
LAND IN THE DISPUTE FOR URBAN RECONSTRUCTION

CHILLÁN, 1939
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Instead of a common good, urban land is a place for territorial, economic and even ideological dispute. Studying the reconstruction of Chillán after the 1939’s earthquake – a naturally caused tabula rasa that offered the perfect opportunity for introducing modern urbanism – this text delves into the frictions between the possibilities of city planning and the safeguard of land ownership.

**KEYWORDS** · earthquake, land use, city, ownership, zoning

**LAND, IN THEORY**

Pierre Lavedan included Chillán in his magnificent *Histoire de l’urbanisme* for being an example of fidelity to the grid when dividing land for the creation of new cities during the 19th century. He described the plan accurately drawn by Nicanor Bologna in 1895 (fig. 1), emphasizing that the land distribution "kept the Spanish layout." This was a square of 12 by 12 blocks of 108 meters long and streets of 16 meters wide, with one central square and four others symmetrically placed at the corners. He also reported that "unfortunately Chillán was largely destroyed by the earthquake on January 1939" (Lavedan, 1952), although he did not mention its reconstruction.

Essentially historical, Lavedan’s work assumed an instrumental role stressing on practicality towards the end of the third volume, including ideas on conservative urbanism (interventions on ancient cities), builder urbanism (urban sprawl and the garden city) and the problem of creating new villas. His tone became definitely conceptual when addressing the difficulties concerning "the complexity of the modern urban organism" in relation to city expansion, green spaces, housing and circulation. He explained that "land distribution – or ‘land use’ as Americans say – is the key problem" from which the use and functions of the different areas – the zoning – derived, including legal restrictions – mainly expropriation and classification – as well as the major divisions of urban land: public-private, and administrative, commercial and residential areas (Lavedan, 1952).

Lavedan’s distinctions – actually urban planning instruments for controlling and developing the city – had already acquired a clear operational sense and triggered successive debates and disputes on the process of reconstructing cities devastated by the 1939 earthquake,
the period when urbanism was consolidated in Chile. The notion of a regulating plan, as proposed in the different versions of the Ordenanza General de Urbanización y Construcciones [General Law of Urban Development and Construction], was stated through land distribution and restriction (a zoning) during the key process of subsequent reconstruction. This process defined the plan’s instrumental possibilities, achievements and boundaries: the debate over the land shaped the development of urban forms and architectures that gave cultural meaning to reconstruction.

DEVASTATED LAND
On January 24, 1939 at 11:30 PM, the ground trembled causing what might have been one of the most damaging earthquakes on record. The death toll ranged from –the official– five thousand to the twenty and thirty thousand reported by newspapers. The affected area was extensive, covering from Temuco in the south to Curicó by the north, although the most damaged cities were in a rather smaller area, including Chillán, Cauquenes, Concepción, Los Ángeles, Parral and countless smaller towns.

Chillán was almost completely destroyed by an earthquake of x degrees on Sieberg scale, which measured earthquakes at the time and is equivalent to an 8.3 magnitude on the Richter scale. Subsequent reports recorded between 28 and 93 standing buildings out of a total close to 3,500. In February 1939, the magazine Zig-Zag published a special issue with an extensive photographic
The technical reports produced immediately after the disaster focused primarily on the state of buildings, aiming to capitalize on the experience with more restrictive regulation in the future (fig. 3). The official report stated that 47% of the city’s houses had collapsed, 9% were partially destroyed, 41% had cracked walls and only 3% remained in good condition. The ones that resisted were built on wood, concrete and reinforced masonry. Adobe had collapsed in almost all cases causing the largest amount of victims. The review of the constructions was accompanied by an extensive study on soil types in the earthquake area. In the case of Chillán, this stated that the subsoil was composed of clays “suitable for the propagation of seismic waves” and that the bedding of rounded rocks was not thick enough, so “instead of producing a beneficial action over seismic behavior, it further weakens the quality of the clay subsoil.” However, it was declared that: “Of the effects of the earthquake, it

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3 Ibid, 102.
follows that there is no visible connection between soil quality and destruction."

Other reports, such as the one by Bastiancig, described soil quality, cracks, level changes, and in general, effects produced by superficial fault lines (Bastiancig, 1939). The study by the Asociación de Arquitectos de Chile [Chilean Architects Association], made by Larraín G.-M, Tagle and Valdivieso was more specific. After examining the most affected places, the text asserted that "thorough scientific investigation of the subsoil's composition in cities and towns is necessary to determine--scientifically rather than in a simplistic manner--the different solicitation rates that the ground can withstand in the various areas of a same city. This is the time to keep this particularly in mind, given its enormous importance for reconstruction." (Larraín García-Moreno et al., 1939)

Both the land and its quality were on debate. Its relationship with the building would be key to a safe and definitive reconstruction. Identifying soil types in the urban area would also nourish the possibilities for establishing zones and building types.

