

## HOUSING FOR SOCIAL INTEGRATION: BEYOND PHYSICAL PROXIMITY



Figure 1: Houses in *Casas Viejas* are relatively homogenous in their appearance, however ceramic tiles are used for the affordable house and corrugated metal for social housing.

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WHICH ARE YOUR ARCHITECTURAL (R)SOLUTIONS TO THE SOCIAL, ENVIRONMENTAL AND ECONOMIC CHALLENGES OF TODAY?

### Research summary

Design for affordability and market appeal  
Development of new building and urban typologies  
Mixed-income neighbourhood

This paper achieves the resolutions by challenging the manner in which housing for social integration is conceived today. Instead of focusing upon and promoting a financial gain to the middle class in order for them to live with the poor, this proposal tries to encourage a long term sustainable approach based on people's interest in energy cost savings and better built environments. This approach cuts across all social classes and offers a more liveable housing option to those who need it most.

**Keywords:** social integration, housing, sustainability

## 1. Introduction

Social segregation does not only impact on those who live in segregated areas, it impacts on the entire population, “it challenges our values and concept of society, affecting also the competitive capacity and the sustainability of our cities,” (MINVU, 2014).<sup>1</sup>

Responding to the concern about an increasing tendency towards social segregation in Chilean cities (Sabatini & Brain, 2008), a broad range of public policies have been developed and, in 2006, specific policies were adopted for the procurement of mixed social and affordable housing. These policies were the *Housing Projects for Social Integration* (HPSI) and the *Selection Guidelines of Projects and Families* (SGPF). They form the regulatory framework within which the first housing developments for social integration in Chile began to be constructed. Both housing policies, the HPSI and SGPF, are based on the premise that the *physical proximity* of different housing typologies for distinct socio-economic households will deliver social integration and that such a mix can be achieved through an economic incentive granted to middle class groups to live with poorer households in the same development. In addition, at a national level, housing for social integration was identified in 2015 as having “as a main objective the stimulus of the economy” (MINVU, 2015).

Recent Chilean literature (including government publications) discussing housing for social integration identifies that the

objectives of integration “go beyond the satisfaction of specific housing need, focusing instead on social and environmental issues addressed through housing” (Centro de Políticas Públicas UC, 2010, pp. 20-21). Therefore, a central tenet of social integration policy aims to improve the *quality of life* of the residents in these housing developments. The problem for achieving this objective lies at the intersection of the overarching urban policy (PNDU) that can only *promote* social integration and sustainability, and the housing policies that regulate the mechanisms to achieve social integration in housing. We identify at this intersection an important oversight in regard to environmental sustainability in each of the housing policies for social integration (HPSI and SGPF). As noted by M. Lethonen, it is well known that the interaction between social and sustainable policies is not yet resolved (Lehtonen, 2004). This provides the basis of a proposition to examine the performance of Chilean housing policies and to propose alternative mechanisms and incentives to achieve the objectives of the PNDU.

This paper concerns a key aspect of a three-year research project, initiated in 2013 that investigates two socially integrated housing projects in Chile.<sup>2</sup>

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<sup>1</sup> I will use PNDU to refer to the *Política Nacional de Desarrollo Urbano* (National Urban Development Policy). MINVU stands for *Ministerio de Vivienda y Urbanism* (Ministry of Housing and Urbanism) of Chile.

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<sup>2</sup> Proyecto Fondecyt Nº 11130636. Research project entitled “Viviendas de Integración Social y Sustentabilidad Medioambiental: una investigación de dos proyectos claves en Chile.”

## 2. Research objectives

This paper analyses the performance of two key housing projects in Chile designed for social integration and questions the premise of achieving social integration by the simple means of a mixture of income household types through a financial incentive (a salt and pepper approach). In particular, the research objective of this paper is to interrogate and challenge the current model that uses a financial mechanism as an incentive to encourage social integration and proposes a sustainable alternative. Social integration is examined by looking at how residents use and modify their houses and surrounding public areas. These observations are further investigated through interviews and surveys of the same residents. The sustainable alternative—in the form of investment in a networked renewal source of energy— could offer a new incentive that would sit at the intersection of social and sustainable policy objectives.

## 3. Method or Approach

This research project seeks to establish indicators of the success or failure in the implementation of housing policies for social integration through tangible and physical evidence from within the two selected case study housing developments. While the focus of this research is on the physical spaces, this method of investigation involves and is assessed against the information obtained through surveys and interviews undertaken with the residents. In addition, interviews with key players, such as the architects involved in the design of these two developments, municipal and government authorities and community representatives is combined with in-situ observations that form part of the larger research project. Underpinning this research is

a literature review of national and international socially integrated housing projects and an exhaustive study of relevant national policies and legislation.

