both a mountain and a river city. It is located at the confluence of the Yangtze and the Jialing Rivers and defined by a steep topography rising from the banks of both rivers. Historically the lower city, adjacent to the river, was the source of wealth, but as the economy has changed the upper city is now the economic center of the city. The older fabric of the lower city has suffered from a long decline and with the shift to the upper city, little reinvestment has occurred in this area. With the decision by the government to maintain the historic core as the contemporary core of the city and the development of a perimeter higher density roadway around the peninsula on the banks of the river, the historic housing and commercial areas have been designated for redevelopment.

Design Research

The circumstances of the site made it a good candidate to explore issues of density, diversity in program and interface with an important heritage landscape. The historic core of the city is constrained by the two defining rivers. This caused the historic fabric to be very densely built, but still defined by walk up ability. The new city is calling for even greater density causing the city to shift from a horizontal fabric to a vertical fabric. The steep topography and the density requirements created an ideal situation to consider the development of a **vertically layered city**. As a neglected historic residential section of the city, it currently houses a large elderly population along with many urban poor. Rather than ship them out of the world they have known and the convenience they have enjoyed with their central location, the project proposed that it be developed in a way that made it possible for them to be resettled right where they are. This goal allowed **exploration into the development of a rich program environment** where affordable and market rate housing would be in the same section of the city along with the integration of complementary facilities required in a healthy community. The location of two important historic compounds within the scope of the site, along with the presence of one of the important historic stairway connections between the upper and lower cities, allowed the possibility of exploring the **designed interface between history and the present**.

Fall 2012, **Negotiated Space**

Chongqing, China: **Shibati District**

Sustainability

As society (re)considers settlement patterns in the wake of the challenges presented by the specter of global climate change, the need to factor in the wholeness of the needs of civilization as they relate to the natural environment has become more acute. Points of departure in this conversation are beginning to emerge. Resources must be carefully managed, waste must become a thing of the past, food supply must be strategically considered and the carbon footprint of human settlement must be minimized if we hope to achieve a sustainable relationship between humanity and the natural world. Cities need to be conceived as ecosystems in the same way nature has always operated. This means, rather than a pattern of segregation and separation in the development of cities, we need to adopt a more integrated strategy of linked and interdependent systems.

Context

Globally there has been an extraordinary population shift from rural areas into the city. This migration has created a series of problems for urban areas. Interconnection dysfunction, infrastructure inadequacy, resource shortages and public health concerns all challenge leadership's ability to meet the needs of the growing population. In China the mega size of cities magnify the challenges. Public spaces are heavily used. They do not have the luxury of dedicated single use. One minute they are an exercise space for elderly citizens, next they are a parking lot and then a shopping street for farmers bringing their goods in to sell in the city. Space is negotiated in the ebb and flow of the day, the season and the events of the day. The intensity of these new environments can challenge the sanity of the community and yet, the choreography of the daily dance of generations, functions and also makes living in the city a rich experience.

Design Research

As cities grow, to meet the needs of a growing population, surrounding agricultural land gets consumed and distances between parts of the city get greater making interconnectivity more difficult. Sustainable cities, in order to avoid consuming more and more land and dysfunctional circulation systems, need to explore strategies that improve use efficiencies, employ mixed use development patterns and explore ways to reclaim agriculture inside the city. The traditional city integrated all of these goals into their fabric but at much lower overall density than is required today in China. This studio was interested in exploring the **potential of negotiated space** to enhance use efficiencies, the opportunities of **mixed use development** to allow more to happen locally in the walkable environment and look for ways to integrate **agriculture inside the city** as a means of both feeding the people and reducing the carbon footprint of cities.

An additional sub text for the studio was exploring ways to address the changing Chinese household situation. Historically the family unit, particularly in China, has valued multi-generational association. The advent of the one child policy and the migration to the cities has strained or disrupted this historic communal relationship. This situation, and the growth of the elderly demographic in China, has established the need for consideration of **alternative strategies for housing the elderly**. Chinese culture still venerates the older generation and concern for the welfare of parents by their children has caused this to be a problem of increasing concern in China. There is a desire to allow people to age in place with distributed service delivery, but the housing types and integrated service facilities have yet to be implemented. Exploring strategies to address this challenge, within the fabric of design proposals, was also identified as a part of the research into residential environments in the new vertical Chinese city.

