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# TABULA RASA MEETS RESILIENCE: URBAN RECONSTRUCTION AND THE DILEMMAS OF MODERN PLANNING IN CHILLÁN, CHILE (1939)

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The total destruction of a city by an earthquake, its possible relocation or reconstruction -i.e. the conversion of land to a tabula rasa- was an incredible opportunity for the application of modern urbanism ideas. Chillan earthquake was, in 1939, the occasion to reinforce the idea of planning in general by creating new organisms at national level. Modern urbanism was promoted both by the possibility of realization of the destroyed cities plans by Le Corbusier, as by the implementation of his ideas and models in some of the proposals. However, modern urban planning was questioned, by landowners and by the supporters of the traditional forms of urban development. It was further reduced to the establishment of zoning as a figure for the urban plan, mainly defining preventive constructive characteristics and delineation of the urban form. Modern buildings erected within the traditional grid framework, under only few restrictions set by the plan and the financing of new organisms was the form definitely acquired by resilience for urban reconstruction.

**Keywords**

modern urban planning; urban reconstruction; earthquakes; modern architecture

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## INTRODUCTION

An intense earthquake took place in Chile at the very beginning of 1939, shattering an important number of cities and destroying the economic basis of a large region in the country. The impact of Chillán earthquake was such that shocked institutional structure, proposing a definite advance in urban legislation and building while a new concept of planning at national level was raised. But also was the opportunity for the emergence and debate of modern urban planning ideas. The devastation induced the establishment of new governmental planning offices and policies related to both economic development and the possibilities of restoring urban dynamics by reconstruction. Concerning the latter, the following paper examines the development of urban planning alternatives, including Le Corbusier's failure to design the destroyed cities plans; a significant local proposal following the same corbusian ideas; and the more definitive strategies contemplated by the traditional national planning office. It also describes the debates regarding the opposition to relocate the city and any expropriation process, and the reduction of planning ideas to the mere control of future construction by zoning regulations. It finally refers to the actual process of reconstructing the city, and the ability to overcome the earthquake's repercussion while building an urban environment that became in time modern heritage.

## DESTRUCTION AND RESILIENCE: THE CHANGE OF INSTITUTIONAL FRAMES.

On January 24 at 11:30 pm, the earth trembled causing what may have been one of the most damaging earthquakes on record. Chillán was almost completely destroyed by an earthquake, equivalent to 8.3 on Richter scale. Published photographs showed the extent of the catastrophe<sup>1</sup>: the city streets piled with waste materials from destroyed buildings.

Chillán was founded in 1580; since its origins it was subject to successive earthquakes, the most important the one in 1835 that destroyed the city. Thus, it was relocated and definitely established with a regular scheme of 12 blocks per side, surrounded by four avenues, with a central square and four others towards the corners. Early on the twentieth century it showed a continuous urban fabric pattern, consisting of neoclassical architecture basically made of brick masonry. These buildings, erected with a technology unsuited to a soil without structural capacity, were the ones totally destroyed in the earthquake. The city's regular layout and the continuity of urban form were blurred, only intuited amid the rubble through some walls still standing. The technical reports produced immediately after the disaster focused primarily on building conditions<sup>2</sup>, but also in the quality of the soil<sup>3</sup>, in order to capitalize the experience in the form of more restrictive regulations.

Advances in Chilean building regulations have been directly associated with the effects of earthquakes. But the impact of Chillán earthquake was such that shocked institutional structure, proposing a definite advance in urban legislation and buildings that, although established nearly a decade earlier<sup>4</sup> would only be definitive by 1939, as the implementation of a master plan for the cities of over 20,000 inhabitants. The plans would be developed at a central level by the Urban Planning Section of the Department of Public Works. (Figure 2)

But also a new concept of planning at national level was raised, and two institutions were created, which would be key to reconstruction and later economic and urban developments: Corporación de Fomento de la producción (CORFO) and Corporación de Reconstrucción y Auxilio (CRA).

CORFO was based on Keynesian principles and assumed the country's development, initially by promoting the substitution of import, and played a key role in generating different economic conditions in the territorial structure. CRA instead was directly in charge of the recuperation of cities and in this context, among others, had the power to formulate a reconstruction plan for devastated areas, to determine which towns and cities would be rebuilt, to develop total or partial master plans, to issue mortgage loans, to approve fiscal constructions works, and -a particularly controversial attribute- to expropriate, buy, sell or exchange properties to meet with plans including streets, squares and public goods<sup>5</sup>.



FIGURE 1 Chillán, 1939: “A painful procession”. People walking in a street piled with waste materials from destroyed buildings, the morning after the earthquake.

It is known that the ideas of planning at the national level were suitable for institutional formalization; the earthquake would be the argument to request a credit to the US Eximbank, by which the national productive apparatus would be rebuilt: the CORFO would be the institution with a degree of autonomy to assume the planned economic development. Moreover, the need to manage the reconstruction would impose the existence of a specific organism, capable of ordering the process and granting rationality to both public and private decisions. In that sense the CRA became the instrument -although at the level of urban planning development, control would be shared with Public Works. Adversity thus was transformed into the opportunity for economic development and establishment of forms and figures of the territorial and urban planning.

