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DESIGNING AND BUILDING HOUSING TOGETHER: THE SPANISH CASE OF LA BORDA

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Abstract

The recent re-emergence of collaborative housing initiatives across Europe is perceived as an alternative solution to the current crisis on affordable housing in many urban centres. La Borda, a recent housing cooperative project in Barcelona, Spain was initiated by a group of citizens who were looking for economic and community-oriented ways to live in the city. To this end, they decided to collectively design and self-manage the whole project. This paper explores how the **collective design process** in La Borda impacted on the final outcome and contributed to its **affordability**. Anchored in concepts of participation, self-organisation, affordability and environmental and social sustainability, La Borda is influenced by Scandinavian collaborative housing, mainly in the use of the Andel tenure system and in the adoption of the co-housing model. In its turn, this South European initiative can provide innovative insights on design approaches to enrich the Nordic background in affordable collaborative housing.

Key words: collaborative housing, affordability, collective design, design approaches, La Borda

1. Introduction

Currently, Europe faces significant challenges in the field of affordable housing provision: in 2015, 11.3% of the overall population in the European Union spent 40% or more of its disposable income on housing (Pittini, Koessl, Dijol, Lakatos, & Ghekiere, 2017, p. 4). This problem is mainly due to the effects of the 2008 global economic crisis and the failure by established (private or public) housing providers to deliver housing that meets the needs of increasing sections of the population. At the same time, the expansion of the *collaborative economy* has gradually transformed the ideas of property and ownership, by promoting the notion of access (Kreiczer-Levy, 2015). Furthermore, the increase of global environmental degradation has resulted in the development of theories such as slow living (Jarvis, 2015) and DIY (Do-it-yourself) approaches.

These new developments reflect the desire to reclaim a certain idea of *simplicity*, consequence of the perceived excesses of the post-structuralism period (Montaner, 2001). Aureli (2016) defends the idea of adopting a more 'ascetic' posture towards life and consumption, where 'less is enough'. In line with line, there has been an increasing interest in recapturing the concept of *Existenzminimum (minimum dwelling)*, a design approach applied to housing after WWI, to guarantee the minimum quality

standards in housing at affordable prices. Many contemporary architects are expressing a renewed social awareness and developing innovative affordable housing solutions, through the revival of the concept both in practice and debate (Montaner & Muxí, 2014; Ruby & Ruby, 2011).

Against this background, the last decades saw the re-emergence of alternative forms of housing provision and management, such as Collaborative Housing (CH) (Czischke, 2017; Fromm, 2012; Jarvis, 2011; Vestbro, 2010). This term comprises a wide range of collective self-organised initiatives, notably co-housing and new types of residents' co-operatives. CH can be defined as 'the arrangement where individuals co-produce their own housing in full or part in collaboration with established providers' (Czischke, 2017, p. 8). The degree of participation of each stakeholder is variable and spans the design, management and maintenance of the housing project. Many of these initiatives challenge the notion of property, since they are based on tenure models that grants access to housing, but not ownership or possibility to rent.

The projects that follow collaborative housing models usually require making design choices in a collective manner. This can lead to more cost- and functional effective housing typologies (e.g., small private units being complemented by shared living spaces and common appliances). This can lower the overall construction and housing consumption costs and guarantee affordable living levels. However, little has been reported about the actual contribution of *(collective) design choices* in providing affordable housing solutions.

While it may be considered a 'new wave' in the Scandinavian countries (Sandstedt & Westin, 2015), other Central and Southern countries see this emergence of CH models as a new phenomenon in housing planning (Czischke, 2017) and are often influenced by the experience of the Northern European countries. Mainly due to the current post-recession situation in Europe, the 'renaissance of the concept' (Jarvis, 2011, p. 565) comes with new drivers, such as 'affordability', 'environmental sustainability' and 'social inclusion' (Czischke, 2017). Hence, researchers are progressively paying more attention to these alternatives forms of housing (co-)production and (self-)management; and a very recent scholarly strand is taking place, mainly focused on the their economic and social aspects (Bresson & Denèfle, 2015; Cabré & Andrés, 2017; Cariou, 2012).

