LIVING SMALL

A Study of Micro-Housing in Dense, Urban Situations

Emerging Professionals Travel Scholarship 2015

AIA Seattle

Garrett Reynolds

PROPOSAL

“Quickly overrun by mold, meth addicts, wild parties, people with mental illnesses, and men who will terrorize our daughters." is how a Seattle resident argued against micro-housing or “aPodments” while testifying to the Seattle City Council[1]. In Seattle and across the United States, micro-housing has quickly emerged as a controversial issue, but these developments seek to provide a viable solution to fill the supply gap for households seeking affordable options to live within the city. Micro-housing represents one of many innovative housing concepts in development to support the increased population selecting to live in dense, urban environments.

By the year 2050, more than 75 percent of the world’s population will live in urban areas. Urbanization and population growth will result in an additional 2.5 billion people residing in cities by 2050[2]. Seattle added 18,000 residents from July 2012 to July 2013, making it the fastest growing city among the 50 most populous cities in the United States with a growth rate of 2.8 percent during this time period[3].

Density is the key ingredient for resource-efficient, affordable, and economically successful cities. Urban dwellers are recognizing the many advantages dense cities provide to them including modern transportation, greater efficiency in buildings, access to knowledge and opportunities, social interaction, and convenience. With the increasing demand for living space within dense, urban environments, architects and urban planners are challenged to develop new, innovative concepts in high density housing.

The introduction of micro-apartments in the United States represents an emerging solution to the increasing demand for single person households in areas with exorbitant land costs. Micro-apartments are commonly defined as “small, typically urban, self-contained apartments between 150-350 square feet[4].” In perspective, a standard parking stall averages 250 square feet[5]. These apartments provide young professionals, new arrivals to cities, and those in transitional stages of life an affordable housing option in the city. Additionally, micro-housing units provide low income individuals the ability to live in close proximity to their work while maintaining a diverse, urban demographic in areas prone to gentrification. Micro-housing is a positive, innovative solution for cities to close the affordability gap and is an opportunity to take the strain off family housing, stimulate the economy, and satisfy the needs of this quickly growing demographic.

The issue of square footage is more cultural than objective. Historically, micro-apartments realized success in parts of the world without a population desiring the single family, suburban home developed in the United States in the 1950s. Dwelling units less than 400 square feet are very common outside the United States[6]. These units provide effective case studies on the topic of compact, efficient housing for application in Seattle and the United States.

Through this travel scholarship, I propose to investigate the meaning of living small in three culturally diverse cities:

New York City, USA Stockholm, Sweden Tokyo, Japan

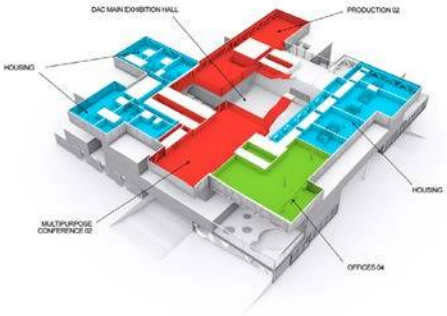
Each of these cities provides unique, innovative approaches to living small in compact urban units. My research will focus on the individual unit, its relationship to other units and communal spaces within buildings, and how unit clusters integrate into the urban fabric of the city. Through this research, I hope to bring innovative micro-housing strategies to Seattle as the city continues to densify, providing a more walkable, livable, and healthy environment for its citizens.

Unit

The main focus of the study is individual dwelling units. My research will study innovative strategies to minimize space and maximize efficiency. Livability and accessibility requirements will be considered. A catalog of unit plans will be developed along with a system of metrics and diagrams to compare one unit to another.

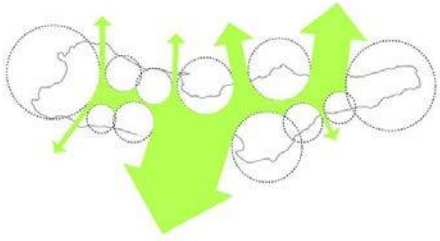
Building

Buildings with micro-units typically offer a diverse array of amenities and communal spaces that enable residents to experience community outside their compact unit. The relationship of units to one another, unit mix, and adjacencies will be studied through a series of drawing and diagrams. The number, size, and density of units on site will be recorded and compared against each other.



City

In areas of the world where public space is highly valued, people are able to live in smaller spaces. City residents utilize these communal spaces as an extension of their personal space and therefore create a more active public realm. The spaces around micro-housing developments will be studied along with how individual units and buildings integrate into the city's urban fabric. A collection of diagrams and images will document these findings.