## LE CORBUSIER, MODERN PLANNING ENTERS THE SCENE

The destruction of the cities had been such that almost nothing was left standing. In Chillán, technical reports after the earthquake indicated between 19 and 28 buildings standing from an amount of 3600 that had originally shaped the city. The devastated land was available for the new city to be built and the possibility for the application of modern urban models was given. As stated by Sergio Larrain -the architect who had built the first modern building in Chile over a decade before- “to make these ideas of urban advance feasible... there cannot be a more opportune time than the present moment, for the catastrophe that has just happened -however tragic and horrific- has given rise to a unique advantage to carry out a new plan: that in some cities nothing exists as regards construction, for having all been destroyed by the catastrophe”<sup>6</sup>.

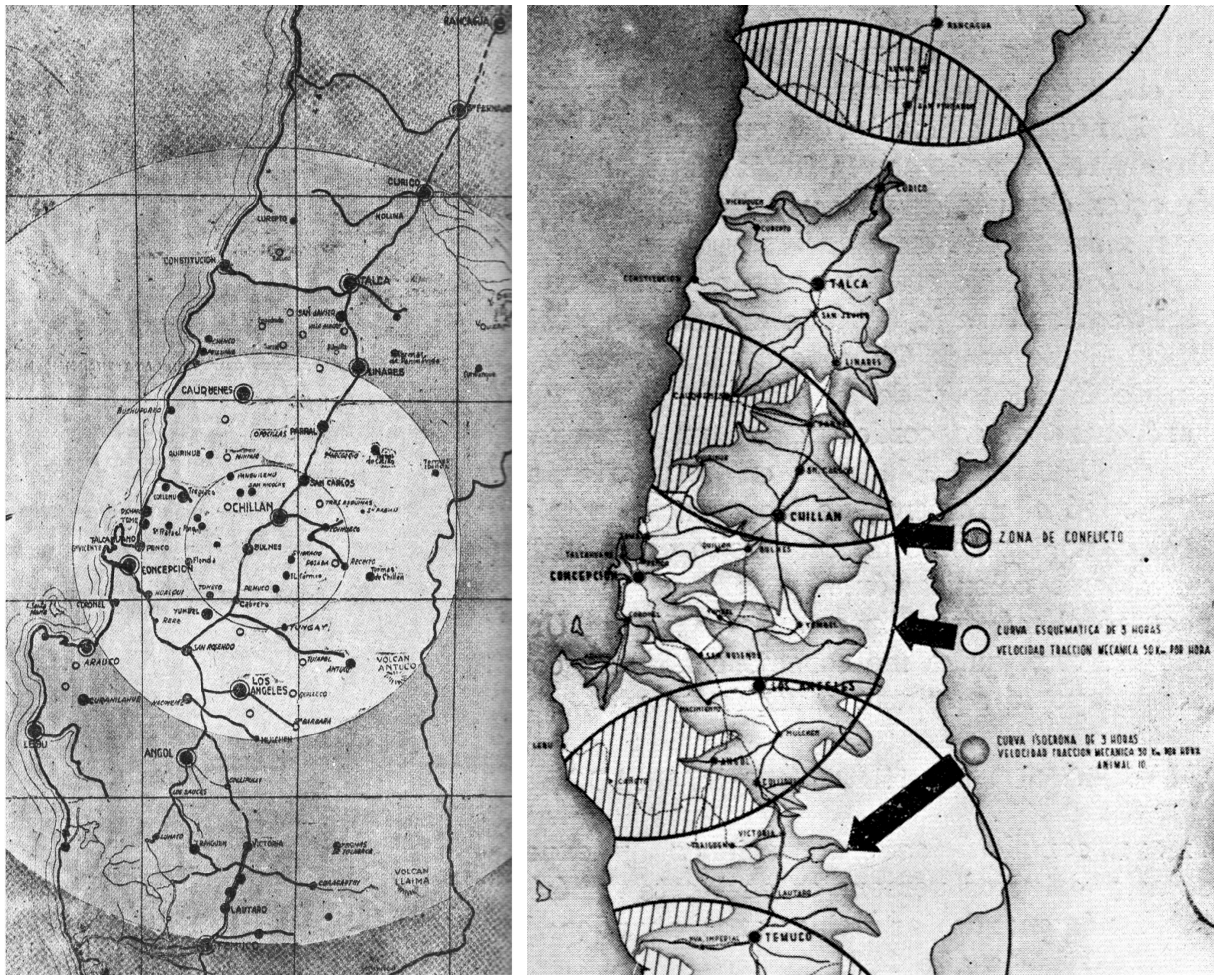


FIGURE 2 The area affected by the earthquake -about 600 kms long- in a map showing the epicenter, and the area in the regional and urban studies for the devastated zone by Luis Muñoz Maluschka from the Urban Planning Section of the Department of Public Works.

The debate on the possible development of new cities called for renowned architects and urban planners. Many individuals and institutions contributed with their knowledge and expressed their interest in rebuilding in the most diverse ways. The Instituto de Urbanismo -an organization with several years of trajectory- promoted a number of meetings in order to affirm the idea of the need for planning at national and local level. The initial proposal was the creation of a technical ministry for reconstruction, which assumed later the task of territorial planning. The idea of planning promoted was comprehensive and assumed sequentially territorial, regional and municipal levels.