Recent movements based on self-organised housing initiatives, seeking affordable and sustainable solutions, include the 'Baugruppen' in Germany, Switzerland and Austria; the recent 'Habitat Participatif' in France; and new 'co-housing cooperatives' in Spain, such as the project of *La Borda*, in Barcelona. The latter is a recent co-housing complex initiated by a new residents' cooperative, which was collectively designed and self-organised by the members of the cooperative; and it will the focus of this study.

This paper is structured as follows: section 2 and 3 reviews the concepts of affordability, minimum quality standards and collective design processes, while establishing a connection between them; section 4 describes the collective design process of *La Borda* and the efforts made to find affordable ways of creating urban collective housing. To this end, the author conducted semi-structured interviews to four future residents (identified as Residents A, B, C and D) and to one of the responsible architects of the project (Architect A). The paper concludes by highlighting the novelty of this project within the Southern European countries and its possible contributions to the wider context of collaborative housing.

2. Housing affordability and minimum quality standards

Maclennan and Williams (1990, p. 9) define housing affordability as 'concerned with securing some given standard of housing (or different standards) at a price or a rent which does not impose, in the eyes of some third party (usually government) an unreasonable burden on household incomes.' This definition highlights the two dimensions that frame the concept: a standard of **housing quality**, and a standard for determining the reasonable **relation of price or rent to household income** (Haffner & Heylen, 2011).

Architectural design plays an essential role in guaranteeing this housing quality, through the implementation of minimum quality standards. However, in the current days, 'insufficient attention has been paid to the impact of architecture on cities in times of increasing shortages of affordable housing' and 'it is imperative that buildings intended to house less-privileged members of society, express dignity and pride through choice of materials and style, but also through a design that relates them to their surroundings.' (Maschaykh, 2016, p. 1)

The use of *design* in providing quality housing at affordable prices was highly explored in the interwar period. The effects of World War I, followed by the inflation in the housing market (Teige, 1932/2002), led to the development of social housing programmes, where the concept of *Existenzminimum (minimum dwelling)* was applied to the design and construction of new *Siedlungen* (settlements). Based on socialist premises (Mumford, 2002; Teige, 1932/2002), *Existenzminimum* aimed at establishing quality living standards in housing, but at affordable prices to the low-income classes. This could only be achieved by optimising the domestic layout, and by industrialising and speeding up the housing production (May et al., 1930).

The result was the mass-production of minimum housing settlements in the outskirts of many European urban centres, such as Frankfurt, Berlin and Vienna. It mainly aimed at creating a new and affordable way of collective living, where *minimum* was understood as *optimum* (Hirst, 1996). Here, *design* was used as a tool to develop affordable housing to larger sections of the population. This approach also influenced the subsidised housing programmes that were developed in the years after World War II; however these programmes disregarded the intrinsic initial principles of *Existenzminimum*, such as an integrative urban planning or community living ideals.

Between 1960s and 2000s, little was explored in the field of design to come up with innovative ways of providing affordable housing; the developments were mainly made at a governmental level, with the application of different kinds of subsidies. In addition, the last decades of the 20th century saw an increased 'marketization' of housing: a shift from government to market, meaning pushing rents up to market prices in countries with a substantial social rental sector. Social housing providers started to operate like private sector companies, targeting only lower income households (Elsinga & Lind, 2013).

More recently, the growing density convergence and **urbanisation**, together with the rapid population growth, led to an increased need for affordable housing in most cities. The 2008 global economic and financial crisis worsened the housing affordability not only for low income people, but to increasing sections of the population in Europe (Parker, 2013). A variety of middle income groups who are now facing precarious or unstable employment prospects are neither eligible for mortgage loans (more

difficult to obtain since the crisis) nor eligible for increasingly restricted social or public rental housing. One response to this phenomenon is the rise in collective self-organised initiatives.

3. Collective design

Many collaborative housing examples are based on collective design processes: the involved stakeholders develop the housing project together, to guarantee an adequate layout to the specific group of residents and, most recently, to produce affordable housing complexes. To achieve **affordability** through these models, **collective choices** about **design aspects** play an important role. Mainly aiming to reduce costs, architects and prospective residents collectively take decisions regarding spatial configuration, use of space (individual and shared space), circulation and accesses, materials, energy efficiency/environmental standards, levels of comfort and finishing, etc.