NEW YORK CITY, USA

Population: 20,464,000 | Density: 27,016/ square mile | Land Area: 11,842 square miles

As the most populous and urban city in the United States, New York is also the capital of single living with 46 percent of one person households. A significant gap of affordable housing options for these people choosing to live alone is forcing the city to develop smaller, micro- apartments.

Scheduled for completion in late 2015, the winning entry in Mayor Bloomberg's adAPT micro-apartment design competition will add 55 new micro-units on East 27th street. These modular, pre-fabricated units of approximately 325 square feet are designed to reflect the evolving lifestyle and demographic shift of city residents. Across the city, new concepts in housing that maintain a certain dynamism in the city are being developed.

adAPT NYC Project Rendering

Contacts
- Paul Freitag - Jonathan Rose Companies
- Margarita McGrath - No Roof Architects
- Patrick Kennedy - Panoramic Interests
- Sarah Watson - Citizens Housing and Planning Council
- Jerilyn Perine - Citizens Housing and Planning Council

STOCKHOLM, SWEDEN

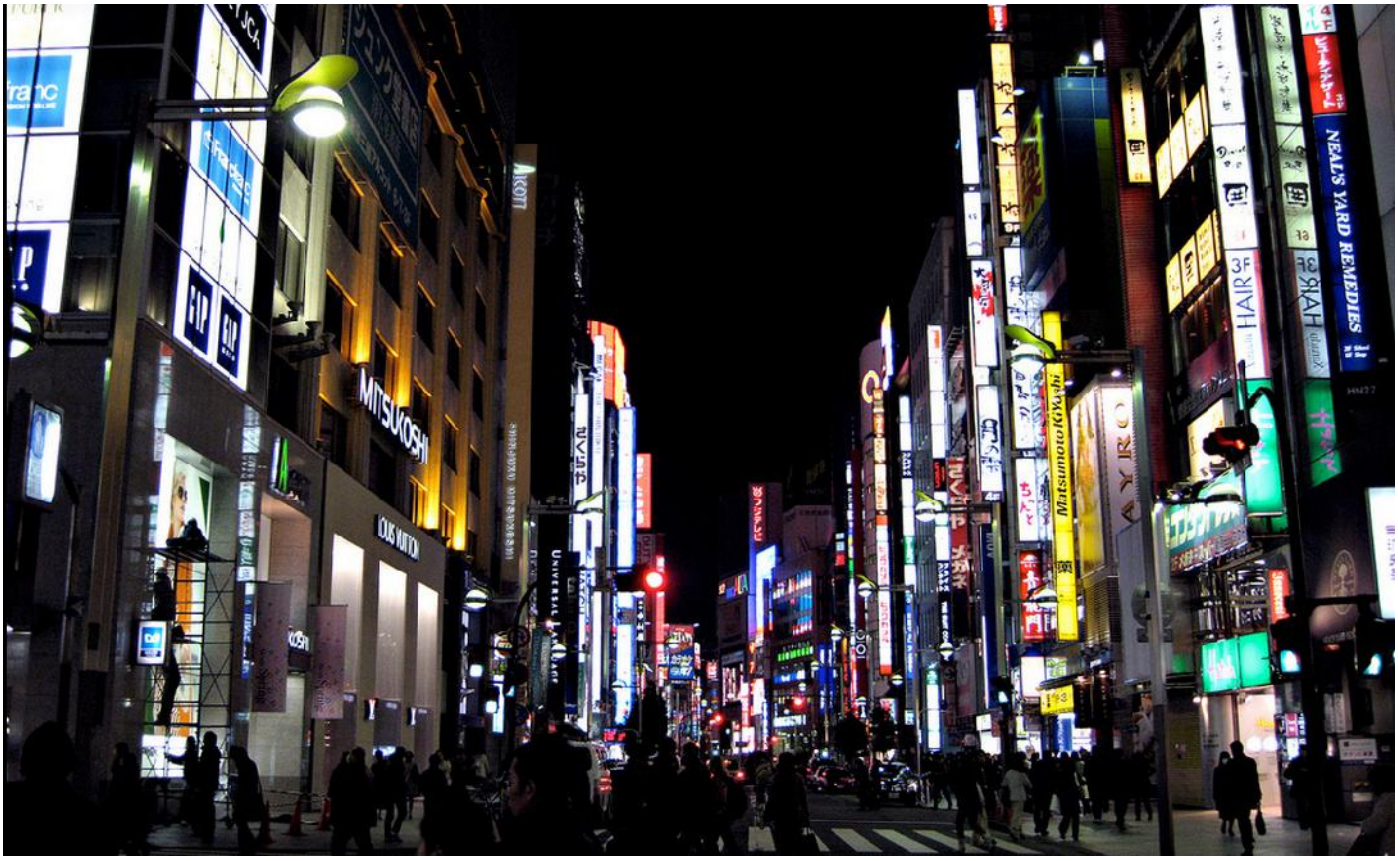
Population: 2,200,000 | Density: 12,000/ square mile | Land Area: 2,517 square miles