The same day the Instituto de Urbanismo made his proposal public, various media reported on an offer by Le Corbusier for the free realization of the urban plans for devastated cities. The news recognized him as “representative of a new spirit and new ideas”, that his principles had already traveled the world and his work had already “created a language common to technicians in all countries, demonstrating solid based theories.” Reported also “the gesture of Le Corbusier corresponds to his strong impetus, that on other occasions has brought all of his knowledge to the service of countries awaiting his wise word, concerning the solution of architectural and urban problems posed by contemporary modern techniques, which undoubtedly have given him fair universal fame.”<sup>7</sup>

Le Corbusier had been invited to advise on the Plan Regulador de Santiago by the end of 1938; he had accepted, confirmed and set his fee on the early days of 1939. After the earthquake, he sent a note offering free plans for Chillán and Concepción if his proposals were accepted<sup>8</sup>. Simultaneously, he received a third invitation to design the plans for Chillán, Concepción and Talcahuano, and his answer was what transcended. (Figure 3)

His trip was promoted by a group of young admirers who promoted ideas regarding modern architecture and urbanism. However they managed for the Instituto de Urbanismo to publicly support the idea, the proposal unleashed a relentless struggle between two opposing visions of modern urbanism: the more radical one, represented by the young, and the already more traditional one, concerning a Central European matrix, developed after the visit of Karl Brünner at the beginning of the decade.

The debate would be polarized so that the figure of Le Corbusier would appear often in newspapers, with opinions for and against. The biggest argument against came from other members of the Instituto, stressing the importance of the figure, “universally known as a fruitful theorist of urbanism”, and emphasizing however that he “could not implement any of the studies made for cities”. Calling him a utopian stated his “studies have not led to practice for various reasons, as considering different economic or ideological facts that made his projects unfeasible.” If the government accepted his offer their presence would be “a factor of healthy technical benefit for our professionals, but we doubt that their presence in Chile can be an effective utility for the country”.<sup>9</sup>

The opposition came from professionals close to the Communist Party and arguments had an ideological character; but paradoxically if on the one hand he was accused of “imagining technically perfect cities, as part of an idealized system of capitalist imperialism”<sup>10</sup>, on the other hand he was demanded the ability to hold negotiations with landowners.

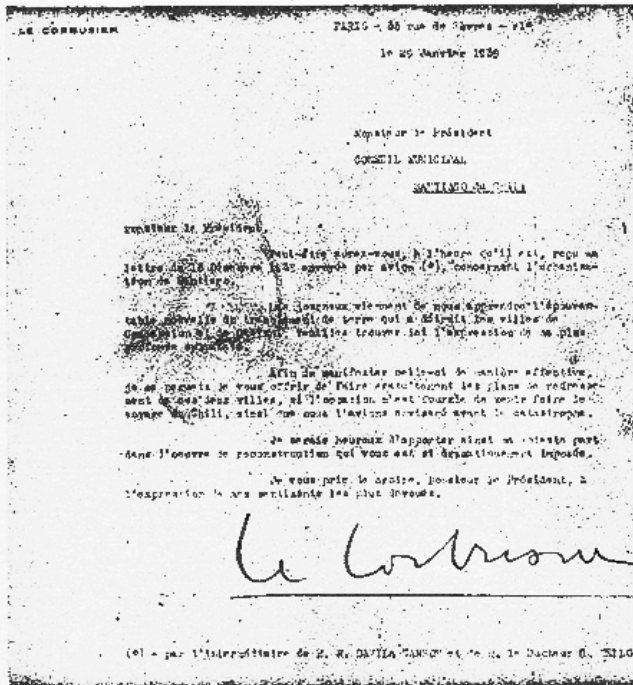
In an analysis on the possibilities of having free land to build, the need to abolish the limits of property “that obstructs the free flight of urbanistic thought” was evaluated. It went further: “those who know the work of Le Corbusier should recognize that it could reach any significance on the basis of land freed for reconstruction. And if his name is prestigious enough to produce an agreement against such sensitive decisions, other resistances against his utopian theory caused in healthy technicians would disappear; to give way to a feeling of gratitude toward those who are able to achieve an agreement that breaks decisively with the mean bias of property, which has largely hindered the healthy, normal and extensive development of modern cities”<sup>11</sup>, it was said in clear knowledge that the figure of the Le Corbusier would not have that power in Chile.

However, the argument recognized a condition key to the debate: “Only in this way we create the premises that all modern urbanism requires: a horizontal area to arrange freely all the elements of the projected city, freedom for coordination of partial areas, zones, centers of public buildings; an area for expansion and growth of the city projected”.<sup>12</sup> In short, what was under discussion was the possibility of clearing land ownership system, ie to delete the only vestige left in a devastated city: a tabula rasa.

## Le Corbusier viene a realizar, gratuitamente, los planes de reconstrucción de las ciudades afectadas por el terremoto

Deben prepararse de inmediato los antecedentes suficientes para que pueda realizar su labor apenas llegue a nuestro territorio

por Carlos Charlín Ojeda



Carta autógrafa de Le Corbusier, en la que ofrece gratuitamente sus servicios para trazar los planes de reconstrucción de las ciudades devastadas por el sismo del sur.