IDEAL LAND
The nearly total destruction of the city prompted several proposals echoing the possibility of building a new plan. As maintained by Carlos Charlín Ojeda: "to redo residential blocks--according to current land-use surveys--would be deeply uneconomic" and would artificially reproduce a situation with no connection to the pace of an effective recovery. Therefore, it was necessary to "build new cities in the devastated region and not simply rebuild the destroyed buildings" (Charlín Ojeda, 1939). In the same line, a controversy aroused about appointing Le Corbusier to develop plans for the devastated cities (Bannen et al., 2009).

On March, Waldo Parraguez—a young architect belonging to the local avant-garde—published "Estudio de
Reconstrucción de la Ciudad de Chillán" [Study for the Reconstruction of the City of Chillán] (Parraguez, 1939). There, he wrote that "the planning of a modern city to be built in accordance with an ideal plan should include certain key concepts, which are those that have included urbanism among the exact sciences" as the discipline meant to organize collective life activities (Fig. 4).

He proposed a new city in a new southwest land, where the ground was apparently more resistant. He found inconvenient to rebuild the city in the same place because of the level of destruction of infrastructure and paved paths. For him, it was unnecessary because "it would be a mistake from the urban point of view, given the case that there is now the possibility of building the city on new lands." The idea of a new city, a new plan and a new place was a unique opportunity to make effective the realization of an ideal city. An empty land was perfect for the exercise of modern urbanism.

Parraguez found then the opportunity to develop the new principles on a mostly unoccupied area and with a brand new plan. The project comprised the distribution of industrial, commercial-administrative, educational and residential areas, issues related to traffic, city orientation considering heat, wind and weather conditions, as well as the distribution of green areas, including the size of the blocks and its subdivisions. He was quite specific in the development of ideas related to the site, zoning, circulation and health services, proposing a density of 200 inhabitants per hectare—against the existing 250—and envisioning a 22-blocks city with a maximum population size of 52,800 inhabitants.
The proposal was a clear consequence of the Ville Radieuse model by Le Corbusier, with its complex underground circulations, even if structures were only two levels high and typologies were closer to single houses than to buildings a redent. The existence of a devastated land and the guilty soil of the preexisting city allowed for the opportunity to draw upon the concept of tabula rasa as strategy, although the idealism of the proposal was inevitably linked to a well-intentioned and quite unrealistic vision. "Now we are presented with the opportunity to rebuild the devastated area over essentially scientific and rational basis, giving thereby a step in the progress of Urbanism," he assured in the final sentence of the text (Parraguez, 1939).

PLANNED LAND
As is well known, the earthquake triggered the creation of two institutions key for the country: the Corporación de Fomento de la Producción [Production Development Corporation] (CORFO) which transcended in time, and the Corporación de Reconstrucción y Auxilio [Corporation for Reconstruction and Relief] (CRA) of short lifespan but significant as a planning agency at the time. Indeed, among its functions, the CRA had the development of the reconstruction plan, the provision of zoning plans and the granting of mortgages, secured loans and other forms of aid for reconstruction. One of its roles was crucial to the urban task: the one of "expropriating, purchasing, selling or exchanging real estate in order to meet the purposes of the Law," in other words, to rebuild.

The possibility of expropriating and other comparable features were at the basis of modern planning mechanisms from urban to territorial scale. The organization of specific entities to encourage the development of comprehensive territorial areas was already well consolidated in international

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experiences both in the American New Deal with the TVA – Tennessee Valley Authority – as well as in Soviet planning.

The ideas for new cities emphasized land management both in the assignment of uses as in the control of its exchange value. In the case of Chillán, the main existing projects ratified these ideas. Since April 1939, Luis Muñoz Maluschka, in charge of the planning section of the Architecture Department of the Dirección General de Obras Públicas [General Direction of Public Works] was responsible for developing the first urban plan draft (FIG. 5). Since 1931, the development of urban zoning plans was determined by the Ordenanza General sobre Construcciones y Urbanización [General Law of Urban Development and Construction] and since 1936 acquired a new dimension to address the destruction. In addition, it was an excellent time to cement the pursuit of an emerging urban planning.

The exhibition of the first ideas regarding the plan took place in April, 1939.6 Muñoz Maluschka’s proposal kept the traditional grid of 12 × 12 regular blocks surrounded by foundational avenues, while the streets linking the four squares were transformed into boulevards, considering a new building line.7 The plan proposed a monumental system based on two axes: one connecting the station and the main square; the other, connecting the square to the north by a central park subdividing the blocks through a central avenue and leaving side sections for public and residential buildings – to be built by retirement’s funds agencies – and culminating in a popular restaurant “surrounded by meadows” and “parks that showed the beginning of the Stadium.” Three small diagonals with green spaces were projected bordering the existing channels.

