

CADASTRE AND COLONIAL POLICIES: A WORLD HERITAGE OF CULTURES.

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SUMMARY

The existence and maintenance of a system of Government required financing and management capacity of the territory, two aspects clearly associated with the land registry, which has led to that throughout history have been developed various models adapted to the needs of each Government, a few times a trend more oriented to taxes and other to legal aspects.

Colonialism is linked to the domain of a territory political, economic, cultural or socially through its occupation through the establishment of settlers which should stay at the ground. Therefore, the colonization process requires the delivery of parcels to the new inhabitants and the legal recognition of their right to property.

All this causes that, along the history, various models of allocation of land and property guarantee schemes has been developed. These models have been the origin of the cadastre in the different countries.

Our paper will focus on the comparative study of three examples that, broadly speaking, can be extended to other places. The model used in the Roman Empire, followed in United States before and after its independence and that of Australia.

SUMMARY

La existencia y el mantenimiento de un sistema de gobierno requiere financiación y capacidad de gestión del territorio, dos aspectos claramente vinculados al Catastro, lo que ha dado lugar a que a lo largo de la historia se hayan desarrollado diversos modelos adaptados a las necesidades de cada gobierno, unas veces con una tendencia más fiscales y otras jurídicas.

A su vez el colonialismo está vinculado al dominio de un territorio política, económica, cultural y/o socialmente mediante su ocupación a través del establecimiento de colonos que debían vincularse a la tierra. Por tanto, el proceso de colonización requiere la entrega de tierras a los nuevos habitantes y el reconocimiento legal de su derecho de propiedad.

Todo ello ha dado lugar a que a lo largo de la historia se hallan desarrollado diversos modelos de reparto de tierras y sistemas de garantía de propiedad que han sido origen del Catastro en los diferentes países.

Este trabajo se centra en el estudio comparado de tres ejemplos que, en líneas generales, pueden hacerse extensivos a otros lugares. El utilizado en el imperio romano, el seguido en Estados Unidos antes y después de su independencia y el de Australia.

1. THE DISTRIBUTION OF OWNERSHIP OF THE LAND IN THE ROMAN EMPIRE.

Governing a vast territory like the Roman Empire required a property organization to facilitate the process of “Romanization” of the new territories conquered by guaranteeing recognition of the link between the ground and the person who works it. To do that it was development a complex structure of the property. If we focus on the system of distribution of lands to settlers in property we can talk about three models: the “ager centuriatus”, the "ager per extremitatem mensura comprenensus" and "ager arcifinius".

Perhaps the most common was the "ager centuriatus" which meant the pre-planning of the plot. One of the oldest forms of carrying out this fragmentation was in "lacineis intercivis", based on the division of the ground into elongated units arranged around the road network. The access to the plots was in on of the narrows sides. Thus promote the existence of a larger number of plots in the front line. Another method was the "strigas et scamnas" where also it maintained the structure of the plots with rectangular shapes, but this time oriented from North to South (strigae) or from East to West (scamna), and not linked to the layout of the roads.

But the most typical way to carry out the "divisio" was the grid. The starting point was two perpendicular lines: the *Cardo Maximus* and the *Decumanus Maximus*. From these two lines it was developed a perfect grid formed by a series of roads around the units of land whose identification is deduced by means of a code composed of letters and numbers that allowed its georeferencing on the map (fig.1) However, such units was not spread out lots but that in turn they were divided into smaller parcels which did not have to be so regular and that he appeared not reflected in any level.



Fig.1

For this reason, there was a fourth system of centuriación combining the previous two. In this system the structured ground from a “centuriación” was subdivided by the system of “scamna et striges”, allowing to determine the boundaries perfectly.

The second formula for burden-sharing was the "ager per extremitatem mensura comprenensus", used normally in lands ceded to Priestly Colleges and also in places where the goal was to respect the internal structure of the populations with a strong tribal nature. In these cases ownership of its territory were recognized. In these cases only was carried the measurement of the perimeter of the surface, without interfering in their internal distribution.

Finally, with the two previous ones had a third mode called "ager arcifinius" usually applied to zones with complex relief for grazing or forest exploitation. In these cases, due to the difficulty of establishing the limits, due to the difficulty of establishing other limits, these are established from the natural geographic elements. Then the ownership belonged to the colony or the municipality, but never to an individual person. This system was the antecedent of the communal lands so typical of later periods.