En nuestros artículos anteriores nos hemos referido a la conveniencia de una planificación previa sobre la zona afectada por el terremoto. Manifestamos en ellos la importancia que tiene la estructuración de la economía regional, como una base para compensar el esfuerzo que la nación realizará para recuperar su ritmo. Esta oportunidad trágica de realizar el ideal de muchas generaciones en lo referente a descentralización administrativa, viene a constituir el punto de partida de la solución de muchos interrogantes nebulosos de nuestra organización económica. Los terrenos arrasados por el sismo suben del 10% de la superficie, y corresponden a más de la tercera parte de nuestra zona agrícola nacional.

Nos permitíamos sugerir la conveniencia de contratar técnicos de fama mundial

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El gran arquitecto Le Corbusier

en estos problemas, y proponíamos a Le Corbusier como el hombre más adecuado para realizar los planes de las nuevas ciudades que se levantarán en esas regiones. Justamente, hemos tenido la suerte de contar con él en un ofrecimiento que nuestro Gobierno está en el deber de agradecer y aceptar. Le Corbusier se ofrece GRATUITAMENTE para realizar la obra. Este urbanista, que ha planificado la "ville radieuse", como la única solución del caso de Paris, que ha elaborado los planes de la ciudad de Argel, de la ciudad universitaria de Rio de Janeiro, del Palacio de la Liga de Naciones, del Centrosoyus de Moscú, etc., vendrá a Chile a poner desinteresadamente su experiencia al servicio de millares de habitantes, que obtendrán de este modo la más valiosa de las donaciones.

Mucho antes de que ocurriera la catástrofe se había pensado en solicitar su colaboración para la realización de los planes reguladores de las ciudades más importantes del país, y para justipreciar lo que significa el sacrificio pecuniario de Le Corbusier, baste señalar que existía la idea de contratarlo para Santiago por una suma superior a 20.000 dólares.

La labor inmediata en estas circunstancias, es preparar los antecedentes suficientes para que se aborde el estudio apenas llegue a nuestro territorio. Las oficinas respectivas deben hacer un censo prolijo de la zona y tener cuadros estadísticos de avalúos, población, catastros de bienes raíces, producción agrícola, ganadera e industrial, redes camineras y ferroviarias con

(Continúa en la pág. 175)

FIGURE 3 Charlín Ojeda, Secretary of the Municipality of Santiago, published Le Corbusier's letter offering the plans for the devastated cities, in an article he wrote to support and promote the visit.

## A NEW CHILLÁN AND THE VILLE RADIEUSE MODEL

Several architects published proposals for the new city: some on the same site, other moving it to securer ground. A more radical project proposed the transfer to new territories, creating a new modern urban form. The layout was a grid with a regular circulatory system, surrounded by parks. A density of 200 people per hectare was proposed -against preexisting 250- and provided a 22-blocks city with a capacity for 52,800 inhabitants.

It was a project developed by Waldo Parraguéz, one of the youngsters who had promoted Le Corbusier's visit. Along with Enrique Gebhard, had jeopardized architectural culture in recent years with the magazine ARQuitectura -published between 1935 and 1936<sup>13</sup>. From there, they proposed an affirmation of modern architecture and urbanism spreading manifestos and documents such as papers from the CIAMs in Brussels and Frankfurt, texts Gropius, Van Doesburg, Giedion and Le Corbusier. Among them it was obviously the recently published Ville Radieuse, illustrating one of the combative articles against Santiago's plan inspired by the work of Brünner.

The design by Parraguéz was certainly in debt with Le Corbusier's model. Le Corbusier had published "La Ville Radieuse" in 1935<sup>14</sup>; text and images appeared already on October of that same year in ARQuitectura<sup>15</sup>, plenty of doctrinal representations: the main points against the corridor street, in favor of high density and low occupancy floor, and fundamentally a deep lyrical about the city as a product of the times<sup>16</sup>. (Figure 4)

Parraguéz scheme was similar to that of radiant city. In addition to residential sectors, it proposed a fairly clear industrial zone in relation to the railway system and a structure with an upper head with public services and major institutions, a sector where school buildings and a future university focused. Proposed a circulation system with parallel streets on ground level -the one parallels on the longest side of the plant, related to workplaces- and underground those perpendicular, with the intention of eliminating crossroads and performing a series of bridges and ramps systems connecting both levels. Thus intersections were replaced by circulation connections specially developed in detail. Parking lots would be underground, on 300 meters long streets. The city would consist of a few housing types, developed in a continuous mode a redent with a uniform two stories height, with the intent to compensate different densities ranging between 50 h/hectare and 350 h/hectare in the city before the earthquake. He conceived housing surrounded by green areas and in an equal opportunity system. However, reducing the redent to two-stores volumes is frankly ridiculous considering the dispersion of urban tissue proposed. The similarity between the proposed structure and that of the Ville Radieuse is evident in the configuration of ground level, while the height of Parraguéz's city established a clear counterpoint to the model.

Not only the model of the radiant city was present, but also its main conceptual structures: the idea of building in new soil, and the possibility that the new floor provided to organize the city with scientific criteria. Parraguéz stated that *"the planning of a modern city to be built in accordance with an ideal plan, should include certain capital ideas, which are those that have joined Urbanism among the exact sciences,"* accompanied by *"Urbanism is the organization the functions of collective life"*.<sup>17</sup> It proposed changing the city's location: considering the destruction degree of infrastructure and paved paths, it was inconvenient to rebuild the city in the same place *"without studying the matter would be a mistake from the urban point of view, given the case that there is now the possibility of erecting it on new grounds "*. He was aware that the earthquake was a unique opportunity for the affirmation of modern urbanism in Chile: *"Now it is presented an opportunity to rebuild the devastated area on essentially scientific and rational basis, thereby giving a step in the progress of Urbanism"*, he granted in the final sentence of the presentation texts. In another immediate release, the headline alleged: *"Everything advises not to make the mistake of erecting it on the ruins of the old one, which had been formed by the agglomeration of houses without being subject to any plan and without previous urban studies"*.<sup>18</sup> Parraguéz found the opportunity to develop new principles on a sector free of occupation and with the complete action of new plan. Even if the aspirations of shaping the city were more unrealistic than those proposed by the master, the project placed in the tabula rasa all its possibilities.