Fall 2011, Urban Renovation

Tianjin, China: Tai'an Road Historic District

Sustainability and Heritage

The process of urbanization always involves change. Whether it be the expansion of its borders or the redevelopment of existing fabric, cities are not static entities. Nowhere in the world is the process of dynamic change more prominent and more urgent than in China. With the twin masters of growth and modernization driving development, the historic fabric of the cities is under great pressure. Their inefficient densities, outdated service structures and low performing building envelopes make them easy targets for (re)development. At the same time, history and memory are also important aspects of the sustainable city. The acknowledgement of history and tradition in the physical environment connects people to place, giving urban dwellers an identity anchor, important for both old and newly arrived residents. Not everything is worthy of preservation. A city is not a museum. It does however have a history, an ancestry, that provides insight into the place and the people. This heritage is an important part of the sustainability of the community.

Context

Tianjin, originally Tientsin, is a city with a 600 year history. It is also one of the most intact 'concession' cities in China. Eight 'foreign powers' established trade concessions in the city as a result of the unequal treaty coming out of the Opium Wars. This has created, in the central city area, a significant and diverse urban fabric reflecting the architecture of the various countries who constructed them. These areas, with their central location, are in jeopardy of being lost to the 'erase and replace strategy' commonly employed in contemporary China or perhaps worse yet replaced with a kitsch homage to the past at a much larger scale. The focus of this studio is to explore ways a finer grain approach could be employed in the (re)development of cities, allowing modern densities to be maintained while at the same time integrating important heritage structures into a new hybrid fabric. The Tai'an Road area, part of the former French and British concession zones, has a number of listed structures and a historic park within its boundary. The area was slated for redevelopment as a result of the departure of a number of government users to a new campus.

Design Research

The presence of a quality heritage urban fabric, the requirement for a significant (re)development density and its adjacency to the Hai River, made this site an ideal platform to explore the integration of heritage architecture and landscapes with new development. The collection of listed buildings were located both on separated individual sites and along a fairly intact single street, requiring development responses to establish a **mixed fabric** as opposed to segregated adjacent areas. The adjacent location to the river and the existing historic park presented opportunities for the **integration of ecological systems** into the design exploration. The program for the project was determined to be both commercial, housing and commercial space. This mixture allowed the possibility of exploring the development of **walkable communities** and the **interaction of rich program environments**. This exploration into urban adaptive reuse and development was designed to generate potential models for urban (re)development in the new China.

Fall 2010, Hybrid Urbanism

Baoding, China: Edge Villages

Rural Sustainability

The integration of industry in the midst of the agriculture village landscape of China creates a new form of urbanism and a different kind of community. The farmer is connected to the land and the cycles of nature and the factory worker is tied to production schedules and market demands. The immediacy of the world of the farmer and the abstraction of distant markets for the factory make them subject to different masters and world views. Yet in this case they are both a part of the food chain each transforming something into something else in ways that generate value. Value that will contribute to the economy of the community allowing it to survive first and prosper second. Still their differences in world view and domestic requirements creates a hybrid situation. The environment of the farmer's courtyard house and the environment of the worker's apartment flat influence the nature of their residents. Creating a new form of urbanism that embraces both worlds and provides opportunities for them to integrate into a single community is an important aspect of community sustainability.

Context

As people in the 'globalized world' become more aware of the carbon footprint of this form of economy, and the threat this energy intensive model presents, every aspect of settlement is being (re)considered. Food is perhaps the most surprising contributor to many, and when they learn the distance the plate of food on their table has traveled it is even more surprising. This has sparked a discussion about the importance of local food and the need to consider ways to integrate it into the urban fabric. With limited arable land, China has a long standing 'red line' policy to protect agricultural land from development so it has the ability to feed its people. Success in following that policy with the growth of its cities has been difficult. This pressure requires the Chinese to consider the integration of urban and rural areas in order to meet the strategic needs of the people.