Although little research has been carried out on the contribution of design in the overall *affordability* of CH, some authors mention some **design decisions** meant to avoid unnecessary costs. The planning of guest rooms, centralised storage, workshops, among others or the reduction of individual space to maximise the common areas (Jarvis, 2011; Tummers, 2016). But most of the studies addressing the architectural design factors in collaborative housing are mainly focused on the *social* benefits of the space: to assess the use of private and shared spaces (Jarvis, 2011; Ruiu, 2015) and the quality of the common rooms (Vestbro & Horelli, 2012); to promote a sense of belonging (Holtzman, 2014; Ruiu, 2015) and social interaction (Jarvis, 2011; Ruiu, 2015, 2016; Williams, 2005). The act of providing less private space and less individual domestic appliances 'encourages greater social interaction within communities' (Williams, 2005, p. 199). This raises the question of how can architectural design provide favourable spatial conditions for voluntary and spontaneous encounters, instead of 'forcing' and deteriorating social interactions. Many studies also pay attention to the design choices regarding the *environmental impact* of the project (Holtzman, 2014; Ruiu, 2015; Tummers, 2015).

4. The project of La Borda

4.1. Context

The city of Barcelona has a long tradition of participation and enterprising by the civil society, reflected in the number of cooperatives in Barcelona in the 19th century. This may have contributed to the increasing interest in the Citizen's Agreement for an Inclusive Barcelona (CA) programme, established in 2005. Mainly driven by concepts of cooperation, community, and coexistence, this programme was created to promote a collaboration between top-down and bottom-up entities in the developments of the social welfare system (Montagut, Vilà, & Riutort, 2016).

Within this context, the project of *La Borda* (part of the wider urban project *Can Batlló*, currently under development) is the result of the cooperation between many different actors. A group of citizens, together with professionals and with the support the municipality, joined forces to shape and introduce this pioneer affordable co-housing model in Catalonia. Because of its innovative nature, the cooperative faced many adversities throughout the process, from contractual issues (e.g., the impossibility of having one common energy contract, or the difficulty to find an insurance for the structure of the building – *La Borda* is the tallest building in Spain with a timber structure) to

construction requirements (e.g., the mandatory construction of parking lots, even after the residents claim that they either do not own any car or they have alternative parking options in the neighbourhood) (Resident C, personal communication, 30 May 2018). This intricate process led to the creation of *La Dinamo Foundation* in order to systematise the whole planning and construction process. The Foundation is currently developing a replicable model to facilitate ongoing and future CH projects (Resident C, personal communication, 30 May 2018).

The group that initiated the project (in 2012) legally formed a residents' cooperative (in 2014) and together with a local architects' cooperative, *LaCol*, started developing the design concept of the building. While each household had to contribute with an initial share (18.000 \oplus) to guarantee the feasibility of the project, the main slice of the financing was provided by Coop57 (retrieved from www.laborda.coop/), a cooperative bank with no precedent in collaborating with residents' cooperatives. The tenure model is influenced by the Danish cooperative housing *Andel Model* (Cabré & Andrés, 2017), a non-speculative system where the residents, as cooperative partners, do not own or rent, but rather have the 'grant of use' of housing, by paying a monthly fee to the cooperative. Likewise, the use of land is based on the same system: the project is built on public property, but its use is possible (up to 75 years) thanks to a leasehold agreement, established between the municipality and the cooperative (retrieved from www.laborda.coop/).

4.2. Collective decision-making process

The cooperative is organized in commissions that gather every month in general assemblies. It was, and still is, a tiring and long decision-making process, with some general assemblies lasting more than five hours (Resident D, personal communication, 30 May 2018). Therefore, these meetings need a strict structure and time control since the beginning. Without it, it would have been impossible to succeed and carry on with the project (Resident A, personal communication, 22 May 2018). A 'governing council' (with one representative of each commission) meet every fifteen days to prepare the topics to be discussed in the general assembly. The commissions that form the cooperative are as follows:

- Architecture commission
- Shared-living commission
- Communication commission
- Legal commission
- Administration commission
- Economy & Funding commission
- Coordination board

Along the process, the decisions had to be taken very fast in the general assemblies; 'too fast' according to all the interviewed future residents. Therefore, many issues were perceived as unsolved or undiscussed (Residents C and D, personal communication, 30 May 2018), in addition to a certain lack of dialogue and interdisciplinarity between the different commissions during the design process (Resident B, personal communication, 30 May 2018).

