

From Sorting to Dyeing: Men, Machinery and Territory for Wool Production in Biella in the 19th Century

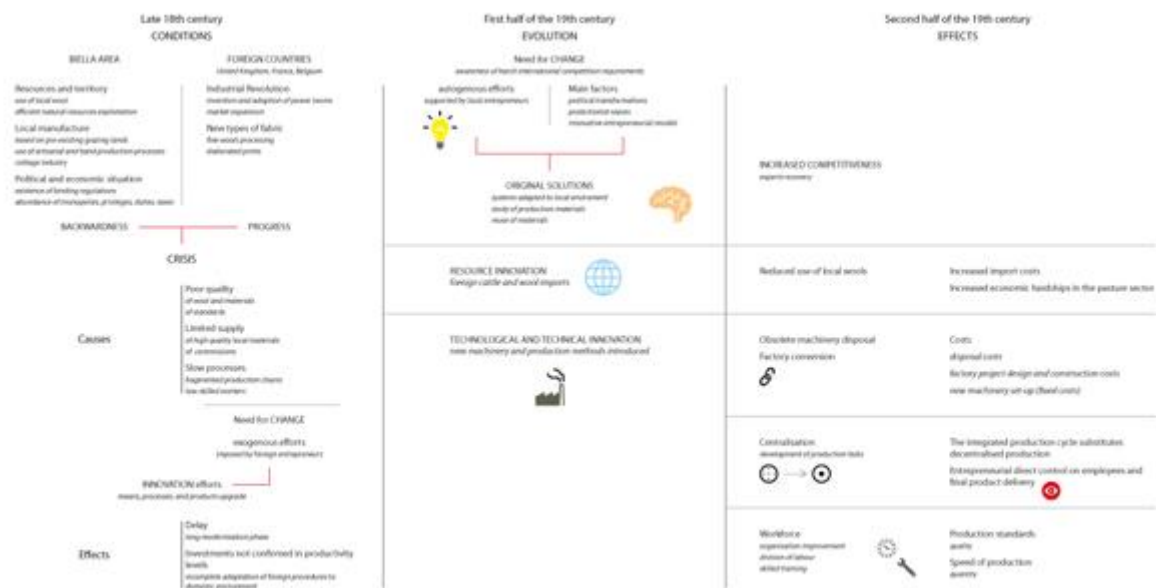
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The history of the Biella textile industry has much in common with other manufacturing sectors that developed in Italy during the same period, both in terms of economic prospects and resource optimisation, and organizational and structural margins. In carrying out an analysis of Biella's textile industry, it is important to bear in mind the difficulties that regularly emerged in the search for suitable wool to be later processed. This was in part due to the poor quantity and quality of wool derived from native breeds of sheep. The importation of higher quality cattle from abroad, and its annexation in the territory, represented an initial step towards a substantial improvement in local production. To this regard, the leading business families provided the government with the necessary incentives to introduce sizeable amendments to the laws in force at the time. For centuries, custom duties and onerous taxes remained extremely restrictive and binding, resulting in reduced trade relations, even with neighbouring regions.

As cattle imports increased, a number of problems arose related to manufacturing processes, previously in the hands of low-skilled labourers, mainly farmers and seasonal workers who worked in a disjoint manner and with rudimentary tools. In the United Kingdom, France and Belgium, the Industrial Revolution had brought about the transition from an agricultural - manual structure to steam-powered machine tools. The expansion of the latter eventually formed a highly specialized working class.

