

SYNERGIES OF A SHARED HOUSEHOLD

ELENI KATRINI

AUTHOR AFFILIATION

CARNEGIE MELLON UNIVERSITY, SCHOOL OF ARCHITECTURE

INTRODUCTION.

HOUSING; THE SITUATION TODAY

At the Universal Declaration of Human Rights in 1948, housing was identified as part of the human right to basic standard of living.¹ The home, as the very manifestation of shelter represents the fundamental value of safety and privacy. In large urban centres today however, housing has lost its actual value, becoming a commodity with an exchange value. As David Harvey said in a recent interview: “Then all of a sudden a lot of people find they can’t have the use of value of the housing anymore because the exchange value system has destroyed it.”^{2,3}

As we shift from the perception of housing as a right to that of an investment, great issues of housing affordability come up. In the US, a house is considered affordable when its expenses do not overcome 30% of the household gross income. Nonetheless this threshold, called the *affordable rent burden*, is far from reality in many US cities today. Housing prices and expenses have increased to a point that they are not affordable even for the middle class, let alone the lower-income one, creating a crisis for the future living of a growing population. In 2013, Los Angeles was the most unaffordable city in the US to rent a house, with the expenses equalling to 47% of the median household income.⁴ Affordability troubles do not pertain only to large metropolitan areas, but to smaller towns as well; College Station in Texas has seen one of the largest increases in rent since 2000, reaching 41.8% of household income in 2013.⁵ In Europe the affordable rent burden is higher than the US; a house is affordable when the housing expenses do not overcome the 40% of the gross household income. Even so, in 2013, one out of three Europeans could not afford their house.⁶

It seems like the cities are becoming a viable option only for the ones who can afford it, losing, on the way, their diversity in income, age and race, which makes them liveable places.

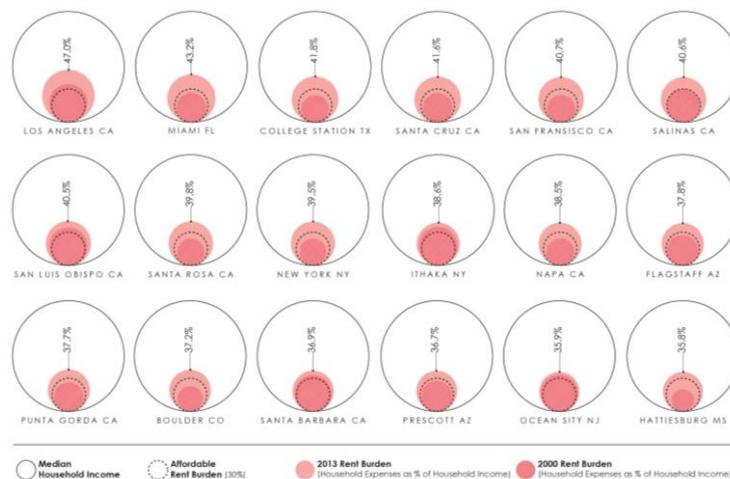


Figure 1. Change of Rent Burden in 18 US Cities between 2000 and 2013 in comparison to the affordable Rent Burden (30%) – (Data Source: Zillow⁷)

CONFERENCE: HOUSING – A CRITICAL PERSPECTIVE

Architecture_MPS; Liverpool University; Liverpool John Moores University
Liverpool: 08—09 April, 2015

SHARING AS AN EMERGING SOLUTION

Under this pressing affordability issue, people try to minimize their housing expenses and find ways to adapt their everyday lives by altering the idea of what a household means. One of the emerging solutions to affordability over the last 5 years is the act of renting out personal spaces or even other personal goods and resources. Even though such practices existed since the wide use of the internet, the founding of AirBnB in 2008 was a catalyzing factor to turning them into common practice. People rent out empty spaces in their house, their couch for couch-surfing, their tools through tool libraries, their driving skills on Uber and Lyft, their bikes through Cycleswap. It seems like online sharing economies have found a fertile ground in urban centres, where both supply and demand for such practices are abundant, by just providing security to users through online platforms and a system of review on performance. The recession of 2008 was the turning point that forced people from different ages and backgrounds to share their personal belongings even though they normally wouldn't. Renting a room in your house was common practice in the Great Recession, and history seems to be repeating itself.^{8,9}