The plan based its possibilities in the fact that “blocks facing the boulevard will be expropriated for specific constructions” as, for instance, the municipality, a cluster of public buildings or the central park system. Mayor Ernesto Arrau conducted the plan’s official and final presentation in August 1939. The proposal generated some concerns, but the Mayor had already announced the “beginning of the definitive works that will mark the first step towards the creation of the new modern Chillán.”8

DISPUTED LAND
It is very likely that both the idea of new cities in other grounds as the fear of the omnipotent expropriation law that the CRA could implement encouraged the emergence of a local organization which strongly rejected any

6  It was simultaneous to a visit by a Commission of the Ministry of Public Works, composed by Ricardo González Cortés from the Asociación de Arquitectos de Chile [Association of Chilean Architects], Héctor Marchant by the Instituto de Ingenieros [Institute of Engineers], Rodulfo Oyarzún by the Instituto de Urbanismo [Urban Institute] and Luis Muñoz Maluschka himself.
7  “Important developments contained in the new plan of Chillán here published.”  La Discusión, August 20, 1939.
8  “The Mayor states: I long to see Chillán transformed into a modern and virile city.”  La Discusión, August 20, 1939.
planning possibility. The opposition was often expressed to the press: “Behind this urban plan there are acceptable ideas and many others that, in the opinion of respectable engineers, are absolutely unacceptable. First, in regard to Chillán, the planners require the city’s total expropriation in order to fulfill their dreams at large.”9 The reasons for most of the opposition were undoubtedly linked to the land: “expropriation is a serious problem” because “... everyone wants to remain in their own land: possession and property are a sacred thing that responds to a very natural and very human requirement.”10

Given this scenario, on May 1939 the Asociación de Propietarios de Chillán [Association of Landowners of Chillán] was formed with the clear purpose of “keeping Chillán’s planning as it is, except for accidental and inexpensive changes and studying a plan in accordance with the chillanejos needs and aspirations.”11

The Asociación led the opposition to the plan and exercised its power against the technical dimension proposed from urbanism (FIG. 6). Their opinions left no room to any

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9 A.A. “Contributions to modern Chillán: Urbanists!” La Discusión, March 31, 1939.
10 Ibid.
11 “Asociación de Propietarios de Chillán defends Chillán planning.” La Discusión, May 6, 1939
possibility of changing the city’s location due to issues of soil quality and did not even allow for any possibility of expropriation. The public exhibition of a plan designed by the Asociación stated the main discordant aspects.

The main argument opposed discontinuous urban fabric based on large plots with possible crops, as the Asociación saw it unnecessary. It also argued that the soil was unfit for “agriculture and instead very suitable for building,” probably because the new proposal assigned differential land values when compared to previous ones.

It is likely that the opposition came from a somewhat biased interpretation, but was also based on the possibility of transforming the land in “areas of intensive farming, enlarging the properties that were too small suggesting that families that had a preference for engaging in such activities would have larger space.” What was at stake was the reconversion of a land that, until then had been occupied by villages, into a greener urban fabric. It was a design considering a more open urban tissue to incorporate isolated buildings, keeping up with an urbanism that conceived the scale of the intervention considering a new relationship between architecture and nature. The proposal probably referenced ideas that, originating in the garden city, had defined the operations of Central Europe and German interwar modern urbanism, placing new value to the open land. It was meant to make Chillán “a modern city, hygienic, full of light and sun.”

The dispute jeopardized decision systems which were the basis for local planning, as Muñoz Maluschka himself stated: “we have not dared –he said– to try other changes that would be of enormous importance and significance, because we have seen that it comes to the rule of created interests over general conveniences. This is unfortunate from the point of view of Chillán’s modernization. We are here in an environment hostile to the innovations demanded by modern planning.” The battle for the land ended up with modern urbanism claudication; from then on, it would only be that which was possible.

**CONSENSUAL LAND**

Nevertheless, the organization of such a fervent opposition to planning undoubtedly motivated the fall of some of the figures contained in the plan, which were lost during the debate and its subsequent approval. Muñoz Maluschka developed the strategy for a consensual land in a series of public and private meetings with authorities and citizens. Once the intention of some of the expropriations that would have allowed establishing a significant urban form

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12 “The Asociación de Propietarios analyzes the intentions of Chillán’s zoning plan.” *La Discusión*, May 16, 1939.
13 “The Urban Planning Commission presented yesterday the draft of Chillán regulating plan to the authorities.” *La Discusión*, April 13, 1939.
14 Ibid.
15 “Chillán Regulating Plan was studied by the Provincial Reconstruction Council.” *La Discusión*, May 18, 1939.
was abandoned, the final draft resulted in a zoning strategy that basically subdivided the land in a monumental civic center area, a commercial sector, residential areas and an industrial zone.