The project of the building was collectively designed by the residents and the architects. However, the degree of participation of the households in the design was carefully set by the architects and 'guided' by a preliminary design scheme, which already considered construction and legal requirements

(Architect A, personal communication, 6 February 2017). During the design process, a lot of confidence and trust was given to the design 'experts', i.e. the architects, without neglecting the horizontal decision-making structure of the group (Resident D, personal communication, 30 May 2018).

The result was the definition of a structural grid, where the residents could decide how to organise their own individual unit. However, since the overall process was based in collective decisions, the personal decisions about the individual units turned out to be 'difficult and complicated'¹ for some residents, since they 'never had thought in an individual manner.'² (Resident A, personal communication, 22 May 2018). The individual flat is perceived as a continuous process: still without any concrete idea of how the internal layout would be, some residents will decide on that over time (Resident D, personal communication, 30 May 2018).

With the intention of **reducing the costs** in a short-term (construction) and long-term (maintenance, energy consumption), the collective decisions were taken, not only from a design perspective but also from a self-management point of view. Besides the decisions related to minimum standards and ratio private-public (developed in section 4.3), the main ones connected to the aim of creating a more affordable housing solution are as follows:

A. Environmental sustainability, one of the main drivers of the project, not only to reduce the ecological footprint of the building, but also to lower the construction costs and long-term energy consumption. One of the first decisions was to use timber in the structure of the whole building. 'Using concrete would increase the price in 20% and it wasn't sustainable.'³ (Resident C, personal communication, 30 May 2018). The ventilation of the building follows a passive house system. A study they carried out showed that the ecological footprint of the building will be reduced in 70%, in comparison to the one of the sum of the places where the people are currently living.

B. Collective purchase of services and goods, ranging from the electricity to the kitchen appliances providing. Buying in a collective manner, the cooperative is able to reduce the overall costs, as proved by a study on economic sustainability, which concludes that

it is not the same having a single purchase of energy than having a multiple one, because each invoice pays a lot of taxes. I think that we, by having only one energy meter, would reduce in more than 40% the amount of the overall invoice.⁴ (Resident C, personal communication, 30 May 2018)

C. Restriction of the individual decisions (e.g., the decision of opening the windows), to reduce the energy consumption of the building and, consequently, the monthly bill (Resident C, personal communication, 30 May 2018).

¹ Translated by the author from the original: 'dificil y complicado'

² Translated by the author from the original: 'Nunca haviamos pensado de forma individual.'

³ Translated by the author from the original: 'usar concreto aumentava el coste en 20% y no era sostenible'.

⁴ Translated by the author from the original: 'no es lo mismo que hacer una compra unica de energia, que hacer una diversificada, porque paga muchos impuestos cada factura. Nosotros con el hecho de tener un contador unico, me parece que reduciamos mas del 40% el valor de la factura sumada.'

D. Collective use of spaces and facilities. Following the principle of saving space and money that led the future occupants to decide for a common laundry (with leased washing machines) and a common kitchen (more equipped than the individual ones), the cooperative members are planning to have a cupboard in each floor for common use, with shared tools and cleaning appliances, avoiding the overfilling of their individual small units (Resident B and C, personal communication, 30 May 2018).

Currently, one of the commission is working on a 'user guide' to be distributed to all group members. This guide focuses on the 'correct use and maintenance' of the building (e.g., the right time to ventilate, the correct way to maintain the different spaces or materials) and on the 'shared living arrangements' (how to use the common spaces) (Resident B, personal communication, 30 May 2018). Despite this more structured approach, the **maintenance** is considered as a process and it is planned to be constantly under revision. Time, experience and trial and error methods will help to refine the maintenance plan overtime (Resident C, personal communication, 30 May 2018).

