

Roger Holden has shown that in the hands of the joint-stock companies, mills began to be more decorative and ambitious, turning them into landmark structures, the name of the mill was often displayed across the top (Roger Holden, 1997, *Stott & Sons: Architects of the Lancashire Cotton Mill*). The remainder of the building usually consisted of vast flat expanses of wall punctuated by windows. The windows themselves became larger as the 19th century progressed, responding to a need for more light and better ventilation as faster machinery generated higher temperatures.

A further boom in 1904-8 generated another phase of mill-building, and by 1911 there were 335 mills in Oldham. In 1926, the peak year when the Lancashire Cotton industry reached its maximum productive capacity, Oldham's spindleage stood at its all-time high of 17,700,000. However, a combination of trade depression, coal shortages, the General Strike and overstretched finances meant that from 1927, mills began reducing their spindleage as companies started to fail and overseas markets disappeared. Despite boycotts from India in the 1930s and overseas competition during the late 1940s and 1950s, Oldham remained until 1964 the largest single centre of cotton spinning. However, by the 1990s in the face of artificial fibre

production and a collapse in overseas markets only a handful of cotton spinning mills were working in the town, and the last, Elk Mill, closed in 1998.

Across Oldham the 2017 survey noted that the average loss rate of mills between 1988 and 2017 is 38.8%. Even so, it is clear from the 2016-17 assessment by the Greater Manchester Archaeological Advisory Service (GMAAS) that the borough has an important stock of textile mills still standing, making a significant contribution to the character of the historic industrial environment. The national importance of several of these mills is reflected in their designation as listed buildings, although the borough also contains numerous very significant but non-designated mills.

The GMAAS survey concluded that most of Oldham's extant mills (76 out of 104) were at 'Low Risk' or 'No Risk' based on their current condition and levels of occupancy/commercial use. How many of these might be standing in another 40 years thus depends upon local communities recognising the value of the embedded carbon in these structures as opposed to new builds, and the promotion of these industrial structures as buildings for converting to new apartments. That's the challenge and aim of the new mill strategy.

CHILE

A CRITIQUE OF THE INDUSTRIAL HERITAGE OF THE GLOBAL SOUTH

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The process of industrialization in Chile was carried out gradually and in parallel with the process of colonization and the subsequent installation of the Republic. As a result, the labour force of Chile comes mainly from the native peoples and natives who have been assimilating to the agricultural dynamics imported and installed by Europeans.