2. THE DISTRIBUTION OF LAND IN COLONIAL AMERICA.

After the discovery of America and a first period of exploration and viceroyalties began the phase of the colonization. This required the development of a new socio-economic model to guarantee the consolidation of settlements through the delivery of lots of land with the resources necessary for its exploitation.

After a few early landowner character distributions, most commonly were parceling with smaller units of property lowers that allowed access to a greater number of owners or extensive territory assigned to a company, society or community that subsequently were divided into its members, etc.

So the different formulas followed for this operation were varied. In some occasions the planning were made linking residence and agricultural land in the same lot. Nevertheless in others were planned a residential city surrounded by land that could belong to the Government of the city which ceded them to its inhabitants or were divided among the owners settlers.

The land gave rise to three models of cadastre: one irregular and without clear boundaries, other regular and well delimited and an intermediate third.

The first of them raised numerous neighborhood conflicts due to the lack of precision in its location and delimitation because it was done using natural terrain elements that were not always so well identified as previously thought. These problems lasted in many cases even after many years later, because were the owners who indicated the surveyor the boundaries of their property, adapted to its own particular interests.

For its part, the regular cadastre was carried out through various systems, among which we can highlight three: the first based on the principle of the square corners; the second by mean of a topographic grid and the last done defining the plots along a flow of water.

The first was carried out among others in the area of Virginia (USA) and was based on the distribution of regular municipalities and lately redistributed among the settlers through a very precarious system layout in which, from the basis of a straight line were defined the others three sides of the rectangle. The resultant plot was later mapped. However this system was very vague and caused numerous conflicts.

The system of grid (Township) was carried out primarily in New England. Here the boundaries of the plot was defined by the municipalities. The main feature of this model was the precision. Before deliver the plots these was measured, and stakeout in the field referenced to a meridian of origin. Later there were mapped. This system helped to prevent conflicts and ensure ownership, even though it was not without problems, at this time due to deficiencies in the technical training and the lack of precision of the methods and instruments used.

The third of regular patterns of cadastre was used by the French from 1700 looking to make an equitable sharing of the alluvial ground for its wealth and because in this way guaranteed access to water and to the most important means of communication at these moment: the river (if it was navigable). The results were rectangular plots where one of the sides touch the rive³ and allow the access to the largest number of plots.

This method is very similar to that used by the Spaniards in the colonization of the Río de la Plata, Paraná or Lujan, where the plots called "Suertes de afrentada" those situated at first line of the River, "Suertes de Cabezada" those that occupied the second-line and "Suertes de Trascabezadas" or "sobrecabezadas" those of the third line. The problem in this case was the lack of previous demarcations and, of course, the lack of topographic maps.

After the independence of United States, from these experiences, a very similar system was designed in New England in order to populate large areas of land that had not yet been. The method was designed by mean of a Committee chaired by Thomas Jefferson and was approved by Congress in 1785 and from 1796 it was know as PLSS.

From a network of meridians (ranger) and parallels, perfectly identified [3], established the territory of a municipality (township), usually of six square miles, organized in a regular grid oriented to the North, that were represented on a map and stakeout in the field.

This space was again subdivided into grid forming units of one square mile (named sections) which in turn could be divided again into halves or quarters until obtaining the desired plot size. Finally plots were identified by a code that allowed their geocoding.

T4SR3W

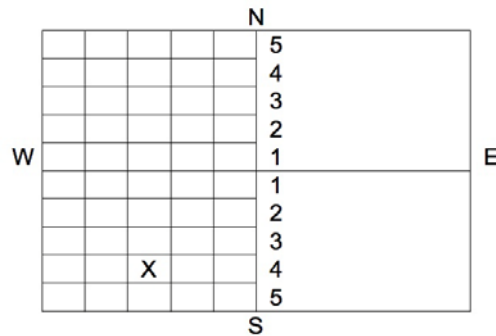


Fig. 2

For example, the table is marked in Figure 2 would be called counting first the initial, the number of the parallel counted with respect to the central one and its address (T4S) and then the initial, the number and the direction of the Meridian (R3W). It would therefore be:

Once established the system of division, the legal land description included the name of the State, the number of the meridian of the origin and the number of the section, so that the definitive description would be as follows:

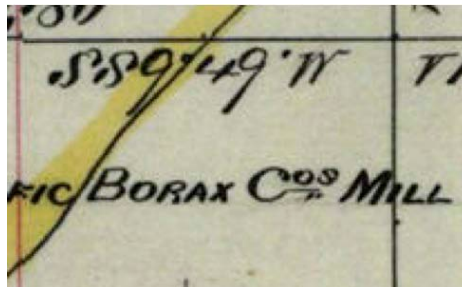


Fig. 3 Detail with coordinates labeled on the map T1SR36E (image obtained from the digital collection of the library of DelaMare, University of Reno, Nevada. USA).