However, there are methods of sharing that go beyond renting, that people are implementing in order to deal with issues of affordability. Doubled-up households, which have been increasing significantly over the past 5 years, are one of those ad-hoc solutions. Doubled-up are called the households which are shared between people who are not related. Only in 2011, 18.3% of all US households were doubled-up, meaning that they were inhabited by non-related people who decided to live together to minimize housing expenses.¹⁰

Additionally, it is not only shared households by strangers that are increasing, but there is also a paradigm shift in family household trends. As young adults are being hit harder from the recession, it seems like they are having trouble leaving the family nest early on. Within just 4 years since 2007, the number of US adults between the age of 25-34 years old still living with their parents increased by 14.2%, reaching 4.7 million.¹¹

In a different generational stage of life -that of retirement- there is another set of opportunities to minimize living expenses by sharing. Senior community housing developments provide people with the benefits of low cost housing in addition to safety, companionship and easy access to services. However, it is not a model that works for all; certain people prefer the comfort of their own home and homeownership gives them a sense of entitlement and achievement. In that case, sharing a house with friends or acquaintances becomes a viable option. It seems that there is an increased interest over the last couple of years in the US from older people thinking about their retirement plans to consider owning and sharing an apartment with other people at the same stage of life. Women, who also tend to live longer than their male partners, are more prone to the idea of sharing a house later in life.^{12,13}

SYNERGIES OF SHARING

Sharing becomes an increasingly significant tool to tackle financial hardships within an unsustainable capitalistic system. But it should not be confused with renting. Sharing, for the sake of this paper, is defined as the capability of more than one individual to have access to common resources; where a resource can be jointly used by more than one individual. The act of doing so has significant financial easements for those involved, but not direct economic profit. The opportunities to share can be classified in three main categories; sharing of a. spaces, b. goods and c. services.

Even though the springboard for sharing might be the financial easements that the de-individualization of some resources brings, there are significant environmental and social benefits that come along with sharing resources, let alone large assets such as a house. Those ideas are not new; the model of

CONFERENCE: HOUSING – A CRITICAL PERSPECTIVE

Architecture_MPS; Liverpool University; Liverpool John Moores University
Liverpool: 08—09 April, 2015

cohousing that started in Denmark in 1964 and has now expanded in different countries across the world, is promoting the same set of principles; the privately owned resources are minimized to the maximum possible, and the rest of the individual needs are served through community shared resources available to all. There has been done significant research on the benefits of cohousing as well as sharing in general and it is worth looking at an aggregated analysis of those in order to understand the cumulative benefits and how we as architects could design in a manner that promotes rather than inhibits sharing. This paper intends to create a comprehensive analysis of the economic, but mainly environmental and social benefits of shared living via a thorough literature review on cohousing, shared housing and sharing in general.

[Economic Benefits]

Apart from the apparent financial benefits of splitting costs and saving in resources, there are several additional economic benefits when it comes to share a household.¹⁴ Firstly, there is greater financial stability; sharing a household with others and especially non-relatives can increase the level of accountability towards the shared household responsibilities, leading to sustained financial stability. Moreover, if trust is established among housemates, a support network is created between them especially during moments of crisis.¹⁵

In the case of cooperatively owned households, and not rented, the stability is even greater for residents, as rent increases or displacement is not possible; there is no third party that seeks to profit from the house as a piece of real estate. Ergo, a cooperatively owned home facilitates ownership by splitting costs and provides a sense of autonomy to residents to create their own rules of self-regulation.¹⁶

The second most important economic advantage of people living together instead of alone is that they can benefit from economies of scale; the larger the group of people the better. What this means is that residents can buy resources as a group in bulk for lower prices. This is an extremely beneficial factor, especially in the case of larger pools of people like in cohousing.

[Environmental Benefits]

Nowadays, human beings seem to accumulate a significant number of goods necessary for their everyday lives; from big assets like a house and a car to smaller ones such as a vacuum cleaner, a laundry machine and an electric drill. Even though most of those things are very useful, they stay idle most of the time. This signifies that they have “*excess capacity*”, which is not taken advantage of when those assets are privately owned and used by one individual.¹⁷ The greatest environmental benefit of sharing is that groups of people can utilize that excess capacity to the maximum, while minimizing the number of such assets owned per individual. From a survey at several cohousing communities, where sharing such assets among households is common practice, it has been proven that the ownership per household of washing machines, tumble driers and freezers was reduced by 25% compared to the average household. The private ownership of lawn mowers was also 75% less compare to the US average.¹⁸ In general, when people share a household or live within a sharing community, they tend to merge belongings and allocate resources leading to a general 8% savings in goods.¹⁹ Apart from possessions, there is also a reduction in space usage; sharing a house means sharing a living room, a kitchen and often a bathroom. In the case of cohousing, the private dwellings are significantly more reserved in footprint giving the opportunity to create larger shared spaces, leading to 31% of space savings.²⁰ Furthermore, when people start sharing, they tend to achieve energy and water savings too. Two people sharing a house are consuming less than double the energy of a single occupant household. For the cohousing households, that reduction has be measured to reach