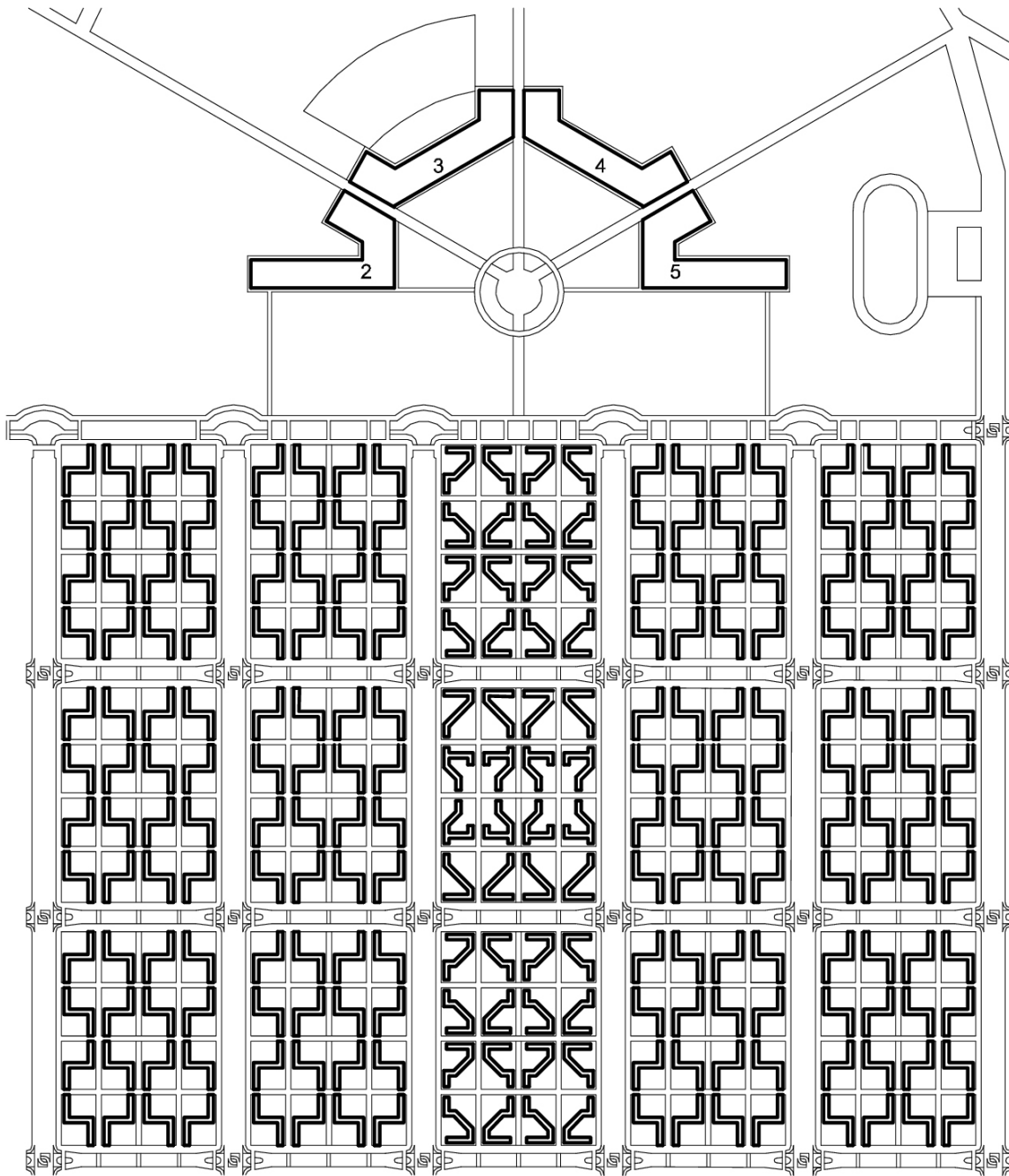


FIGURE 4 Parraguéz plan for the new city of Chillán, based on Le Corbusier's Radiant City model.