3. THE DISTRIBUTION OF LAND IN AUSTRALIA AND THE TORRENS SYSTEM..

Australia was initially occupied by penal colonies that developed from the beginning an interesting industrial activity where the convicts were used as manpower. The Crown distributed directly large properties to the stakeholders that subsequently were divided in smaller properties that were sold out. Therefore there were two types of property: The transferred directly by the Crown, whose authenticity had any doubt and those obtained by other means such as purchase or inheritance in which case, to obtain recognition of their rights, the owner must prove them through a complex and expensive system of follow-up to the previous land register called “chain” that were difficult or impossible process.

This was the reason because Sir Robert Richard Torrens designed the system that bears his name to ensure the accreditation of private property and the transfer of titles in Australia in 1857. This system, as opposed to the previous mentioned, not regulate the form of distribution of land, but only for ensuring ownership and facilitate the transfer through a system of registration of title (possessory title).

At the process the applicant should present the title and the map that required the approval of the surveyors of the Land Titles Office. It was a simple system of guarantee based on the principle that “the registered prevailed on that to be registered”. The reason for the success of this system was its simplicity.

With the system Torrens the investigation of the previous method was unnecessary, except conflict with previous owners or neighbors who have a period of three months to claim. Also this system protects and allows the register of leases and easements and incorporated since its inception, clearing systems to compensate possible errors.

All this explains why it was quickly adopted in a large number of countries including Commonwealth, some States of United States and Dominican Republic among others.

4. CONCLUSIONS.

As mentioned at the beginning of this paper, the colonialism is linked to the domain of a territory political, economic, cultural or socially. The most effective way of carrying out this colonialism was through the settlement of populations to develop a link with their new places of residence through the possession of the ground.

One of the most ancient systems was designed by Rome for the occupation of their new conquered territories. A complex structure giving response to various situations that serve as source for later systems and which distinguished three types. The “ager arcifinius” antecedent of “communal territories”, frequents inside and outside Europe. For example in many areas of Spain jet it is possible to find this kind of land distribution, usually devoted to forestry and grazing.

The “ager per extremitatem mensura comprenensus”, a model traditionally used for the delivery of land or relocation of indigenous groups and the “ager centuriatus” that in it various forms, appear repeated in other subsequent colonization processes. A very clear example could be founded in America, where a clear parallelism between the French and Spaniards groups of parcels along roads and rivers and the “lacineis intercisivis” Roman, with rectangular parcels can be recognized trough it access from the road or river by one of the most short sides.

On the other hand, the system designed in 1758 in USA after the independence, shows a combination of the Roman “centuriacion” and the English cadastre. The similarities with the

first are related with the shape of the plots in a grid oriented to the North and stakeout at the field divided recursively to obtain the desired size of property. Something very similar to the method designed by the Commission chaired by Thomas Jefferson, based on a grid whose point of origin and its orientation was established from a principal meridian and which it was successively divided to get the final size of plot. Both systems provide geo-references and the mapping of the plots.

The Anglo-Saxon cadastre provided its legal nature. This type of cadastral information serves to prove the property and its location and makes the map a fundamental document, as happened in the American cadastral system, not developed for tax collection, because the money was obtained with the sale of the parcels.

The Torrens system ensures the property. Due to the policy of occupation of Australia as a penal colony, the formulas used for the consolidation of new populations in this continent were very different from the rest of the citations examples. For this reason, also was different the process of distribution and ownership of the land, which led to develop a system designed primarily to guarantee the rights and to identify the property but without intervening either in the form of distribution of land or in the fairness of the distribution. The formula was based on a property registration, where to integrate the titles there should be accompanied by the map and the description of the property and both documents should match.

The Torrens system was designed as registration of real state, initially for Australia, but was quickly exported to other parts of the world by the advantages that its application provided as guarantees and facility of the registration process.

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