CONFERENCE: HOUSING – A CRITICAL PERSPECTIVE

Architecture_MPS; Liverpool University; Liverpool John Moores University
Liverpool: 08—09 April, 2015

up to 57% of electricity savings compared to the US average.^{21, 22} Sharing does not only contribute to the fact that we are consuming less, but coherently we are producing less waste because of that.²³

In general, through sharing people learn to better manage resources; by involving themselves into sharing habits, they turn towards practices of responsible consumption and degrowth.²⁴ Belonging in a group facilitates such pro-environmental behaviours, especially if the social norms of the group support analogous behaviour. In the case of cohousing, such environmental goals become a great part of the core values of the community and initiatives of conservation, recycling, smart transportation and sustainable food are common practice.²⁵

Moreover, in cases of extended groups of people, the incorporation of innovative energy production and water conservation systems becomes feasible. With three or more sharing a household, costly initiatives, such as better air-tight windows, low-flow faucets or even implementation of PV and solar water heaters, are a more viable option as costs are shared among residents and savings are distributed among all. Furthermore, because economies of scale are a prerequisite for the wide adoption of such systems, doubled-up households could become a viable target audience for policy change; tax easements and incentives that promote the incorporation of sustainable building features can be offered to them.

[Social Benefits]

No matter how important the environmental benefits of sharing are and despite the fact that the springboard for sharing a household might be financial hardships, the greatest benefits of sharing are social and radically change residents' everyday life. When people live under the same roof, even though they might not be related, they create a social network that grows stronger every day because of their active involvement in all aspects of the management of their property. Sharing a household offers a feeling of stability and belonging that is rare in individual households.²⁶ Due to the interconnectedness between the residents, there seems to be a strong sense of emotional support that resembles to that of a family.²⁷ And because trust-building is necessary and inevitable at the same time, when sharing a house turns out to be successful, housemates tend to be supportive of one another leading to greater durability of this housing model.

Apart from the sense connectedness, there are significant social benefits to the everyday life of the residents of a shared household that spur from the simple dispersion of responsibility among many than just one person. All of the sudden, household chores are split between residents, cooking and sharing meals become regular and pet sitting might be an option offered by other housemates. When responsibilities are split, then there is more time available for personal growth and relaxing. That is the basis of cohousing communities too; creating a more active social life while minimizing the burdens of everyday life.²⁸ Assistance in several tasks might not only come from splitting household responsibilities, but also from mutual assistance between residents. For example, in cohousing it has been proven that residents adopt a more collaborative lifestyle and they tend to assist each other in different occasions, either through formal events and groups but informal ones as well.²⁹ Accordingly, when people are sharing a household, there is significant willingness to share and collaborate among them to the fullest.³⁰ This might result to various offers of informal services between residents like carpooling, pet-sitting opportunities and skills exchange. It is shown that personal growth and development are an integral part of shared housing situations as residents tend to learn and benefit from each other. In cohousing communities this might happen in a more formal, intentional way through the development of workshops, learning and sharing events.³¹ However, sharing of skills, knowledge and assistance in an informal way is apparent in all cases of a shared living condition, thus creating a strong support network for the residents.

CONFERENCE: HOUSING – A CRITICAL PERSPECTIVE

Architecture_MPS; Liverpool University; Liverpool John Moores University
Liverpool: 08—09 April, 2015