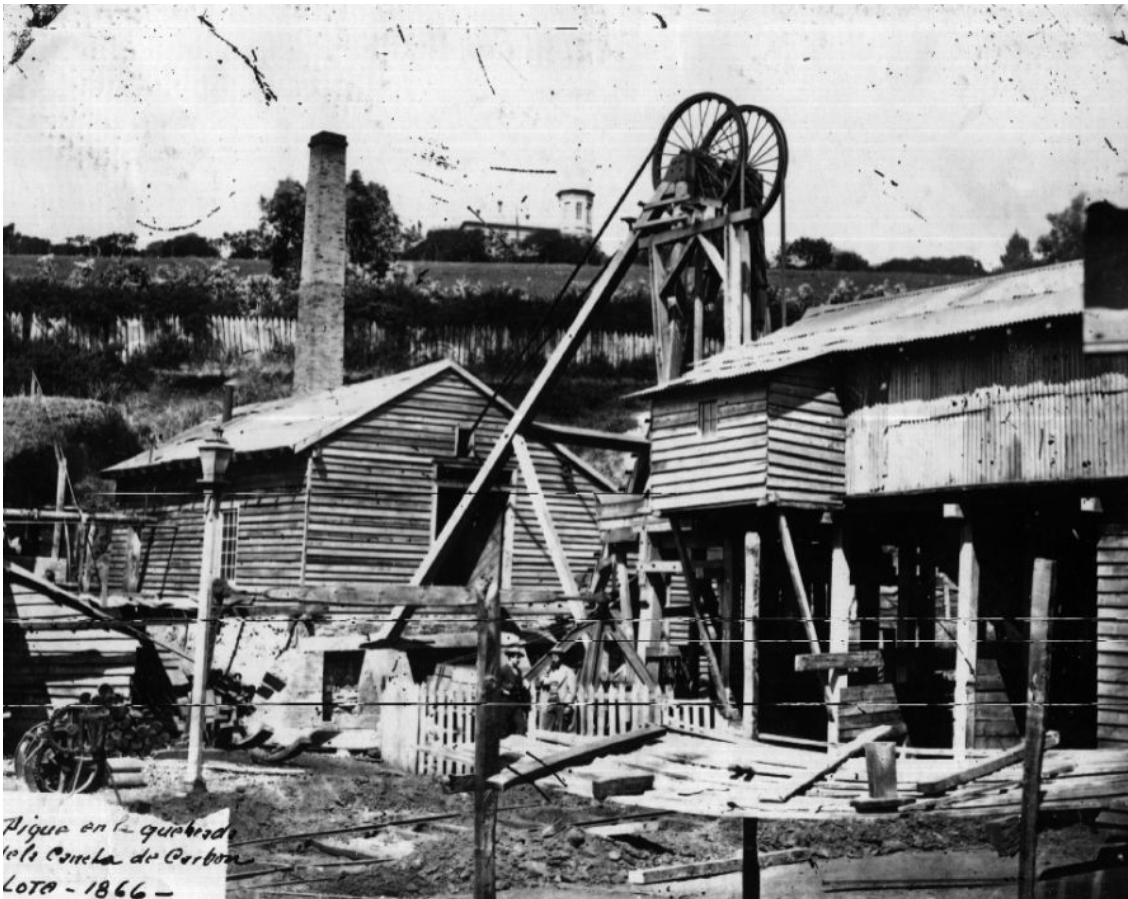
The process was a long one given that not only a new culture, a new religion and new political ontologies were installed, but also a new legislation that supported the worldwide expansion of extractive processes that originated in Europe. This phenomenon will later be called globalization.

Particularly in southern Chile, this had great challenges, not only for the foreigners who pushed the extractive activities in regions far from industrial centres, but also for the indigenous Mapuche people, who led an unprecedented resistance. Chile's independence from the Spanish monarchy was driven by Chilean-born children of Spaniards, and was declared with the signing of independence in 1818. This meant that the political distribution of



The sloping entrance the Lotilla mine leading down to the below-sea coal seams, 1876. (ENACAR photographic record, digitized by the Universidad de Concepción Photographic Archive, recovered in 2010)

power stayed in the hands of outsiders. Territorially, the natural border was the Biobío River, which separated the new Chilean Republic to the north of it from the lands of the native people, the Mapuches, to the south. The Mapuche lands, extending from the Biobío south to the Toltén River, are now commonly known as the Araucanía.



Headstock and winding engine of the mine, 1866. (ENACAR photographic record, digitized by the Universidad de Concepción Photographic Archive, recovered in 2010)

The occupation of the Araucanía started in 1860, and it was incorporated into the Chilean Republic in 1883. Wars, treaties, agreements and disagreements affected the agricultural lands of the Mapuche who still defended their territory, their families, their lifestyle, and their cosmogonies.

In 1861, Cornelio Saavedra proposed the plan of militarized and systematic occupation, building fortifications that gradually ran along the border line to the south of the Biobío River. This process was marked by violence and forced labour by the original communities. The frontier life developed from wars, political and economic relations and with important family relations that were produced by the mixing of Spaniards and Mapuches.

This period is called the Arauco War, and it featured discord between both power groups disputing territories, autonomies, and mutual recognition. The problem persists as an important historical debt to the Mapuche who continue to resist in search of recognition and autonomy.