The Ordenanza Local de Urbanización de Chillán [Local Ordinance for the Urbanization of Chillán], which was presented in October,16 was based on the establishment of the city’s urban area around its four perimeter avenues, and on the definition of different land uses and built forms through zoning, a quite restrictive one at the beginning (FIG. 7).

The regulation established a special area around the central square, incorporating also the block where the public services building would be built. Land use would be preferably public and, in the case of private plots, these were supposed to destine their first floors to public utility services or commerce. Also, a continuous grouping type was established for the urban form with a height of minimum 9.20 m and maximum 12 m, which strengthened the presence of the block.

The commercial area reinforced the transformation of some streets in major arteries along with the special area, and with continuous facades between 6.20 and 9.20 meters high.

Residential areas –which occupied most of the urban plan– were characterized by the exclusion of other activities and by two grouping types. On the one hand, almost half of the urban plan in the western area was defined by a sort of continuous grouping with a height of 3.20, 6.20 and 9.20 meters depending on the number of floors. Towards the

16 "Ordenanza Local de Urbanización de Chillán." La Discusión, October 1, 1939.
east, on the other hand, the regulation established a residential area with isolated buildings "surrounded by open spaces" of similar heights, along with an easement distanced three to six meters from the building line.

Two affordable housing areas were also established towards the borders of the urban plan, in correlation with residential areas. In this way, continuous affordable housing were located on the west and isolated dwellings on the east. The zoning was completed two areas connected to the railroad tracks: one mixed and one purely industrial.

The ordinance also established a notion of urban harmony, as it could be "required for new buildings to adapt their architectural features and color to the conditions determined by finished definitive neighboring buildings," while the Dirección de Obras Municipales [Direction of Municipal Works] would set the "general guidelines that would serve as a standard for the study of architectural projects." \(^{17}\)

The proposal was not adopted as such, but with modifications, in 1943 as part of the Plan Regulador de Chillán [Chillán regulating plan] designed by Guillermo Ulricksen in the urban planning section, of the crA’s Technical Department\(^{18}\) (Fig. 8). The changes seemed minor, although the isolated residential area and the affordable housing disappeared, prevailing the position that had prompted the dispute and debate during reconstruction. Muñoz Maluschka’s plan was gradually reduced to the traditional city-form, keeping former land subdivisions and removing the central park, one of the main symbolic features of the initial proposal.

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\(^{17}\) Ibid.

\(^{18}\) Ordenanza Local de Urbanización de Chillán. La Discusión Graphics Workshop, Chillán, 1946. The approval by the Council of the crA was held in May 1943. It was officially released on August 11, 1945 in Santiago and the following year in Chillán.
Despite the lengthy process of normative definition of a regulating plan, Chillán’s reconstruction started with decisive force in September 1939, when the CRA itself began providing building loans. The sequence of the reconstruction was remarkable, with a strong initial momentum between late 1939 and early 1943 and then probably held back by the high cost of materials triggered by the Second World War.\footnote{The DOM [Direction of Municipal Works] records show the building permits granted annually: 233 in the period 1939-1940, 256 in 1941 and 107 in 1942, descending to 59 in 1943, 41 in 1944 and 50 for 1945 with a slight upturn after that date and until 1953. FONDECYT 1140964 report based on DOM records, Municipality of Chillán.}

While the initial reconstruction was visible by huge works, it also featured some housing types favored by the CRA credits, determining land use perception (FIG. 9). The monumental strategy was reflected in the buildings for the Province Hall and Public Services (Müller, 1940), the Municipality, the Theater, the Technical Lyceum (Müller and Cooper, 1940) and the Cathedral (Larraín, 1939-1950), among other buildings of great importance such as the Central Cinema Theatre (Rodríguez Arias, 1945) and the Market (attributed to Müller, 1941) in the commercial area, or the complex for the train station –with its linear buildings monumentalizing it– built years later by the CORVI.

Most of the residential constructions, characterized as modern (FIG. 10), were promoted by the CRA and built by a young generation of newly graduated architects who settled in Chillán, including Udo Schweitzer, Guillermo Aravena, Orestes Depetris and Raúl Alarcón, along with local architects such as Jorge Etchevers. They were mainly houses that partially ratified the notion of continuous building, semi-detached but paired to their neighbors, while keeping their...
curvy balconies towards gardens and open spaces related to livestock activities, which were inserted in the urban fabric. Thus, the idea of an open fabric valuing free un-built land pervaded, to some extent characterizing specific urban areas. Beyond the proposed zoning, reconstruction itself was what provided character to the city.

However, Lavedan himself discouraged the role of zoning plans in the reconstruction of cities destroyed by war, experience and vicissitudes. The planning alternatives discussed for Chillán, a key episode in shaping Chilean urban instruments, reaffirm the land and its destiny as a key element in the process of reconstruction. ARQ

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