That support network of sharing and collaboration has been proved to significantly increase the levels of happiness and personal satisfaction.³² It is noticed that people are more positive when sharing and the social cohesion that is built among individuals can help them address more effectively situations of pressure and stress that come up. This self-confidence springs from the confidence of the group and the ability to rely on others. Hence, it is evident that social interaction and support created through sharing has shown to have great benefits to both the physical and mental health of the constituents.³³ Ultimately, a shared living situation can have different significance for people of different age, income, background etc. It might be that for individuals of lower income, the primary benefit of a shared household is affordability and the sense of financial stability. On the other hand for students and young professionals, the financial easements might be the motive for home-sharing combined with the sense of belonging in a “family” as they are trying to make it on their own for the first time in their lives. For older, more economically stable folks, it is a grand solution for retirement and companionship might be the utmost benefit of their moving in together.³⁴ In a survey of more than 100 older homesharers, they reported a happier and healthier state while sharing a home compared to living alone.^{35,36} Even for people with children, who might seem a population that is not appropriate to share with non-related people, it can be beneficial to share resources and live in a close knit community where they can rely on others. Such a living condition can create great opportunities of kids growing up together, parents having a more sociable life and enjoying easements of occasional baby-sitting by friends. For example, it seems that because of the housing boom, there are cases where single parents in London, have created opportunities of sharing a house and raising their kids all together.³⁷

CHALLENGES

Based on the above, it is evident that everyday life in a shared household entails significant benefits for the residents across all levels because of the closeness and socially engaging lifestyle it promotes. Moreover, it promotes a sustainable lifestyle that minimizes the resource consumption. Nevertheless, it does not mean it is an effortless alternative or that it is appropriate for everyone. There are significant challenges in sharing a household. Firstly, attention needs to be paid on issues of overcrowding; one of the main challenges of a shared household is to balance between communality and privacy. Studies have shown that minimizing the private area per individual, can significantly affect their level of happiness and satisfaction.^{38, 39} Apart from privacy, in order for a shared household to succeed, it needs time, effort, resources, good management as well as a suitable group of people; skills and investments that not everyone can afford. We realize that a shared housing model can be demanding and entails a great amount of risk, preventing people from engaging in such endeavours. Hence, there are certain limitations when it comes to applying the model of a shared household as a solution towards more affordable, sustainable and social engaging housing options, limiting it from becoming available to the mainstream.

So the question is how can we create places and communities that benefit from the assets of the intimate and socially engaging lifestyle of shared housing, without demanding that people start doubling up across the board? Is there a way to promote sharing and collaboration in an urban scale, rather than in the micro-scale of the housing unit? Future research needs to test exactly that; recreating relations of collaboration and sharing on a neighbourhood scale. The objective should be to examine what are the opportunities of sharing outside of the household and if those will recreate social and environmental benefits that yield from shared households? Can we move from a self-contained household to a “network” one without just renting our properties but rather sharing in a meaningful way as a manner of enjoying the environmental and social benefits?

CONFERENCE: HOUSING – A CRITICAL PERSPECTIVE

Architecture_MPS; Liverpool University; Liverpool John Moores University
Liverpool: 08—09 April, 2015

