

THE CREATION OF THE INDUSTRIAL SCHOOL OF BARCELONA (1851)

Guillermo Lusa Monforte

With the disappearance of the old régime and the new liberal system, a reorganization of the educational system takes place in Spain which gives rise to the modern technical teaching, and particularly to the industrial teaching, created by the decree of 4th September 1850. The following year the Real Instituto Industrial of Madrid and the industrial schools of Barcelona, Seville and Vergara are also opened. The Industrial School of Barcelona is the result of joining the free departments or schools that the Commerce Council of Barcelona had been creating and financially supporting since 1769.

The difficulties in the industrialization process and the first important crisis of the Spanish capitalism, which began in 1866, are the determining causes of the shutdown of almost all these schools. The Real Instituto Industrial of Madrid, flagship of the ambitious process of creating industrial schools, is also among these. The Escuela de Barcelona, which will resist the crisis thanks to the economic help from the county council and the Town Hall of Barcelona, becomes the only school of industrial engineers of Spain during the long period 1867-1899. The fact that the only industrial school is not in the capital of the country is a consequence of the difference between the political capital and the industrial capital, a difference that will greatly contribute to highlight the difficulties of the Spanish industrialization during the XIX century.

In this work the antecedents and circumstances relevant to the preparation of the project of the industrial teaching, as well as the creation of the Escuela de Barcelona, are studied. The provisions promulgated for the opening of the Escuela and the doubts that many professors had are also analyzed. The correspondence between the professors, the dean, the governor and the Dirección de la Instrucción Pública permits us to learn about some characteristics of the technical teaching in the schools of the Commerce Council; they also reveal information about the social composition of the students of the school of Barcelona. The enrolment form from the academic year 1851-52, presented here with detail, accounts for the social response to the diversified technical offer of the school of Barcelona. The article concludes by bringing up the importance of the change from the old departments of the Council to the new school.

THE BIRTH OF THE INDUSTRIAL UNIVERSITY TEACHING IN FRANCE

André Grelon

In France, the Restoration period (1815-1830) is but a major moment in the history of the technical teaching, since it corresponds to the birth of the industrial teaching together with the creation of the "École centrale des arts et manufactures" in 1829. Several types of schools existed before this new institution was created, and

the "École" had to define itself with regard to these schools, either to have them as a model of inspiration or to move away from them. In this paper, the main institutions are studied: the "École polytechnique", which at first aimed to provide a generalist engineering formation but which eventually turned into a centre of general theoretical scientific teaching; the "École des Mines", near the industrial fields but with only a few students; the "Conservatoire des arts et métiers" / whose oral, high-quality lectures were not enough to offer a complete formation; the "Écoles d'arts et métiers" / which in theory were supposed to prepare skilled workers and foremen but which had not yet found their place; industrial courses in the provinces, which did not provide practical formation and focussed on just one or two subject-matters. The "École Central e" offered a new synthetic concept, that of "industrial science" / and wanted to train generalist engineers to respond to the requirements of the developing industry. This model will turn out to be the most suitable to the needs of the time and it will be the one to be implemented in numerous European countries and other parts of the world.

THE SCHOOL OF MATHEMATICS OF THE COMMERCE COUNCIL 1819-1850

F. X. Barca Salom

The departments of the Acadèmia and the department or school of the Commerce Council were the only responsables for the teaching of mathematics in Barcelona in the first half of the XIXth century. The latter, which constitutes the main topic of this article, was inaugurated in 1819 and absorbed by the Escola Industrial in 1850. From the file sources of that time, we have tried to reconstruct its history, analyzing the subjects taught and detecting the influences it had.

THE FIRST TEACHING OF MECHANICS COURSES IN THE INDUSTRIAL SCHOOL OF BARCELONA (1851-52). PRECEDENTS, PROFESSORS, AND FIRST STUDENTS

Carles Puig-Pla

During the first academic year of the School of Industrial Engineers of Barcelona (1851-1852), the teaching of Pure Mechanics and Industrial Mechanics and Technology was established. In spite of being a new school, the teaching of practical mechanics derived from a long Catalan tradition related to the teaching task of the Commerce Council. The teaching of Industrial Mechanics and Technology was a continuity of the Machines Laboratory of G. Faralt (1804) , and of the Hydraulic Machinery department of H. Bordeje (1831). As regards the theoretical side of mechanics, the furthest precedent is linked to the School of Mechanics (1808) of F.

Santponç; the lectures of Rational Mechanics that L. Presas gave at the University of Barcelona from the academic year 1847-48 on are the nearest precursor.

In all cases, there is a clear prevalence of the model and texts used in different French institutions, even though the English influence cannot be underestimated. We can note that the students of the first lectures on mechanics used and applied the knowledge they acquired later, during their professional life.

THE LABORATORY ENGINEERING. A CHALLENGE OF THE XXth CENTURY

Antoni Roca Rosell

During the first decades of this century, the laboratory Engineering was consolidated as a result of the technical teaching and the need to establish a test and check service for the new industry sectors that appeared in Catalunya. A project of the new building of the School of Industrial Engineers, which only remained a project, included the construction of two big laboratories - a Chemistry one and a Mechanics and Hydraulics one.

This process reaches its peak with the creation of the Testing and Conditioning General Laboratory, made official in 1922, which was based on the different laboratories of the Escola Industrial of Barcelona. With this centre, the Diputació de Barcelona and the Mancomunitat offered the Catalan industry quite a sophisticated service, probably even better than the actual demand of the time. However, experimental research was not carried out from this laboratory, even though, in fact, it can be regarded as the most immediate antecedent of similar centres settled down in Barcelona after the Civil War.

Traducció Marta Aguilar