4.3. Redefinition of Minimum standards

The definition of the concept for the building required 'redefining the notion of **minimum**' (Architect A, personal communication, 6 February 2017). This helped to define a set of standard modules, the small unit of 40m² (size 'S'), the medium unit of 60m² ('M') and the large unit of 90m² ('L'). The size of the units can increase, as the needs of the household change. In this sense, the design of the building predicts that some spaces are left empty for potential dwelling expansions, in a direct relation to *incremental housing* models.⁵ This approach still creates some 'surprise' (Resident C, personal communication, 30 May 2018) and some 'doubts' (Resident D, personal communication, 30 May 2018) among some residents, who are a bit sceptical about the actual feasibility of these eventual individual extensions.

A household of two persons who currently live in a $150m^2$ apartment has chosen to live in a unit of $60m^2$ (typology 'M'), as they consider it 'enough space' for them, and believe that at their age (60 – 65) reducing is a positive thing. The collective spaces and the surrounding community life compensate the decrease of the individual space: 'We will win in everything.'⁶ (Resident C, personal communication, 30 May 2018). When the individual space is reduced to maximize the common rooms and facilities, the balance between private and public is a pivotal issue in this kind of housing models. Some residents are confident with the result of the collective effort in designing the right proportion of shared and private areas:

To live with less in your individual space and to live with more at a collective level, for me it is an advantage. Also I think that, although we have small spaces, La Borda allows you a very good balance between the private and the collective. You are not forced one way or the other.

⁵ *Incremental housing* stimulates the construction of temporary minimum units (equipped with the basic services) that can grow over time, depending on the needs and financial possibilities of the household (Aravena & Iacobelli, 2012). Huchzermeyer and Misselwitz (2016) highlight the advantages of self-produced housing and incremental processes in providing affordable solutions, stating that '[r]ecent evidence strengthens the rationale for the support of self- provisioned and incremental housing' (Huchzermeyer & Misselwitz, 2016, p. 74).

⁶ Translated by the author from the original: 'Vamos a ganar en todo.'

*You have both: you have your level of intimacy and you have your level of community.*⁷ *(Resident A, personal communication, 22 May 2018)*

The collective decision to leave many spaces **unfinished** and programmatically **flexible** (to be completed, adapted and transformed by the residents) can also be perceived as a reinterpretation of the *minimum standards* towards affordable construction levels. Unfinished surfaces, unpainted walls, unassembled individual kitchens and window blinds, etc., are examples of construction elements to be completed by the residents upon their arrival, through **self-building** and **DIY** processes.

Every first Saturday of each month, a self-building group (members of the cooperative) organises a workshop in the construction site and, together with some external volunteers (Resident A, personal communication, 22 May 2018), works on finishing the common spaces, through DIY approaches (Architect A, personal communication, 6 February 2017). For instance, the wooden leftovers from the construction site are recycled and reused in the floor of the common kitchen. In addition, some residents with expertise in building techniques are willing to create specific workshops to help the residents to finish their individual units. In these sessions, they will give instructions on how to assemble the kitchen modules, how to do an electric installation, and how to build an interior wall, among others (Resident A, personal communication, 22 May 2018). The creation of an online platform to exchange furniture between them is another measure used to reduce the waste and lower costs at the same time (Resident C, personal communication, 30 May 2018).

The provided domestic services are small and basic: the kitchen elements follow the required minimum standards (it is provided with a small sink, a double induction cooker and no oven – although it is possible to individually re-dimension everything) and, as mentioned, the cupboards are planned to be assembled by the residents; the bathroom only has a shower (to enjoy a full immersion bath, the house is equipped with a shared bathroom with a bathtub). However, the fact that the kitchens would not be completely delivered represents a cultural shock for some people (Resident A, personal communication, 22 May 2018) and requires a change of mentality:

It involves changing some ideas. Because, for instance, when you buy a flat, or you rent an apartment, it is finished. For example, La Borda will not have kitchen furniture and the walls will be unpainted. And if you want other walls, you have to build them yourself. Then, there were people who did not accept that easily, because in La Borda there are very diverse people.⁸ (Resident A, personal communication, 22 May 2018)

⁷ Translated by the author from the original: 'vivir com menos en tu espacio individual y vivir con mas a nivel colectivo, para mi es una ventaja. Ademas yo creo que, aunque tenemos espacios reducidos, La Borda te permite un equilibrio muy bueno entre lo privado y lo colectivo. No te ves obligado ni una via ni a la otra. Tienes las dos: tienes tus cotas de intimidad y tienes tus cotas de comunidad.'