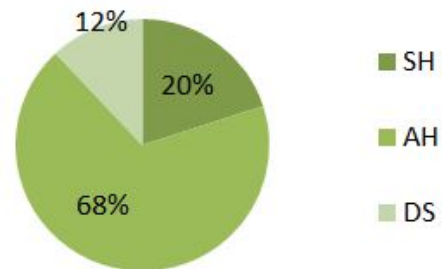


Figure 2: Housing typology distribution in Casas Viejas, Santiago.

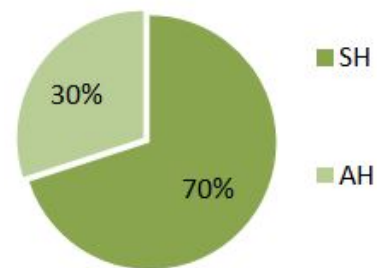


Figure 3: Housing typology distribution in Villa Las Araucarias, La Serena.

The two case studies of socially integrated housing developments are *Casas Viejas*, in the capital of Santiago (Figure 1) that contains 2,088 houses and *Villa Las Araucarias* in the provincial city of La Serena, with 144 houses. For the purpose of this paper we have divided the housing in each development into three main groups (Figure 2 and Figure 3): social housing (SH) with a 95% government subsidy; affordable housing (or middle class housing) (AH) that attracts a government subsidy varying between 21% and 60% depending on the cost of the house and, thirdly, direct sale or privately owned houses, that attract no government subsidy (DS).<sup>3</sup> It is important to

<sup>3</sup> Source: D.S.1, government document that details the requirements and percentages of subsidies for

note from these figures that although the SGPF establishes a maximum 30% of social housing (SH) within the housing typology mix of the development (or up to a 60% in the case of cities with a population of less than 40,000 inhabitants), in the case of *Villa las Araucarias* social housing represents 70% of the total housing stock. This anomaly presents a problem for comparison between the two case studies, but also provides an opportunity to understand the impact that these guidelines can have when they have not been or are not consistently applied.

### 3. Housing and Policies

Currently, the goal of achieving social integration through housing in the aforementioned housing policies, and as more specifically detailed in the *Selection Guidelines of Projects and Families* (SGPF), is through two main mechanisms.<sup>4</sup> The first mechanism is to encourage social integration through a *financial incentive* in the form of an extra subsidy directed *only* to those residents buying into the “affordable” housing option (i.e. middle class housing) within the socially integrated housing developments. The second mechanism is through the provision of a set of design guidelines that, among other aspects, sets the standards and the technical specifications for the housing and aims to ensure an aesthetic homogeneity throughout the housing development. An important role of

the guidelines is to reduce the visual difference between houses designated to different household incomes groups. While developers are obliged to comply with a minimum 44% of the set of design guidelines, a lack of proper inspection and enforcement by the responsible authorities has meant that, in some cases, these guidelines have not been met.

The two case studies discussed in this paper represent what we consider to be at opposite ends of compliance with the design guidelines: *Casas Viejas* in Santiago being the socially integrated housing development that best complies with the guidelines (Figure 1), and *Villa Las Araucarias* in La Serena as the case study that least complies (Figure 4 and Figure 5).

In terms of social integration in housing developments, the mix of poor and middle class households is currently secured through the regulations that establish a percentage allocation of different housing types to different income household groups. These minimum percentages can vary from 20% to 30% for social housing (poor housing) and from 20% to 80% for affordable housing (middle class housing). However, this rather instrumental approach does not ensure that the objective of social integration is achieved in the complexity of a “regeneration of the social fabric of hope” (Esteva, 2012).

Social integration is defined by the Ministry of Housing and Urbanism (MINVU) in terms of *physical integration, equity and conviviality*. These concepts are directly associated with:

- Positive mixture of diverse groups
- Quality of life
- Accessibility
- Connectivity
- Residential integration

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“emergent class” (low income or vulnerable social groups) opting for social housing and [low] middle class opting for affordable housing. Note that these subsidies vary depending upon the location of these projects within the country, with higher subsidies available to people living in more remote regions. Retrieved from, [http://www.minvu.cl/opensite\\_20110608104702.aspx](http://www.minvu.cl/opensite_20110608104702.aspx).

<sup>4</sup> Social housing in Chile is traditionally not rental housing. Rather, the housing is the property of the beneficiaries of government subsidies for the purchase.



- Quality public spaces
- Solidarity and trust
- Identity
- Sense of belonging
- Respect for the place within which they live

(MINVU & CEHU, 2009, p. 30)



Figure 4: social houses in *Villa Las Araucarias*. Houses are grouped together by their typology and this separates them demographically; 2-storey social housing in this image.



Figure 5: a 1-storey affordable house in *Villa Las Araucarias*. Houses are grouped together by their typology and this separates them demographically; 1-storey affordable housing in this image.