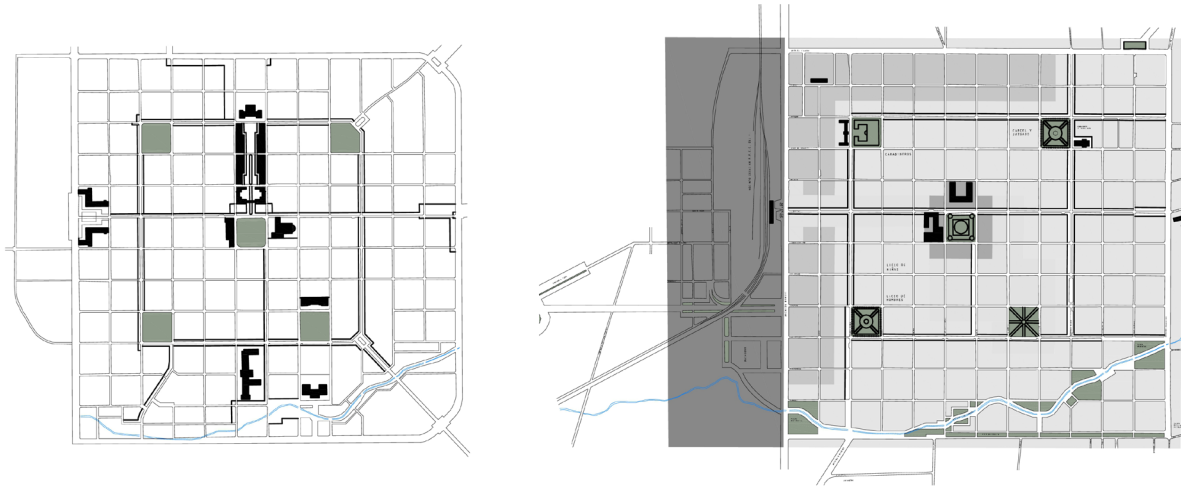


FIGURE 5 a. Preliminary draft of the Master Plan from the Planning Section of the Department of Public Work during 1939; and b. the definitive Master Plan - mostly a zoning regulation- from the Technical Department of the Planning Section of the Corporación de Reconstrucción y Auxilio, 1943.

## TABULA RASA REJECTED, MODERN PLANNING IN DEBATE.

Contemporary to the debate on the presence of Le Corbusier for the proposed new city, the government attempted to expropriate all the land of destroyed cities. A project aimed to declare public utility “all the land occupied by cities and affected populations” and “the adjacent area to a radius of 500 meters,”<sup>19</sup> an action initially supported by homeowners associations in general and subsequently strongly rejected. In Chillán, possible expropriations and possible transfer of the city led to the definitive rejection of the option.

Luis Muñoz Maluschka -in charge of the Planning Section of the Department of Public Works- took over the development of a first draft of the regulatory plan (Figure 5a). The proposal maintained the traditional layout of 12 x 12 regular squares bordered by the founding avenues, and streets linking the 4 plazas now transformed into avenues by retroceding the building. It recommended a monumental system based on two axes -one between the station and the main plaza, the other departing from the plaza up to the north, with a central avenue and side blocks for public and residential buildings culminating in a popular dinner building “surrounded by meadows” and parks. The plan based its possibilities in the fact that “squares across the boulevard will be expropriated for preferential buildings”<sup>20</sup> such as the Municipality or public buildings, as well as the central parks system. The rejection to the proposal -which changed the land property- and to expropriations was organized by the Asociación de Propietarios de Chillán, formed to face the possibility of planning to include such measures.

A consensual strategy was then proposed, abandoning all expropriation and considering an alternative zoning strategy, based on: an area for the monumental civic center, a commercial sector, residential areas, and an industrial zone. (Figure 5b). The proposals were gradually reduced, finally ending in a series of reasonable measures that consolidated previous urban structure, with the addition of proposals at the street level, maintaining subdivision of land and the disappearing of the central park, one of the main tactics adopted to give meaning to urban form. Faced with the deterioration of aspirations regarding the plan, it was Muñoz Maluschka himself who expressed that “we have not dared to try changes that would be of enormous importance and significance, because we have seen that comes to dominate created interest before general conveniences. It is unfortunate from the modernization of Chillán’s point of view. We are here in an environment hostile to innovations demanded by modern planning.”<sup>21</sup> A remarkable confession of the abandonment of urban planning expectations, particularly important if it is understood that the position of Muñoz was tempered regarding the possibilities of contemporaneous urbanism.

## RECONSTRUCTION IN PROGRESS.

The Plan recorded in short some of the major actions that could be developed in a context of possibilities, especially those that would be built with central power resources, whether public architecture or private works through property loans.

The key operation was aimed at building the city's center, mainly the administrative district. The Public Services and Administration building, by Benavente and Morales (1940) (Figure 6) formed one of the sides of the plaza, occupying a full city block with a symmetrical plan that frees an interior space and opens a large portico with freestanding pillars for the establishment of continuity: likely a remaining from its original participation in the monumental system in previous versions of the plan. Also facing the plaza, the City Hall, the Municipal Theater and the Technical School by Müller and Cooper (1940) formed a unitary piece of remarkable scale and composition. On the other side, the Cathedral by Hernán Larraín (1939-1950) was placed to complete the ensemble. In the same context some works of great importance were designed, such as the Central Cinema Theatre (Rodríguez Arias, 1945) and the Market (attributed to Müller, 1941) in the commercial sector, as the Railway Station (G. Bustos, 1940) plus its surroundings, built with linear structures that would monumentalize it years later.

Notwithstanding the lengthy process of normative statement of a regulatory plan and its figures, the reconstruction of Chillán began with definitive force in September 1939, when the CRA itself began providing loans for the building. The sequence of the reconstruction was remarkable, having a strong initial momentum between late 1939 and early 1943, probably held back by the elevated cost of materials caused by the war.<sup>22</sup> It was mainly houses that partly ratified continuous building notions, semi-detaching from their neighbors and releasing the curves of their balconies to gardens and open spaces in relation to cattle activities, inserted in the urban fabric itself. A notion of open tissue permeated, with a higher value of free land that partly characterizes some areas of the city. Beyond the proposed zoning, it was rebuilding itself that gave character to the city. That was the process by which the city of Chillán was actually rebuilt and turned into a modern city.