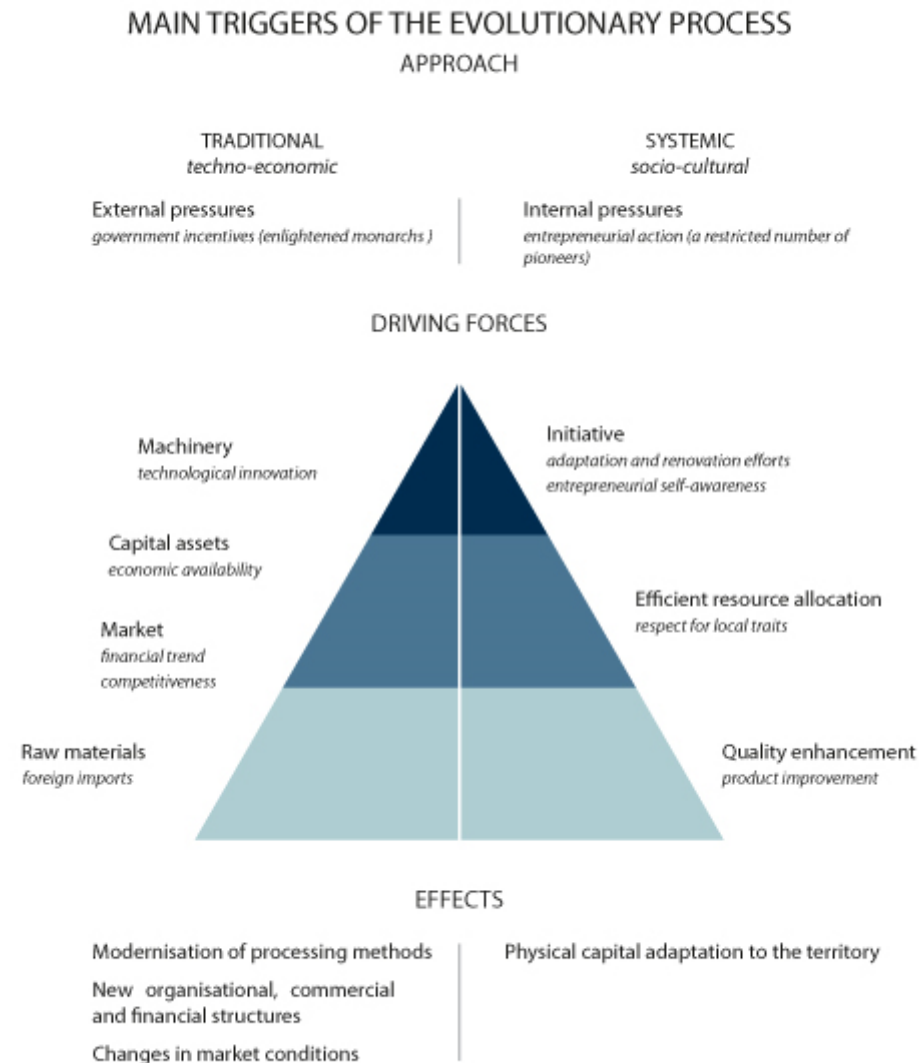


General scheme. Table summarizing the most significant events that took place in the Biella region during the 19th century and the progress made in relevant fields

To maintain competitiveness with other international business and respond to an expanding market demand, the Biella industry had to adapt its pre-existing technologies and adopt advanced machinery. Furthermore, Biella entrepreneurs decided to change the organizational structure of the industry through the gradual centralisation of all production cycle activities in integrated plants or factories (the traditional stages of processing - beating, washing, carding, spinning and weaving - customarily took place in different locations, but were now combined into a single complex). Centralisation also prompted reduced manufacturing costs and greater control over production standards and final products. During these modernisation efforts, unqualified contractors were the category of workers who suffered the most, as they were not able to enter the new and more stable employment opportunities offered by the recently implemented policies. Indeed, in most cases, they failed to adjust to changing techniques and working conditions.

The thesis is divided in five chapters: the first focuses on the birth of the wool industry in the Biella territory; the subsequent chapter concerns technological innovation; the third details the corporate structure of the industry; the following chapter analyses the impact of changing production techniques on the final product; the final chapter proposes a thorough analysis, grounded in a systemic-cultural approach, of the period's transformations and their effects.

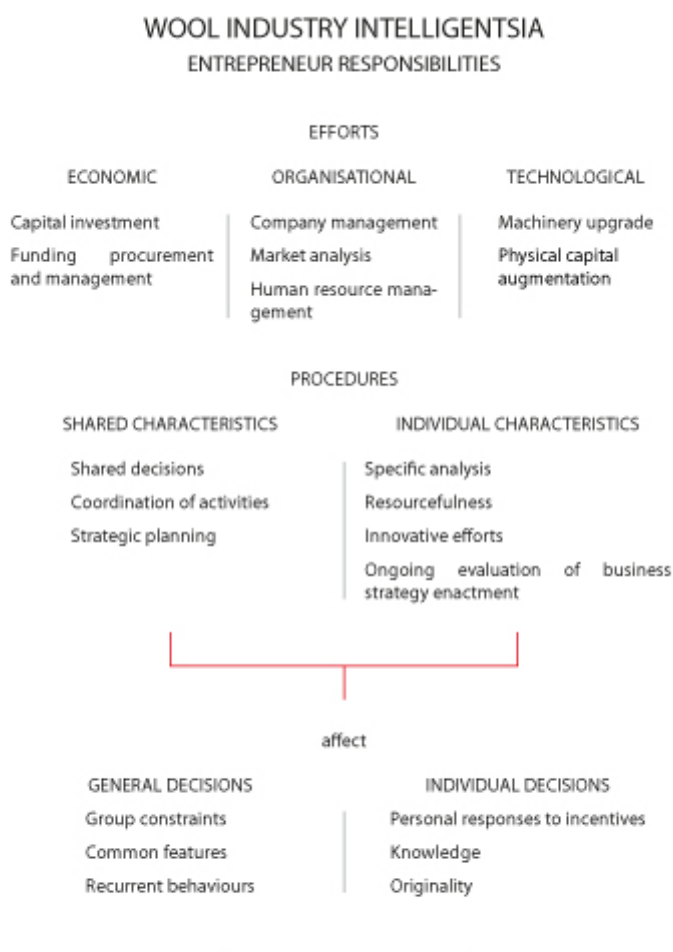
This fifth and final chapter is the core of the thesis. The systemic-cultural approach provides an analytical framework for complex network of relationships and information flows that connected the actors involved in Biella's industrial upgrade through the study of changing economic, political and social factors.



Main triggers of the evolutionary process. Graphic representation of shifting events' priorities between the systemic approach and the traditional historic interpretation

Local entrepreneurs acted as pioneers, playing a fundamental role in the interaction between different parties. In fact, unlike what occurred in other industrialising countries and regions, they did not limit their inputs to mere technological application, by adopting new means and information. Biella industrials took into account different potential outcomes, evaluating the consequences each choice would have involved, and acting in compliance with local identities. An attitude of this kind, which aims to preserve and enhance the originality of the territory, is sign of a strong attachment to the past and a deep knowledge of the local reality.

The unrelenting search for original solutions demonstrated the entrepreneurs' extraordinary perseverance and dedication, also corroborated by the excellent results and unanimous accolades at the international level.



Entrepreneurs learn from modern foreign experiences in the wool industry; they reinterpret and apply them in the local context, taking into account the territory's specific traits. In a later moment, they upgrade production methods and facilities.

Wool industry intelligentsia. The table illustrates the skills and personal characteristics that distinguished Biella wool entrepreneurs from their competitors

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