

EMPIRICISM, SYMBOLISM, AND SCIENCE IN THE CARTOGRAPHY OF THE HISPANO-AMERICAN TERRITORY IN THE 16TH CENTURY.

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Within the new Renaissance society emerged it a preoccupation for the graphical representation of territory, this worry was bolstered with the discoveries of the new American territories, that motivated numerous planimetric maps during the 16th century. The cartographic works in sixteenth-century Spain soon acquire an exceptional importance because of the demands of overseas expansion. At this time were developed several empirical methods to produce maps from which we can see numerous examples in the cartographic documents that have survived from that period. On the other hand, although to a lesser extent, cartographic documents found in colonial Latin America, drawn in accordance with the principles developed in Italy in the sixteenth century. These two ways of conceiving and representing the territory [empirical and scientific] contacted they, producing a mixture that gave a hybrid mapping different from what was known before.

The dissemination of topographic and cartographic methods were being used in Europe during the fifteenth and sixteenth centuries, reached the New World unevenly way. Coexisted in the same period and on the same geographical area, procedures as diverse as that were generated for the determination of the length, of a high scientific level, and the methods used by indigenous painters and *tlacuilos* who already had a pictorial and cartographic tradition of pre-Hispanic times, and most were trained by the monks in the monastic schools, which began to develop a style that blended native traditions with pictorial conventions of representation Spanish.

The projects carried out in Europe, in order to know the lands and cities belonging to the Spanish empire of Philip II, were also subsequently exported to Spanish America. The responsables for their management and organization were the cosmographers Alonso de Santa Cruz and Juan López de Velasco. In 1571 the president of the Council of the Indies, Juan de Ovando, nominates Lopez de Velasco as royal cosmographer and chronicler, and he entrusted him with the creation of a definitive chronicle atlas of the New World, based on the information sought from calls *Relaciones Geográficas de Indias* (Geographical Relations of Indies). The project sought the implementation of general maps, broken down into other partial maps so that they could create a complementary chorographic album of New World cities and towns. The maps would be managed by a system of longitude and latitude coordinates, as determined by astronomical methods. On general maps could be locate the regional maps that could be gained from the surveys of the *Relaciones Geográficas*. These maps would show the geographical and topographical characteristics of the different territories. This would permit not only quantify the extent of the American continent, but also establish the status of it with the rest of the known world. The project would finish with a collection of views, also obtained from surveys sent to the New World to create an album chorographic of Hispanic American towns and cities, like the one van den Wyngaerde produced of Spain.

In theory, the map of the New World it was possible because was postulated with rational principles, which were the basis of the cartography of the time and could be applied to any country, anywhere in the world. In the first phase, these cosmographers had planned to establish a geometric projection of America, based on a grid of longitude and latitude, which it had long been theorized by Ptolemy, but never developed it in full. A second phase was launched by Philip II, who commissioned the study of a project to New Spain that would allow to obtain the maps of the colony, similar to those being made by Pedro Esquivel of the Iberian Peninsula.

We can therefore say that there was a real project for representation of New World, with which to compose a geographical and chorographic atlas, to carry out a thorough and accurate description thereof. This great project was unrealistic, was conceived in the metropolis without taking into account the reality on the other side of the Atlantic: the vast distances, large areas unexplored, the uniqueness of Indians officials and the lack of surveying techniques. Hispanic colonial administrators were responsible for the king's command would fulfilled, but then its implementation remained in the hands of people of different race, culture, language and training, what would result precisely in the existing variety, both in the written replies on maps that formed the geographical relationships.

On the other hand, the responses to the Relaciones Geográficas were uneven and incomplete, in most cases, and in some places, there was not even reply. Therefore, the representation's project of New World, covering in detail the inland areas by mean of the Relaciones Geográficas, it was partially a fail, and there not appears to have proofs that this manuscript material was never incorporated into the general maps. Despite its peculiarities, these partial representations of the continental interior are, as a whole, images that combine two conceptions of the world based on Spanish Renaissance tradition, and in pre-Hispanic culture, steeped in symbolism. The mapping effort realized by Spain during the sixteenth century, aided by the indigenous contribution, resulted in a remarkable knowledge of the geography of the American territories.