While MINVU's description of social integration reads very much like the goals advocated by urban and social planners since the 1950s, these ideas have not been universally accepted. Some have claimed that such "... attempts to foster interaction are based on a fundamental misunderstanding of the

neighbourhood as a social unit" (Sarkissian, Forsyth, & Heine, 1990) and that the central problem for integration is indeed one of "resource allocation" (Sarkissian et al., 1990).

#### 4. What is the problem with the financial incentive for social integration?

Although it is often presented in more palatable ways, the essence of the financial incentive is to ensure the social mix of different income households within a housing development, by offering middle class buyers an extra subsidy to purchase their house and to live with poorer residents in the same development. The incentive is also for the developers who receive an additional subsidy to build these affordable middle class houses. These houses have an additional 5m<sup>2</sup> of floor space as compared to the same type of housing stock that is located in an exclusively middle class housing development. Social integration policies and their subsidies only apply to housing with a maximum value of approximately US\$80,000. This excludes the construction of socially integrated housing developments in wealthier city suburbs, where even the most affordable housing exceeds this value. While aiming to improve the living standards of the poor, many believe that the middle class subsidy is a substantial ethical flaw in the legislation (Sabatini & Brain, 2008).

#### 5. Residents may live next to each other, but is this truly social integration?

To assess the levels of social integration achieved through the current mechanisms, we need to contextualise the two case studies in this paper within two urban scales—the city and the housing development.



Figure 6: orange marks indicate the location of the gates that close the cul-de-sacs and lanes in the *Casas Viejas* housing development, Santiago

### 5.1 The city scale

Various research papers and policies argue that a land policy is needed for social integration to take place at an urban scale. This would deal with the mechanisms of land distribution (Brain, Cubillos, & Sabatini, 2007; MINVU, 2014). The current mechanisms, which are controlled by commercial land speculation, predetermine the peripheral location of social housing. This is demonstrated by the location of *all* 11 of the housing developments for social integration that have been constructed to date. Even where social integration is tenable within the housing developments themselves, their location in areas of social and economic vulnerability, by and large, excludes them from the services provided in or near the city centres. Although important in the discussion

of social integration, it is not possible to investigate the urban scale within the scope of this paper or the larger body of research.

### 5.2 The housing development scale

To understand social integration at the housing development scale we sought evidence of spatial transformations that may manifest residents' behaviour and use of public space. From these transformations, we may deduce something about the success or failure of the goal of social integration. To this end, we have used the following 4 physical criteria:

- *Closure of roads and cul-de-sacs:*

As a criterion, it may be somewhat paradoxical to use the closure of roads and cul-de-sacs as an indicator of social integration. Intentionally or not, the result of these physical changes at

the housing development scale produces a more pervasive exclusion of some residents and yet, at the same time, have the potential to further strengthen the familiar ties of those households enclosed within this spatial zone (for example, the interior of the cul-de-sacs). At a housing development scale these closures interrupt the free and fluent movement within and through the public spaces of the roads and footpaths within the housing development. In the interviews, one resident summarizes the paradox of these closures by saying that it creates “on one hand, a sense of safety and on the other, the neighbours talk about those neighbours from ‘inside’ and those from ‘outside’”.<sup>5</sup>

The urban design of *Casas Viejas* is dominated by several major streets within a main octagonal grid that has 44 cul-de-sacs and this make their closure easy and viable for residents. 77% of the cul-de-sacs in this development have been closed (Figure 6). *Villa Las Araucarias*, on the other hand, is based on thoroughfares and, as such, this type of resident initiated modification to the streetscape is not possible.

- *Changes to permeability of houses (fences, planting):*

This criterion seeks evidence of the willingness or otherwise of residents to interact with their neighbours. Such interaction could be impeded or enhanced by the permeability of fences. As the urban interface between private and public life, the fences afford a shared enjoyment or exclusion for the owners of the houses with their adjacent neighbours and those who pass by.

In our assessment of the current situation in both housing developments, we have classified

housing permeability into three categories: 100% permeability (with the fences as built); 50% permeability (partial infill with plants or built form) and; 0% permeability (visually impenetrable).

We found that 62% of the fences and street plantings of houses in *Casas Viejas* remain what we define as 100% permeable. In *Villa Las Araucarias*, this level of permeability was 47%. Of the houses with a reduced permeability of 50%, in *Casas Viejas* this was 23% and in *Villa Las Araucarias* 40%. The percentages of houses that are completely visually impermeable (Figure 7) are similar in both housing developments, with 15% in *Casas Viejas* and 13% in *Villa Las Araucarias* (Figure 8).



Figure 7: example of a house that shows 0% permeability. *Casas Viejas*, Santiago.

<sup>5</sup> Interview with Resident 1 FS 2.





Figure 8: changes to housing permeability in *Villa Las Araucarias* housing development, La Serena.



