

“FINDING PATHS” IN THE EIGHTEENTH CENTURY CARTOGRAPHY

“ENCONTRANDO CAMINHOS” NA CARTOGRAFIA SETECENTISTA

“ENCONTRANDO CAMINOS” EN LA CARTOGRAFÍA SIETECENTISTA

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Abstract

Studying territorial circulation, for the Brazilian research on the 18th century, can help provide an understanding and a visualization of the territorial formation that was produced gradually after the gold mine extractions. These made possible a demographic and economic flux that consolidated the Brazilian presence beyond the border established by the Tordesilhas Treaty (1494), forming continuous features of urbanization that led to an incipient urban network, altering the qualities of the Portuguese colonization process. From these varied aspects of the golden century, the roads and paths surged as spatialization emblems occurred at that time. The activity of such roads and paths will be inquired, on opposition to a technical passivity, overcoming the understanding of paths reduced to a mere function of interconnection between arraiais and vilas, with emphasis on the sociospatiality of these phenomena. Therefore, the relevance of a geohistorical method will be brought forward (by the interpretation of historical maps and the processing of primary sources using geoprocessing techniques), offering a renovation to the traditional methods of Brazilian colonial historiography.

Keywords: Historical Geography, GIS, colonial cartography, 18th century.

Resumo

O estudo da circulação territorial, para a pesquisa brasileira dedicada ao século XVIII, pode nortear o entendimento e a visualização da formação territorial que foi paulatinamente produzida a partir das extrações auríferas. Elas possibilitaram um fluxo demográfico e econômico que consolidou a presença brasileira além da fronteira impetrada pelo Tratado de Tordesilhas (1494), formando continuadas feições de urbanização que desencadearam uma rede urbana incipiente, alterando as características do processo colonizador português. Dessa miríade de facetas do século do ouro, as estradas e caminhos surgem como emblemas da espacialização ocorrida à época. Será problematizada a atividade das estradas e caminhos em detrimento de uma passividade técnica, superando uma função de mera interconexão entre arraiais e vilas, com ênfase na socioespacialidade dos fenômenos. Portanto, a relevância apresentada por uma abordagem de método geohistórico será destacada (por meio da leitura de mapas históricos e tratamento das fontes primárias a partir de ferramentas de geoprocessamento), oferecendo uma releitura aos métodos tradicionais da historiografia colonial brasileira.

Palavras-chave: Geografia Histórica, SIG, cartografia colonial, século XVIII

Resumen

El estudio de la circulación territorial, para la investigación brasileña dedicada al siglo XVIII, puede orientar en la comprensión y la visualización de la formación territorial que fue, progresivamente, producida a partir de las extracciones auríferas. Ellas hicieron posible un flujo demográfico y económico que consolidó la presencia brasileña más allá de la frontera definida por el Tratado de Tordesilhas (1494), formando los sucesivos talantes de la urbanización que desencadenó en una incipiente red urbana, alterando las características del proceso colonizador portugués. De esta mirada de facetas del siglo del oro, las estradas y caminos surgen como emblemas del espacio sobrevenido en la época. Será problematizada la actividad de las estradas y caminos

en oposición a una pasividad técnica, superando una función de merca interconexión entre aldeas y villas, con énfasis en la socio-espacialidad de estos fenómenos. Por lo tanto, la relevancia presentada por un enfoque de método geo-histórico será resaltada (a través de la lectura de mapas históricos y del tratamiento de las fuentes primarias a partir de técnicas de geo-procesamiento), ofreciendo una relectura a los métodos tradicionales de la historiografía colonial brasileña.

Palabras-clave: Geografía Histórica, SIG, cartografía colonial, siglo XVIII.

Introduction

The troubling matter presented here involves an interdisciplinary discussion of certain topics, working with several colonial primary documents and a bibliographical basis that offer, altogether, the necessary support to research, geographically and historically, the specific territorial circulation of the 18th century gold extractions.

Approaching circulation as a subject is prolific because it makes possible a concrete theorization on Brazilian territorial formation, for the territorial penetration undertaken throughout all our colonial history presents a reciprocal relation with the production of roads and paths. With the goal to reach certain portions of the territory, paths were created alongside the continuous exploration of the unknown. In a second aspect, the spatialization produced by the recurring use of routes that led to the interior of the colony – the hinterland – reinforced the colonizatory presence in those locations. When a given locality ceased to capture the interest of explorers (sent by the Portuguese Crown or not), on many occasions those paths also succumbed. As an incipient network of paths will be presented, based on historical cartographical sources, it is elaborated in reference to zones of the colony that were regularly requested by the most various exploratory interests and, simultaneously, by the paths that made this same process possible.

Although diverse *flows* can be specifically addressed, intertwined and established under a certain geohistorical logic, one must not cease to recognize the necessary existence of *fixed* arrangements along these pathways.² Urban nuclei, tax registers, forts, ranches, hydrological and orographical obstacles, among other aspects, are essential to conceive the *totality* of the 18th century. In this article, some hints on how to handle possible access routes will be given, but there is still much to cover in this field so that it can be possible to put forward a more thorough and integral understanding.