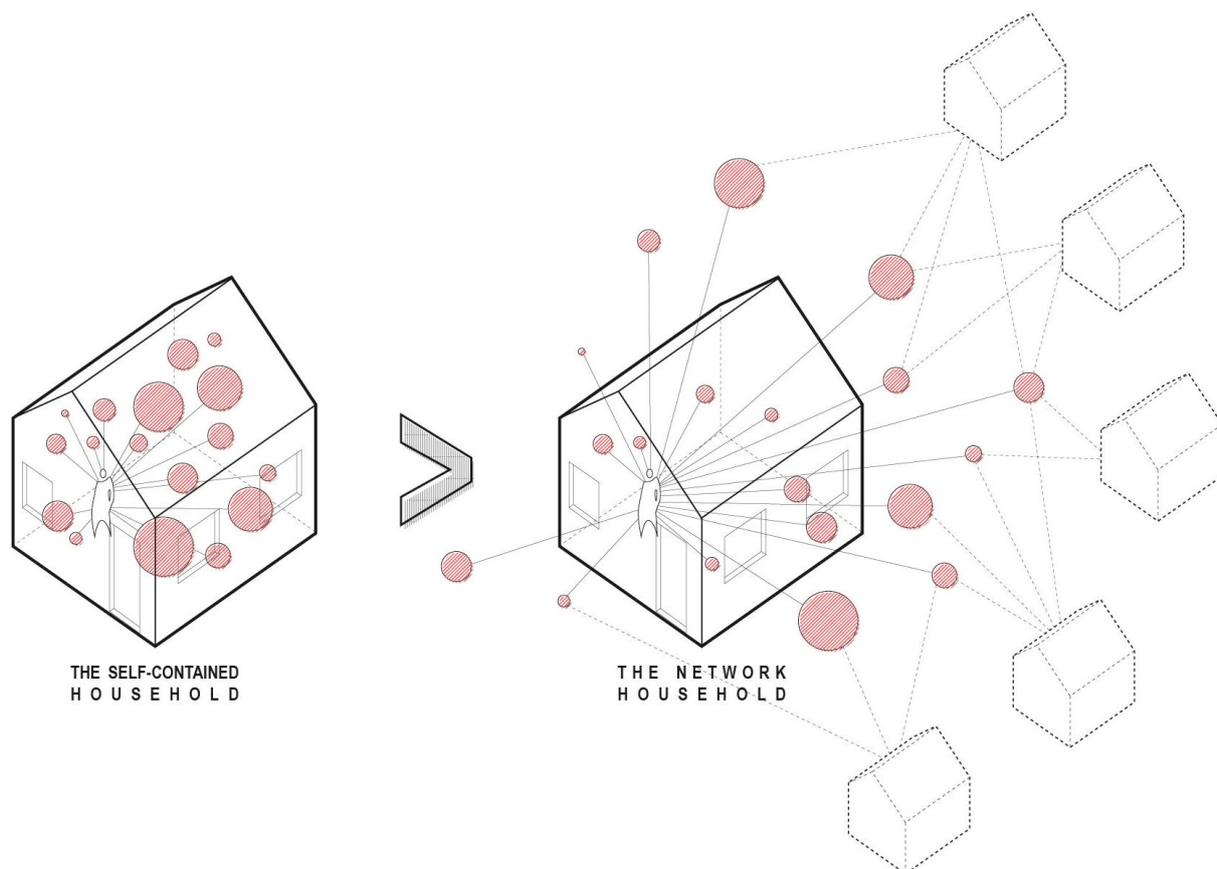


Figure 2. From the Self-Contained Household to The Network Household

TOWARDS FUTURE MODELS

Such examples of sharing on an urban scale are not novice ideas; communities across the world come together and reclaim public spaces, share goods and *co-create the everyday commons*. From community gardens and carpooling to exchange of goods and social kitchens, neighbours extend their private households creating a hyper-space in the middle where they can share, collaborate and communicate. Even though, those ideas exist across the globe giving hopes of an ideal human-centred society, they are niche examples and do not manage to build the necessary capacity in order to become part of the mainstream reality. In order to move towards the network household model, we as citizens need to explore ways to amplify such community initiatives and make them inclusive for all. These methods will demand both policy changes on a higher level of decision making and local action with design.

Firstly, in order for sharing practices to scale up in the city, “invisible” sharing systems previously practiced by friends and neighbours might now need to become “visible” by a larger pool of strangers. So, one effect that needs to be considered in the expansion of such sharing systems is their visibility in the city and their physical manifestation. A way to move towards such practice would be through the *use of existing obsolete infrastructure*. A good example of such a case study is the micro-library within an old phone booth in Lewisham, UK presented in the paper “Design for Sharing”⁴⁰. Quite different from other little free libraries that have been trending both in the US and Europe, the Lewisham micro-library is a worth-looking at because of the smart use of a previously obsolete infrastructure; the public payphones. This means that given the necessary support by the community, there is an interrelated physical system already dispersed within the city, that due to the obsolescence

CONFERENCE: HOUSING – A CRITICAL PERSPECTIVE

Architecture_MPS; Liverpool University; Liverpool John Moores University
Liverpool: 08—09 April, 2015

of its previous use, it can now be used for the wide replication of a new sharing system across the UK. And because unused old payphones exist in most cities, it is something that can be easily replicated in other cities too. Secondly, this project started as an individual initiative and was eventually embraced by the community.

Another way to support sharing practices within the city is by the *use of existing infrastructure in combination to policy incentives*. A good example for that is carpooling. Carpooling is defined as the act of riding existing privately-owned cars by more than one person at once. Carpooling currently happens by chance and based on private initiative. It can be locally supported by the use of physical infrastructure, such as signage for dedicated reserved parking spaces at the parking lot of LEED buildings⁴¹. However, such incentives are not enough to promote carpooling on a larger scale.