⁸ Translated by the author from the original: 'Implica cambiar algunas ideas. Porque por ejemplo, cuando compras un piso, o entras en un piso de alquiler, está acabado. Por ejemplo, La Borda no tendrá muebles de cocina y las paredes estarán sin pintar. Y otras paredes que quieras las tienes que hacer tu. Entonces, hubo gente que eso les costó, porque en La Borda hay gente muy diversa.'

5. Conclusion

The project of *La Borda* was self-initiated and self-organised by a group of citizens, whose aim was to live in community and take advantage of the socio-economic perks of designing, building and living in a collective manner. This paper describes the collective efforts made (through design and self-organisation) to reduce costs in the construction phase and in a long term. The conscious decision of reinterpreting the notion of *minimum*, by 'reducing' in space (the individual areas, the level of finishes, the services and appliances, etc.) and in energy consumption (collective contracts, use of passive house systems, etc.) played a pivotal role in this search for housing affordability, without compromising its quality.

From a wider perspective, the project reflects the urgent needs to readapt the way housing is being produced to more suitable and economic layouts to the contemporary urban dweller. Due to its novelty and controversial design features, the project keeps challenging the Spanish/Catalan regulatory framework and the conventional economic system in many different ways. These difficulties often caused a 'vertigo sensation' (Resident A, personal communication, 22 May 2018) among the group. All in all though, they prepared the ground for the development of new initiatives of collaborative housing in Catalonia in a faster and more systematised manner. Within the South European context, *La Borda* is a groundbreaking self-organised initiative that is inspiring and encouraging other residents' groups to start their own housing project.

And, even though this project presents many features that are no big news to the solid Nordic background in collaborative housing, it brings a certain freshness to the way that groups of citizens can actively a) help creating innovative affordable housing solutions; b) live according to their beliefs and lifestyle choices; and c) contribute to the gradual transformation of the often outdated urban and housing policies and regulations.

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References

- Aravena, A., & Iacobelli, A. (2012). *Elemental: manual de vivienda incremental y diseno participativo*: Hatje Cantz.
- Aureli, P. V. (2016). *Menos es suficiente*. Barcelona: Editorial GG SL.
- Bresson, S., & Denèfle, S. (2015). Diversity of self-managed co-housing initiatives in France. Urban Research & Practice, 8(1), 5-16. doi:10.1080/17535069.2015.1011423
- Cabré, E., & Andrés, A. (2017). La Borda: a case study on the implementation of cooperative housing in Catalonia. *International Journal of Housing Policy*, 1-21. doi:10.1080/19491247.2017.1331591
- Cariou, E. (2012). Habitat groupé et organismes HLM: une utopie réalisable et reproductible? *Revue* Internationale de l'Economie Sociale, 91(323), 29.
- Czischke, D. (2017). Collaborative housing and housing providers: towards an analytical framework of multistakeholder collaboration in housing co-production. *International Journal of Housing Policy, 18*(1), 55-81. doi:10.1080/19491247.2017.1331593
- Elsinga, M., & Lind, H. (2013). The effect of EU-legislation on rental systems in Sweden and the Netherlands. *Housing Studies*, *28*(7), 960-970.