Coal and the rise of modernity in indigenous contexts

It was in this context that industrialization was installed in the frontier territory. The discovery of important minerals attracted many industries, creating what is necessary to activate industrial development.

A significant phenomenon occurred with the installation of in-

dustrialized mining operations along the Biobío River. Although there were extractive activities throughout Chile of both coal and other minerals, it was in Lota where industrialized extraction and the development of modernity were installed from the middle of the 19th century. Matías Cousiño, a businessman with important background in the saltpetre and copper mining industry of northern Chile, discovered the submarine coal seams in Lota and began systematic settlement in the territory. In 1851, the first extractive plant was established, and in 1897, the first hydroelectric plant in Chile.

Cousiño and his team placed extraction processes, copper smelting, the hydroelectric plant in Chivilingo, and they promoted the construction of the railway. The latest technology of that time also promoted the construction of a company town with high standards, quickly becoming a city where peasants and Mapuches saw the possibility of independent life.

However, the problems of settlement, public health and the precariousness of the labour system that was confused with colonialist dynamics, lead to years of mutual struggle. Lota was an important engine of social change for establishing decent work systems, housing, education, and health.

After important political, economic, and social processes, the industrialization of southern Chile is an important part of the acculturation process that took place here, with the original native

people assimilating a new culture through their direct contact with European-style extractive industries and the formation of modern societies in indigenous territorial contexts.

For the social sciences, these company towns can be real laboratories to observe historical phenomena of cultural syncretism, and socio-cultural phenomena where the network between cultural diversity, the different power groups and the installation of modernity are perceived as motors of important social changes for those who were obliged to change their lifestyles and worldviews, either out of necessity or in search of new horizons. To understand the original cultures, is to understand the cultures of those who are relevant for the installation of industrial processes and who first assimilate the modern life. In them we can find the foundation of our current society.

Critical industrial heritage reflections

The coal industry in Lota finally closed in 1997. At the end of the 20th century, many industries in Chile had to close given the various global political and economic phenomena.

The coincidence of the colonizing events, the installation of republics with an important colonial stamp, and the phenomenon of the

industrialization of the global South, demand a critical reflection in relation to the processes of industrial patrimonialization, where the important indigenous contribution in these matters is rarely visible. This can be an important attribute also within UNESCO World Heritage declarations.

The spheres of power are installed from a complex cultural domination and require native peoples to adapt to lives that scarcely incorporate their ontologies.

The determinism of the labour trades has meant that the ancestral cultures' ways of being overlap or are hidden in the industrial historiography, being an important axis to consider for those of us who continue to understand and observe the importance of their worldviews in modern, postmodern, and current processes.

In post-industrial cities, and in current political contingencies, indigenous identities are an important part in the re-significance of their past and present. This reaffirms the need for further research and studies that allow us to dismantle the official history in order to trace the cultural and historical threads of the original cultures. This would also make important contributions to the critical reflection on the industrial heritage of the global South.

TICCIH NEWS

THE HERITAGE OF THE TEXTILE INDUSTRY – TICCIH THEMATIC STUDY

Mark Watson

The textile industry is a global phenomenon encompassing the impetus for industrialisation, the growth of cities, the creation of company towns and world-wide trading routes in staple goods: silk, wool, linen, cotton, jute and artificial fibres. Facing global economic changes, textile mills have proved adaptable to new purposes. Many spearhead urban regeneration and secure the future identity of places. Which lessons do mill conversions give? Which are the pioneers, the flagships, the giants, and the time capsules, containing historic machinery, and what are the related skills (intangible or living heritage) needed to work them? Which networks best demonstrate international interchange? Did associated company towns fail or prosper? Some are World Heritage Sites - is the balance correct? What attributes do these places share, what makes them different, and what is missing?

This book ([downloadable pdf](#)) condenses input by several researchers into the better understanding of textile mills and landscapes worldwide. The authors/editors are professors of Architecture in