A more effective approach to the promotion of carpooling has been the high-occupancy vehicle lane (HOV lane) that started in the US around the 1970s-1980s. Here, by reserving one lane out of highways and roads of high traffic (through the necessary policy regulation) specifically for carpooling, citizens are more prone to carpool with friends, acquaintances or even strangers. Even though there is no monetary benefit in the exchange of either the driver or the passenger(s), both parties are benefited from carpooling as they will get to their destination faster just by using the HOV lane⁴². As such models can be very successful and are actually of minimal costs (the roads and cars exist, they only need to be signed as HOV), we understand that the use of policy incentives in order to promote a more sharing approach to existing infrastructure and resources can be one of the most effective strategies to be used towards the expansion of sharing practices. For example, policy incentives could greatly benefit another sharing system that currently exists widely in the US and it is not recognized as much by the “hype of the sharing economy”; the shared laundry facilities in the multifamily buildings. Most apartment buildings use their basements as shared laundry facilities. A system like that could be expanded to the extreme, where having a shared laundry facility in the basement is mandatory for an apartment building and incentives could be given to the landlords in order for them to have high performance Energy Star appliances. Moreover, through policy incentives both in retrofits, or new construction of apartment buildings the provision of such services could be offered for free or at least included in the rent. In that way, the residents would be prone to use the free shared services rather than buying a private appliance.

Finally *branding and place making* are another way to amplify sharing practices within the city, just by mere engagement, communication and visibility. Local sharing practices that are organized through just the use of internet and social media can become rather exclusive to all ages and backgrounds. Moreover, by visibly exposing sharing practices, even when the activity is not there, allows residents to engage and learn more easily about specific initiatives that might be taking place within their neighbourhood. A great example of sharing that is organized via online paths is Huiskamerkantoor or else called Hoffice in Sweden. Hoffice is when home living rooms are used like co-working spaces for freelancers or students⁴³. This system takes advantage of the excess capacity of a living room large enough to host more than one person to work. The visitors might bring cookies or coffee in exchange and the system is regulated by an online platform. Even though the network of available living rooms that can host people is regulated online, more spontaneous sharing opportunities could take place within a neighbourhood, just by adding a “Hoffice-branded” sticker at the entrance of the houses / apartment buildings connected to the network.

These are just some preliminary schemes that can be used in order to move towards the network household. Realizing the synergies that occur on all levels, social, environmental and economical, when people are sharing is the first step towards making the case for the network household model. However in order to achieve an ideal and inclusive model like that, more detailed design and policy

CONFERENCE: HOUSING – A CRITICAL PERSPECTIVE

Architecture_MPS; Liverpool University; Liverpool John Moores University
Liverpool: 08—09 April, 2015

schemes will be necessary. More extensive ideas like the ones mentioned above should be applied on the ground through extensive engagement processes in order to test viability and success.

Nevertheless, those design and policy schemes should not be prescriptive or used in non-transparent processes to serve other causes. Creating the everyday commons is not something that should be prescribed on citizens, but rather create a viable space where such practices can prosper. Often enough policy and physical space can be prohibiting for people to share and collaborate in the urban space. In such cases transforming laws and using design to allow for sharing practices to take place, will assist in the process of turning the network household into a reality.