Figure 9: home businesses noted in red, *Casas Viejas* housing development, Santiago.

- *Establishing home businesses:*

It is common for the lower income sectors of Chilean society to open home businesses as a way to increase the household income. The presence of these businesses can also add to the amenity of the neighbourhood by providing services and in creating the circumstances for different and more complex community interaction. The results of our

investigation show that 2.1% of the total number of houses operates a form of business in *Casas Viejas* (Figure 9), as compared with a 0% in *Villa Las Araucarias*. Within *Casa Viejas* the distribution of home businesses is spread evenly across the housing development.

- *5.6 Does my house meet my family needs?*

Given the relatively small size of the houses within socially integrated housing developments, starting with a minimum of 45m<sup>2</sup>, it is surprising to find that most people interviewed are satisfied with the design layout and general conditions of their housing (Figure 10). The figures below show that there is a higher level of satisfaction among people living in social housing. This may indicate a relative and significant improvement in the household living conditions after poorer families obtain social housing.

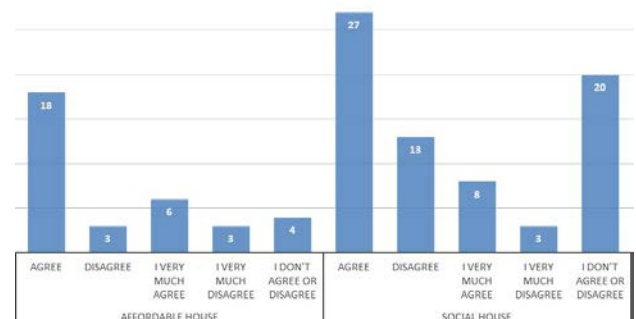


Figure 10: survey response to the question “my house is well adapted to my needs”, *Villa Las Araucarias*, La Serena.

## 6. Living within these housing developments

Interviews indicate that there are substantial differences in the quality of the social interaction between the two economic groups in the two case studies. In both case studies residents clearly differentiate between social and affordable housing typologies and identify themselves accordingly. From the interviews and in-situ observations, *Casas Viejas* in



Santiago displays what could be considered as a “normal” level of neighbourhood interaction. Children from within *Casas Viejas* tend to go to different schools: children from social housing attending semi-public school in the development and middle class children attending a private school nearby. However, this is not an impediment to the viability of mixed social and community activities e.g. the setting up of home businesses or the election of community representatives for their neighbourhood association.<sup>6</sup>

On the other hand, within *Villa Las Araucarias* there is a high level of hostility between the two socio-economic groups. This hostility is expressed in situations where one or the other group takes exclusive control of a public space, such as the square. This hostility translates into a feeling of insecurity in all public spaces and impedes the viability of home businesses within the housing development and the establishment of a functioning residents' association.

The situation in *Villa Las Araucarias* may be partly due to the developer's disregard for the design guidelines (SGPF). This is most evident in the high percentage of social housing (poor housing), the overt differences in the architectural styles and form of the two housing typologies and the physical separation of these two typologies within the housing development. However, while at the housing development scale there are considerable social problems for integration, at the individual housing scale residents appear to be relatively satisfied with their house (Figure 10).

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<sup>6</sup> These types of residents association are legally recognised and a customary across all social-economic groups levels and across all Chilean cities and towns.

## 7. Results and design potential

Our research shows that compliance with the design guidelines has made a more aesthetically pleasant environment in the *Casas Viejas* development. In the case of *Villa Las Araucarias*, non-compliance has created a segregated community. Nevertheless, from the interviews and surveys there is no evidence in either of the two case studies of enhanced social integration outside of the percentage mix of household types.

From the findings of the research, we have observed that in both case studies, the most basic form of social integration has been established and maintained. However, the aim of social integration as described within the objectives of the government policies - *physical integration, equity and conviviality* - has not been achieved.

Through the outcomes of the interviews we have undertaken energy use surveys in *Casas Viejas* and *Villa Las Araucarias*, where we are exploring the residents' interest in sustainability from the perspective of energy consumption. The initial results in both housing developments have given an indication that there is interest in sustainability from a practical and economic point of view. In fact, residents from *Villa Las Araucarias* have organised themselves to obtain grants for the purchase of hot water solar systems. This tangible expression of interest in sustainable energy supply supports our earlier analysis of residents' responses to surveys and interviews. This alternative form of economic incentive, in the shape of sustainable energy, provides the basis for the next level of our research. We are undertaking a feasibility study to investigate sustainable geothermal heating and cooling energy supply. We propose that this would be financed through an alternative use of the

current middle class housing subsidy that would deliver its benefits across the entire housing development. Our hypothesis is that by providing alternative energy solutions, the housing development will be more economically and environmentally attractive to both low and middle income groups and promote a more complex form of social integration.

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