- Fromm, D. (2012). Seeding Community: Collaborative Housing as a Strategy for Social and Neighbourhood Repair. *Built Environment, 38*(3), 364-394.
- Haffner, M., & Heylen, K. (2011). User costs and housing expenses. Towards a more comprehensive approach to affordability. *Housing Studies, 26*(04), 593-614.
- Hirst, J. (1996). Values in Design: "Existenzminimum," "Maximum Quality," and "Optimal Balance". *Design Issues*, *12*(1), 38-47.
- Holtzman, G. (2014). Community by design by people: Social approach to designing and planning cohousing and ecovillage communities. *Journal of Green Building*, *9*(3), 60-82.
- Huchzermeyer, M., & Misselwitz, P. (2016). Coproducing inclusive cities? Addressing knowledge gaps and conflicting rationalities between self-provisioned housing and state-led housing programmes. *Current Opinion in Environmental Sustainability, 20*, 73-79. doi:10.1016/j.cosust.2016.07.003
- Jarvis, H. (2011). Saving space, sharing time: integrated infrastructures of daily life in cohousing. *Environment* and Planning A, 43, 560-577. doi:10.1068/a43296
- Jarvis, H. (2015). Towards a deeper understanding of the social architecture of co-housing: evidence from the UK, USA and Australia. *Urban Research & Practice, 8*(1), 93-105. doi:10.1080/17535069.2015.1011429
- Kreiczer-Levy, S. (2015). Consumption Property in the Sharing Economy. *Pepperdine Law Review, 43*(61), 61-124.
- Maclennan, D., & Williams, R. (1990). Affordable housing in Britain and the United States. York: Joseph Rowntree Foundation.
- Maschaykh, U. (2016). The changing image of affordable housing: Design, gentrification and community in Canada and Europe: Routledge.
- May, E., Gropius, W., Corbusier, L., Jeanneret, P., Bourgeois, V., & Schmidt, H. (1930). *CIAM II: Die Wohnung für das Existenzminimum*, Frankfurt.
- Montagut, T., Vilà, G., & Riutort, S. (2016). Barcelona: A Citizen's Agreement for an Inclusive City Social Innovations in the Urban Context (pp. 273-279): Springer.
- Montaner, J. M. (2001). *Depois do movimento moderno: arquitetura da segunda metade do século XX*: Gustavo Gili.
- Montaner, J. M., & Muxí, Z. (2014). Arquitectura e política: ensaios para mundos alternativos. São Paulo: Gustavo Gilli.
- Mumford, E. (2002). The CIAM Discourse on Urbanism, 1928-1960. Cambridge, Massachusetts: The MIT Press.
- Parker, S. (2013). The squeezed middle: The pressure on ordinary workers in America and Britain: Policy Press.
- Pittini, A., Koessl, G., Dijol, J., Lakatos, E., & Ghekiere, L. (2017). *State of Housing in the EU*. Retrieved from <u>www.housingeurope.eu</u>
- Ruby, A., & Ruby, I. (2011). Min to Max: International Architecture Symposium on the Redefinition of the "minimal subsistence dwelling". Retrieved from http://www.min2max.org/
- Ruiu, M. L. (2015). The effects of cohousing on the social housing system: the case of the Threshold Centre. *Journal of Housing and the Built Environment, 30*(4), 631-644. doi:10.1007/s10901-015-9436-7
- Ruiu, M. L. (2016). Participatory processes in designing cohousing communities: the case of the community project. *Housing and Society*, 43(3), 168-181.
- Sandstedt, E., & Westin, S. (2015). Beyond Gemeinschaft and Gesellschaft. Cohousing Life in Contemporary Sweden. *Housing, Theory and Society, 32*(2), 131-150. doi:10.1080/14036096.2015.1011687
- Teige, K. (1932/2002). *The Minimum Dwelling* (E. Diuhosch & R. Svacha Eds.). Cambridge, Massachusetts: The MIT Press.
- Tummers, L. (2015). Understanding co-housing from a planning perspective: why and how? Urban Research & *Practice*, 8(1), 64-78. doi:10.1080/17535069.2015.1011427
- Tummers, L. (2016). The re-emergence of self-managed co-housing in Europe- A critical review of co-housing research. *Urban Studies, 53*(10), 2023-2040. doi:10.1177/0042098015586696
- Vestbro, D. U. (2010). Saving by Sharing Collective Housing for Sustainable Lifestyles. Second Conference on "Economic Degrowth for Ecological Sustainability and Social Equity", Barcelona, 26-29 March.
- Vestbro, D. U., & Horelli, L. (2012). Design for Gender Equality: The History of Co-Housing Ideas and Realities. Built Environment, 38(3), 315-335.
- Williams, J. (2005). Designing Neighbourhoods for Social Interaction: The Case of Cohousing. *Journal of Urban Design*, 10(2), 195-227. doi:10.1080/13574800500086998