—

ENDNOTES

-
- ¹ UN Habitat, *The Right to Adequate Housing*.
 - ² Red Pepper, "David Harvey Interview."
 - ³ Interview with Prof. David Harvey.
 - ⁴ Dewan, "In Many Cities, Rent Is Rising Out of Reach of Middle Class."
 - ⁵ Ibid.
 - ⁶ Eurostat SILC, "European Union Statistics on Income and Living Conditions."
 - ⁷ Dewan, "In Many Cities, Rent Is Rising Out of Reach of Middle Class."
 - ⁸ Russ, "House Sharing Becomes More Common With Down Economy."
 - ⁹ "National Shared Housing Resource Center."
 - ¹⁰ Johnson, "Households Doubling Up."
 - ¹¹ Ibid.
 - ¹² Bush, Machinist, and McQuillin, *My House Our House*.
 - ¹³ Healy, "Home Sharing an Option for Seniors."
 - ¹⁴ Williams, "Predicting an American Future for Cohousing."
 - ¹⁵ Margolis and Entin, "Report on Survey of Cohousing Communities 2011."
 - ¹⁶ "Berkeley."
 - ¹⁷ Benkler, "Sharing Nicely."
 - ¹⁸ Williams, "Predicting an American Future for Cohousing."
 - ¹⁹ Ibid.
 - ²⁰ Ibid.
 - ²¹ Ibid.
 - ²² Brown, "Comparative Analysis of Energy Consumption Trends in Cohousing and Alternate Housing Arrangements."
 - ²³ Green and Vergragt, "Towards Sustainable Households."
 - ²⁴ Light and Miskelly, "Design for Sharing."
 - ²⁵ Margolis and Entin, "Report on Survey of Cohousing Communities 2011."
 - ²⁶ Barnds et al., "Affordable Housing Cooperatives, Conditions and Prospects in Chicago."
 - ²⁷ Margolis and Entin, "Report on Survey of Cohousing Communities 2011."
 - ²⁸ Lietaert, "Cohousing's Relevance to Degrowth Theories."
 - ²⁹ Williams, "Predicting an American Future for Cohousing."
 - ³⁰ Meltzer, *Sustainable Community*.
 - ³¹ Margolis and Entin, "Report on Survey of Cohousing Communities 2011."
 - ³² Light and Miskelly, "Design for Sharing."
 - ³³ Williams, "Predicting an American Future for Cohousing."
 - ³⁴ Bush, Machinist, and McQuillin, *My House Our House*.
 - ³⁵ Altus and Mathews, "Examining Satisfaction of Older Home Owners with Intergenerational Homesharing."
 - ³⁶ Pynoos, Hamburger, and June, "Supportive Relationships in Shared Housing."
 - ³⁷ Riley-Jones, "Credit Crunch Commune."
 - ³⁸ Ahrentzen, "Double Indemnity or Double Delight?"
 - ³⁹ Mitchell, "Some Social Implications of High Density Housing."
 - ⁴⁰ Light and Miskelly, "Design for Sharing."
 - ⁴¹ USGBC, "SSc4.4: Alternative Transportation - Parking Capacity."
 - ⁴² Benkler, "Sharing Nicely."
 - ⁴³ Boer, "Home Office In Swedish Is Hoffice"; Boer, "Your Neighbor's Living Room Is Your New Office!"

—

CONFERENCE: HOUSING – A CRITICAL PERSPECTIVE

Architecture_MPS; Liverpool University; Liverpool John Moores University
Liverpool: 08—09 April, 2015