Stockholm has become Europe's fastest growing city with a population growth exceeding 2% and the number of residents expecting to rise by 420,000 in the next five years. A longer life span, higher birth rate, and increased amount of immigration are making Stockholm's population rapidly grow. Of this population growth, the majority is between the ages of 20 and 64.

Small, compact apartments are the norm in Sweden, where 85 percent of the population live in cities. With such a high percentage of city dwellers, public spaces are valued and heavily used. Singles living alone make up 47 percent of all households compared to 28 percent in the United States. Many options including micro-units, cohousing options, and accessory units give residents this choice.

The "Smart" micro student housing unit

Contacts
- Trond Greve Andersen - MIR
- Rachel Greene - Stockholm based architect
- Kai-Uwe Bergmann - Bjarke Ingels Group



TOKYO, JAPAN

Population: 37,126,000 | Density: 11,300/square mile | Land Area: 3,300 square miles

With approximately 37 million people in 3,300 square miles, Tokyo has remained the world's largest urban area for more than six decades. It's high demand for compact homes, or *kyo-sho-jutaku* in Japanese, results from the scarcity of suitable land for housing and astronomical land prices. Tokyo is historically known for living small with housing designed to take advantage of every inch of space. In 1972, the Nakagin Capsule Tower was built as part of the metabolism movement to provide 140 units at approximately 100 square feet each. It was an early attempt at living small within a dense, urban environment. Today, Tokyo continues to build small "one room mansions, or *wan rmu manson*, consisting of a bed, bathroom, and kitchenette in less than 100 square feet.

Unit in Nakagin Capsule Tower

Contacts
- Masao Shiina - Masao Shiina Architects
- Christopher Sjoberg - University of Tokyo

Sources

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[2] Burdett, R, & Sudjic, D. (2007). The endless city: the urban age project by the london school of economics and deutsche bank's alfred herrhausen society. Phaidon Press.

[3] Census: Seattle is the fastest-growing big city in the U.S. (n.d.). Retrieved January 9, 2015, from http://blogs.seattletimes.com/fyi-guy/2014/05/22/census-seattle-is-the-fastest-growing-big-city-in-the-u-s/

[4] ULI Multifamily Product Councils Publish New Research about Micro Units - Urban Land Institute. (2014, November 14). Retrieved January 9, 2015, from http://uli.org/report/uli-multifamily-product-councils-publish-new-research-micro-units/

[5] Parking space. (n.d.). Retrieved January 9, 2015, from http://en.wikipedia.org/wiki/Parking_space

[6] Shore, Z. (2014). The Case for Micr-Apartment Housing in Growing Urban Centers. Boston: MIT.

[7] Balcony Heaven. (2014, August 24). Retrieved January 9, 2015, from https://www.flickr.com/photos/dirks_pic/8578636128/

PROPOSED ITINERARY

1. Seattle to New York City, NY | 5 Days

Airfare: +/- $300

Hostel: +/- $50/night for 4 nights

Food: +/- $50/day for 5 days

2. New York City to Stockholm, Sweden | 7 Days

Potential side trips to Oslo, Norway and Copenhagen, Denmark

Airfare: +/- $950

Hostel: +/- $50/night for 6 nights

Food: +/- $50/day for 7 days

3. Oslo, Norway to Tokyo, Japan | 7 Days

Airfare: +/- $550

Hostel: +/- $50/night for 6 nights

Food: +/- $50/day for 7 days

4. Tokyo, Japan to Seattle, WA

Airfare: +/- $700

5. Seattle, WA | Exhibition

Upon return to Seattle, the results from the research will be documented in a publication and shared with the local design community through an exhibition.

Print 10 copies of trip documentation including unit plan catalogue: +/- $300

Materials for Exhibition: +/- $200

Entry Visas and miscellaneous travel expenses: +/- $250

Estimated total cost: +/- $5,000