FIGURE 6 Public Services and Administration building, by Benavente and Morales (1940), the main building of Chillán new civic centre.

## CONCLUSIONS: TABULA RASA MEETS RESILIENCE

The concepts of a whole new city organization were behind the idea of a blank field, a *tabula rasa* regarding both relocation of the city or complete deletion of its historical layout. Opposition to the potential plans designed by Le Corbusier depicted the clear traditionalist trend of Chilean urban professionals, even though a group of young architects favored his ideas as a solution for reconstruction. At the same time, when the traditional side tried its own planning instruments, some of the ideas were completely rejected by population and landowners. Then, finally, a joint process was agreed.

The challenges of the reconstruction of Chillán showed particularly the debate over urban planning ideas, both in the professional field and in the public realm. The concepts for a complete reorganization of the city involved both the relocation to the complete deletion of the city's historical layout. Destruction caused by the earthquake became the opportunity to assess one of modern planning main ideas: the *tabula rasa*, as a blank field to build a new modern environment. The opposition to the plans designed by Le Corbusier marked the traditionalist trend of urban professionals in Chile, even when a group of young architects favored his ideas as a solution for reconstruction. However, when the more traditional urbanism –settled at the Planning Section of the Department of Public Works- tried to use the instruments of planning, some of the ideas were completely rejected by the population and landowners.

This forced the beginning of a consensual process, and finally the Urban plan was only based on the aspects related to lands future capacity of resisting an earthquake, mainly by zoning in relation to soil resistance and construction technologies possible to be used in public and private buildings. The debate for the reconstruction of Chillán called for various urban approaches, forms and figures of modern planning. The final plan was only related with the zoning regulations, but the reconstruction was based on a strategic localization of the public buildings and the financing by the CRA, of a few residential types, that promoted modern architecture in the traditional grid. That was the resilient way to rebuild the city that finally became modern heritage.

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## Disclosure Statement

No potential conflict of interest was reported by the author.

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## Endnotes

- 1 Zig-Zag N° 1767. Special Edition February 2, 1939.
- 2 “Informe de la Comisión Gubernativa sobre los efectos producidos por el terremoto de Chillán en enero de 1939”. *Boletín del Colegio de Arquitectos*, 1 (1944): 086-109.
- 3 Agostino Bastianci, “El terremoto del 24 de enero de 1939 en Chile. Observaciones y consideraciones relacionadas con la edificación”. *Scientia*. Vol. V. (1939).
- 4 Ordenanza General de Construcciones y Urbanización. Decreto Fuerza de Ley DFL 345, May 30, 1931.
- 5 Luis Muñoz Maluschka, “Corporación de Reconstrucción y Auxilio Ley 6334”. *Urbanismo y Arquitectura* n° 2 (1940): 55-56
- 6 “Debe elaborarse un plan de restauración considerando los factores económico-sociales”. *El Mercurio*, February 4, 1939.
- 7 “Le Corbusier”. *El Mercurio*, February 10, 1939.
- 8 Pedro Bannen; Fernando Pérez Oyarzún, Claudio Vásquez. “Entendidos, subentendidos y malentendidos sobre urbanismo moderno: alternativas del frustrado viaje de Le Corbusier a Chile”. In *Massilia 2004. Anuario de estudios lecorbusieranos*; ed. Josep Quetglas; (Barcelona: Fundación Caja del Colegio de Arquitectos de Cataluña, 2004).
- 9 Federico Oehrens, “A proposito de Le Corbusier”. *Diario Frente Popular*. February 11, 1939.
- 10 *Ibidem*.
- 11 Guillermo Ulricksen, “La tierra liberada para edificar”. *Diario Frente Popular*. February 15, 1939.
- 12 *Ibidem*.
- 13 See: Torrent, Horacio. “La revista ARQuitectura y la transformación del campo disciplinar: Vanguardia, cuestión social, planificación urbana y arquitectura moderna”. In: *Las revistas de arquitectura (1900-1975): crónicas, manifiestos, propaganda*. Héctor García Diego, ed. ( Pamplona, España.: T6 Ediciones; 2012) : 319-326.
- 14 Le Corbusier. *La Ville Radieuse*. Éditions de l'Architecture d'Aujourd'hui, Boulogne-sur-Seine, 1935.
- 15 Enrique Gebhard. “Urbanismo y habitación”. *ARQuitectura* N° 2. (1935) : 15-23.
- 16 See: Torrent, Horacio. “Ciudades en papel: Teorías arquitectónicas y urbanas en Chile 1930-1940”. In: *Revistas, Arquitectura y Ciudad: Representaciones en la Cultura Moderna*. Horacio Torrent, ed. (Pamplona: T6 Ediciones; 2013) : 127-155.
- 17 Waldo Parraguéz, “Estudio de Reconstrucción de la Ciudad de Chillán”. *Suplemento Dominical La Hora*, March 26, 1939.
- 18 Waldo Parraguéz, “Los modernos principios del urbanismo deben aplicarse al reconstruir la ciudad de Chillán”. *Sección Arquitectura La Nación*. March 29, 1939
- 19 “Proyecto de expropiaciones de terrenos en la zona del sismo envió al Congreso el Ejecutivo”. *La Hora* February 26, 1939.
- 20 “Importantes innovaciones que figuran en el nuevo plano de Chillán que publicamos”. *La Discusión*, August 20, 1939.
- 21 “Plan Regulador de Chillán fue estudiado ayer por el Consejo Provincial de Reconstrucción”. *La Discusión*, May 18, 1939.
- 22 The registration of the Directorate of Municipal Works account of building permits granted annually: 233 for the period 39-40, 256 for 1941, 107 for 1942, falling to 59 for 1943, 41 for 1944 and 50 for 1945, with subsequent slight rise to that date to 1953. DOM base register, Municipality of Chillán.