BIBLIOGRAPHY

- Ahrentzen, Sherry. "Double Indemnity or Double Delight? The Health Consequences of Shared Housing and 'Doubling Up.'" *Journal of Social Issues* 59, no. 3 (July 1, 2003): 547–68. doi:10.1111/1540-4560.00077.
- Altus, Deborah E., and R. Mark Mathews. "Examining Satisfaction of Older Home Owners with Intergenerational Homesharing." *Journal of Clinical Geropsychology* 6, no. 2 (April 1, 2000): 139–47. doi:10.1023/A:1009562528835.
- Barnds, Ann, Martha Glas, Matthew Glesne, Claudia Saravia, Patricia A. Wright, and Yittayih Zelalem. "Affordable Housing Cooperatives, Conditions and Prospects in Chicago." Chicago: University of Illinois Chicago, June 2004. <http://www.uic.edu/cuppa/voorheesctr/Publications/Affordable%20Cooperative%20Housing%2004.pdf>
- Benkler, Yochai. "Sharing Nicely: On Shareable Goods and the Emergence of Sharing as a Modality of Economic Production." 2004. <http://www.yalelawjournal.org/essay/sharing-nicely-on-shareable-goods-and-the-emergence-of-sharing-as-a-modality-of-economic-production>.
- "Berkeley: Runaway Housing Costs Make Co-Ops Attractive." *InsideBayArea.com*. Accessed March 14, 2015. http://www.insidebayarea.com/breaking-news/ci_27706941/berkeley-runaway-housing-costs-make-co-ops-attractive.
- Boer, Joop de. "Home Office In Swedish Is Hoffice." *Pop-Up City*, February 2015. <http://popupcity.net/home-office-in-swedish-is-hoffice/>.
- . "Your Neighbor's Living Room Is Your New Office!" *Pop-Up City*, July 2013. <http://popupcity.net/your-neighbors-living-room-is-your-new-office/>.
- Brown, Jason R. (Jason Robert). "Comparative Analysis of Energy Consumption Trends in Cohousing and Alternate Housing Arrangements." Thesis, Massachusetts Institute of Technology, 2004. <http://dspace.mit.edu/handle/1721.1/30142>.
- Bush, Karen M., Louise S. Machinist, and Jean McQuillin. *My House Our House: Living Far Better for Far Less in a Cooperative Household*. Pittsburgh, PA: St. Lynn's Press, 2013.
- Dewan, Shaila. "In Many Cities, Rent Is Rising Out of Reach of Middle Class." *The New York Times*, April 14, 2014. <http://www.nytimes.com/2014/04/15/business/more-renters-find-30-affordability-ratio-unattainable.html>.
- Eurostat SILC. "European Union Statistics on Income and Living Conditions." *Housing Cost Overburden Rate by Income Quintile*, 2013. http://ec.europa.eu/eurostat/web/microdata/european_union_statistics_on_income_and_living_conditions.
- Green, Ken, and Philip Vergragt. "Towards Sustainable Households: A Methodology for Developing Sustainable Technological and Social Innovations." *Futures* 34, no. 5 (June 2002): 381–400. doi:10.1016/S0016-3287(01)00066-0.
- Healy, Vikki Ortiz. "Home Sharing an Option for Seniors." *Chicago Tribune*. October 2013. http://articles.chicagotribune.com/2013-10-11/news/ct-met-senior-housing-shares-20131011_1_lombard-home-lombard-house-seniors.
- Interview with Prof. David Harvey. Interview by Irish Left Review, November 2013. <http://www.irishleftreview.org/2013/11/04/interview-prof-david-harvey/>.
- Johnson, David. "Households Doubling Up." *US Census Bureau*, September 2011. <http://blogs.census.gov/2011/09/13/households-doubling-up/>.
- Liettaert, Matthieu. "Cohousing's Relevance to Degrowth Theories." *Journal of Cleaner Production*, Growth, Recession or Degrowth for Sustainability and Equity?, 18, no. 6 (April 2010): 576–80. doi:10.1016/j.jclepro.2009.11.016.
- Light, Ann, and Clodagh Miskelly. "Design for Sharing." Newcastle, UK: EPSRC Digital Economy Sustainable Society Network+, Northumbria University, November 2014. <http://www.fccrnet.org/wp-content/uploads/2014/11/design-for-sharing-webversion.pdf>.
- Margolis, Diane, and David Entin. "Report on Survey of Cohousing Communities 2011." Cohousing Association of the United States (Coho/US), September 2011. <http://www.cohousing.org/node/2023>.
- Meltzer, Graham. *Sustainable Community: Learning from the Cohousing Model*. Victoria, B.C.: Trafford Publishing, 2005.
- Mitchell, Robert Edward. "Some Social Implications of High Density Housing." *American Sociological Review* 36, no. 1 (February 1, 1971): 18–29. doi:10.2307/2093503.
- "National Shared Housing Resource Center." *National Shared Housing Resource Center*. Accessed March 6, 2015. <http://nationalsharedhousing.org/>.
- Pynoos, Jon, Lisa Hamburger, and Arlyne June. "Supportive Relationships in Shared Housing." *Journal of Housing for the Elderly* 6, no. 1–2 (July 10, 1990): 1–24. doi:10.1300/J081V06N01_01.
- Red Pepper. "David Harvey Interview: The Importance of Postcapitalist Imagination." *Red Pepper, Spicing up Politics*, August 2013. <http://www.redpepper.org.uk/david-harvey-interview-the-importance-of-postcapitalist-imagination/>.
- Riley-Jones, Amanda. "Credit Crunch Commune: Feeling the Pinch? These Three Families Were - and Found a VERY 21st-Century Solution." *Daily Mail Online*. July 2009. <http://www.dailymail.co.uk/femail/article-1196898/Our-credit-crunch-commune-Feeling-pinch-These-families--VERY-21st-century-solution.html>.

CONFERENCE: HOUSING – A CRITICAL PERSPECTIVE

Architecture_MPS; Liverpool University; Liverpool John Moores University
Liverpool: 08—09 April, 2015

Russ, Marianne. "House Sharing Becomes More Common With Down Economy." *KPBS Public Broadcasting*, March 2009. <http://www.kpbs.org/news/2009/mar/18/house-sharing-becomes-more-common-with-down/>.

UN Habitat. *The Right to Adequate Housing*. Human Rights Fact Sheets 21. Switzerland: Office of the United Nations High Commissioner for Human Rights, 2009.
http://www.ohchr.org/Documents/Publications/FS21_rev_1_Housing_en.pdf.

USGBC. "SSc4.4: Alternative Transportation - Parking Capacity." *LEEDuser*, 2009.
<http://www.leeduser.com/credit/nc-2009/SSc4.4#bev-tab>.

Williams, Jo. "Predicting an American Future for Cohousing." *Futures* 40, no. 3 (April 2008): 268–86.
doi:10.1016/j.futures.2007.08.022.