

# The changing role of the map in Western European society over the last 250 years

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**Abstract:**

As a result of scientific and technical developments the map became geometrically and semantically more precise and accurate, but its socio-economic role changed definitively around 1800: the needs of the industrial revolution required the development of spatial inventories and led with new reproduction techniques – esp. colour lithographic printing – to the development of new types of thematic maps. The 19th century is therefore characterised by cartographic inventories, not only topographic but also geological, hydrographical, ..., although also maps used for the representation of sociological and economic phenomena. We can thus note new themes addressed in cartography, such as indigence (Quetelet, 1843) or road, rail and telegraph networks or maps dealing with river or maritime links. This also led to the development of the first land management maps.

The French Revolution and the Napoleonic period saw important changes – even new methods – of inventarization of real estate and land use. As Kain and Baigent (1993) state the collecting of taxes from land and resources drawn from that land were the overwhelming reason for the cadastral mapping in Europe. The development between the end of the 18th century and the Law of the Cadastre in 1807 (France) – with lesser-known steps, such as the introduction of a cadastral system by mass of cultivation (1803) in France and the countries that were later integrated into the French Empire – is proverbial for the change in the concept of land ownership. This period also underpins new forms of mapping in the 20th century, such as spatial planning maps.

After the Second World War the evolution of technology led to new technologies in mapping, starting by data collection, e.g. aerial photography facilitating surveying.

But technological change also influenced field techniques: if for centuries - or even millennia - topography had been based primarily on the measurement of angles, the measurement of distances took on a predominant role during surveys, only to be replaced in recent decades by the preponderance of the observation of the time differences.

Since the beginning of the industrial revolution till 1990's, geological maps, soil maps and other inventory maps have largely expressed the know-how of cartographers, but nowadays they are more and more replaced - due to the technological developments - by ephemeral maps on screen generated by GIS from databases instead of from the printed document.

A parallel between economic developments, cartographic and surveying methods and the role of soil and land ownership over the last two hundred years is discussed. The intertwined relationship between the development of technical aspects and the social impacts is also considered (Chrisman, 2005).

This also influenced the role of the administration holding the land inventory (the cadastre), which from a common model in 1807 throughout the French Empire developed in the different countries where the Napoleonic cadastre had been established in different ways (e.g. the Netherlands vs. Belgium or France).

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