## Bibliography

- Bannen, Pedro; Pérez Oyarzún, Fernando; Vásquez, Claudio. “Entendidos, subentendidos y malentendidos sobre urbanismo moderno: alternativas del frustrado viaje de Le Corbusier a Chile”. In *Massilia 2004. Anuario de estudios lecorbusieranos*; ed. Josep Quetglas; (Barcelona: Fundación Caja del Colegio de Arquitectos de Cataluña, 2004).
- Bartelt, Natalie. “Binnenmarktförderung als Entwicklungsstrategie : staatliche Industrialisierungspolitik in Chile durch die Corporación de Fomento de la Producción (CORFO) 1939 – 1952”. Magisterarbeit, Freie Universität, Berlin, 1999.
- Bastianci, Agostino. “El terremoto del 24 de enero de 1939 en Chile. Observaciones y consideraciones relacionadas con la edificación”. *Scientia*. Vol. V. (1939).
- Gebhard, Enrique. “Urbanismo y habitación”. *ARQuitectura* N° 2. (1935) : 15-23.
- Müller Biscar, Martín. “The public sector and the Chilean industrialization process: an analysis of CORFO during the period, 1939-1973”. MA diss., University of Texas at Austin, 1978
- Le Corbusier. *La Ville Radieuse*. Éditions de l'Architecture d'Aujourd'hui, Boulogne-sur-Seine, 1935.

- Muñoz Maluschka, Luis. "Corporación de Reconstrucción y Auxilio Ley 6334". *Urbanismo y Arquitectura* n° 2 (1940): 55-56
- Muñoz Maluschka, Luis. "Concepción dinámica del urbanismo, espacios vitales urbanos". *Urbanismo y Arquitectura* Vol.2. N°10, (1940) : 46
- Oehrens, Federico. "A proposito de Le Corbusier". *Diario Frente Popular*. February 11, 1939.
- Parraguéz, Waldo. "Estudio de Reconstrucción de la Ciudad de Chillán". *Suplemento Dominical La Hora*, March 26, 1939.
- Parraguéz, Waldo. "Los modernos principios del urbanismo deben aplicarse al reconstruir la ciudad de Chillán". *Sección Arquitectura La Nación*. March 29, 1939
- Torrent, Horacio. "Ciudades en papel: Teorías arquitectónicas y urbanas en Chile 1930-1940". In: *Revistas, Arquitectura y Ciudad: Representaciones en la Cultura Moderna*. Horacio Torrent, ed. (Pamplona: T6 Ediciones; 2013) : 127-155.
- Torrent, Horacio. "La revista ARQuitectura y la transformación del campo disciplinar: Vanguardia, cuestión social, planificación urbana y arquitectura moderna". In: *Las revistas de arquitectura (1900-1975): crónicas, manifiestos, propaganda*. Héctor García Diego, ed. ( Pamplona, España.: T6 Ediciones; 2012) : 319-326.
- Ulricksen, Guillermo. "La tierra liberada para edificar". *Diario Frente Popular*. February 15, 1939.
- Ulricksen, Guillermo. *Ordenanza Local de Urbanización de Chillán, 1943*. Dpto. Técnico. Sección Urbanismo. Corporación de Reconstrucción y Auxilio. Santiago, 1946.

### Image Sources

- Figure 1: "Una caravana dolorosa" (A painful procession). Photograph, unknown author. Published in: Zig-Zag N°1767, (February 20, 1939) : 40
- Figure 2: Map of the earthquake area, in Zig-Zag N°1767, (February 2, 1939) : 16 and the area in the regional and urban studies, from Luis Muñoz Maluschka, "Concepción dinámica del urbanismo, espacios vitales urbanos". *Urbanismo y Arquitectura* Vol.2. N°10, (1940) : 46
- Figure 3: Page of Zig-Zag N°1769, (February 16, 1939) : 22
- Figure 4: Drawing by Natalia Moreno (Fondecyt 1140964) based on the plans published in La Hora, March 26, 1939
- Figure 5: Drawings by Natalia Moreno (Fondecyt 1140964) based on: a). the plans published in La Discusión, de August 26, 1939 and on: b). the plans published in Ulricksen, Guillermo. *Ordenanza Local de Urbanización de Chillán, 1943*. Dpto. Técnico. Sección Urbanismo. Corporación de Reconstrucción y Auxilio. Santiago, 1946.
- Figure 6: Chillan, Public Services and Administration building. Postcard. Photographer Antonio Quintana. C.1950. Private collection.