Design Research

Starting with the notion of bringing what is more typically part of the city into the rural environment, industry, and introducing urban people to the source of their industry, agriculture, a hybrid form of urbanism can emerge. Sustainable urbanism needs to consider the integration of food production into the midst of its densely developed regions and larger systems thinking into the more agricultural regions. This implies that **human ecologies and natural ecologies will need to interact** more frequently in both environments. The studio is designed to explore ways the different 'communities' (villages with each other and factory workers with farmers) can be blended. The **establishment of community space** becomes the first task in building this new hybrid community and the **negotiation of the edges** between the existing and new development becomes the second task in forming this new form of urbanism.

Fall 2009, Rural Sustainability

Baoding, China: Ag Eco Village

Sustainability and Rural Urbanism

Rural urbanism in agricultural areas are organized differently than the city. Rather than structured by circulation they are organized by the methods and technology of raising crops. Rural China is defined by a dispersed collection of villages surrounded by a doughnut of small allotment farmland walking distance from each village. This dispersed landscape systematically creates a dispersed economy that fails to offer these people much opportunity for a better life. This lack of opportunity is causing many to migrate to the booming economies of the cities despite the fact that their rural hukou prevents them from enjoying access to the social services of those with an urban hukou. This disparity is beginning to be questioned, and the strategic need to feed the people calls for a different perspective on the rural landscape. The Ag-Ecozaung project seeks to take a different approach to urbanism, one that chooses to design from the outside-in as opposed to the traditional approach of designing from the inside-out. This switch in vantage point is designed to give the space outside the urban core equal value. Too often the inside-out approach looks at the land outside the core as undeveloped or on its way to being urban as opposed to important and productive ground worthy of integration into a unified 'urban' fabric. The ultimate goal is the development of an integrated systems approach to urbanism in which an ecology of coexistence is pursued and the total environment is planned and considered from an economic viewpoint.

Context

The rapid growth of the economy of the cities has caused a large migration from rural areas into the cities. This movement is taxing the infrastructure of the cities and draining rural areas of the labor pool necessary to raise the food required by the country. Concern about their ability to serve the growing populations of the cities has the central government is looking for strategies that can stem the tide of human migration into the cities by creating better options in rural areas to build wealth and create a better quality of life. Rural areas in China however suffer under the dispersed economics of the small plot allotment structure, whereas cities enjoy the benefits of the concentrated economy of the factory and the emerging service sector. Liberalization of the allotment process that allowed farmers greater control of what they plant above their expected base crops was a good first step, but it still suffers under the limits of operational scale. Consideration of significant land reform and other entrepreneurial initiatives are gaining currency in the government. The studio is proposing a systematic approach that will create a more sustainable food supply chain, indicate a path toward enhanced agriculture production and build wealth opportunities in rural areas.

Design Research

The economic models for cities are primarily driven by manufacturing and service industries not agriculture. Agriculture is a commodity driven industry that is dependent on external forces like changing market demands and the varieties of shifting climates. Given the fluidity of contemporary food supply systems, there has been loose connection between the city and rural areas. This loose fitting arrangement wastes lots of energy in the path from field to table. The scenario proposed **food processing industry be shifted to the rural area** from the city improving the efficiency of this connection in the food chain. The addition of the concentrated economics of industry to the rural economy was speculated to serve as a catalyst to **organize a collection of villages into a unified system**. Secondly the scenario proposed the **reorganization of the land into a large and small plot allocations**. Large plots, organized as a cooperative, could take advantage of the yield improvements facilitated by mechanized farming of grain crops. The small plots clustered together would allow the individual farmers to continue to enjoy the financial benefits of growing high value crops for sale. These land restructuring efforts also offer the opportunity to introduce **ecological water systems** to the site to improve water quality as it passed through this landscape. Finally with the improved economy and collective organization the scenario posited that **strategically located improved community services** would become affordable improving the quality of lives in the new hybrid rural/urban community what we called the Ag ecozaung.