The presented sources of information will be of cartographic order, with applications and handlings in *Geographic Information Systems* (GIS), so that the main object of this research can be discussed: the spatialization of gold mining paths and the expansion of the colonial territory. This investigation does not present itself unconnected to recent discussions in the fields of Geography and History. On the contrary, recent academic perspectives must be stimulated so that certain issues on Brazilian colonial history can be renovated, without failing to refer, also, to traditional studies that continue to have a big impact on any study in this area.

The presented topic concerns the gold mining paths located, mainly, between the captaincies of Mato Grosso, Goyaz and Minas Geraes, in the 18th century. This spatial and temporal restriction was established assuming that the representations promoted by the paths of territorial circulation were derived from the mineral extraction activities that altered, profoundly, the Brazilian colonial space. If, during the first two centuries of colonization, there was a coastal occupation of the territory on a sugar-based economy, mining activities caused a radical interiorization of the colonial limits, in a process that was also being put in motion by cattle breeding during the 16th and 17th centuries.³ Therefore, these aspects are iconic to a procedural conception of history. An analysis on the 18th century that does not involve general considerations on the Brazilian territorial formation cannot be of much reliability. All endeavours promoted at that time were in accordance to determined necessities, established in a wider geopolitical, economical, social and cultural context.

The paths of the captaincies of Mato Grosso, Goyaz and Minas Geraes were chosen as case studies due to the interesting and intertwined mesh generated from the territorial exploration of these locations in result, also, to the natural arrangements found along their routes. In other words, it was not necessarily the implementation of a political project that created this ensemble of routes and paths, but a regular use of natural resources. Thus a urban layout arose based on the social needs of that time.⁴ But, in a context of a political project idealized by the colonial intentions of the Portuguese metropolis, a large amount of these routes were incorporated to the Royal Paths or were ostensibly banished according to the concerns of the Portuguese Crown.⁵

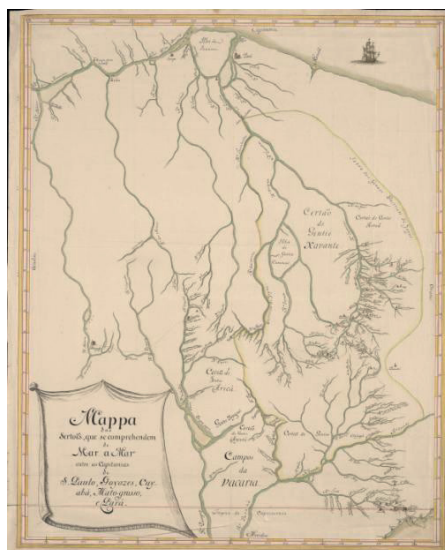
In the following cases it was no different. Whilst the maps were being georeferenced, progressively I was able not only to acknowledge the extent that these paths had in terms of distance, but also the interconnections established between the routes. This article still represents an embryonic research, but that can be inserted in a prior

discussion: the advance of urbanization in colonial Brazil rapidly and radically occurred during the mining period of our history.⁶ Paths and the urban nuclei intrinsic to them demonstrate the force of this thesis. GIS will be used in order to conceive suchspatialization in a less traditional manner and with recent technical applications, pursuing interpretations and comprehensions that can be alternative to what is found in the literature and the cartography of this matter.

The geoprocessed paths

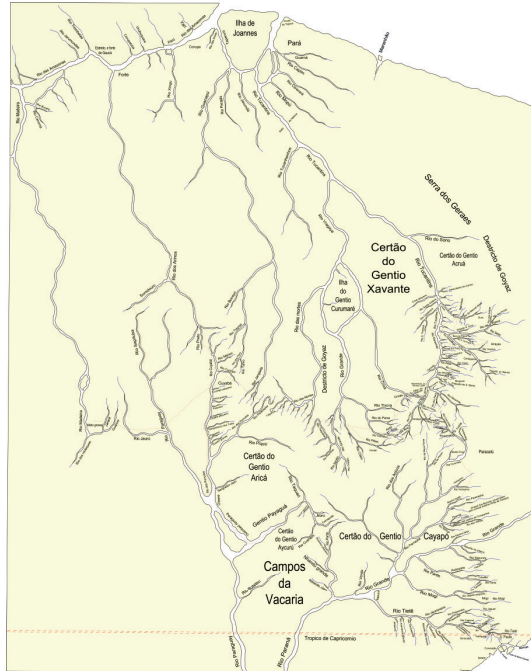
Three maps were manipulated: *Mappa dos Sertões, que se comprehendem de Mar a Mar entre as Capitânicas de S. Paulo, Goyazes, Cuyabá, Mato-grosso, e Pará*⁷(18th century); *Carta ou plano geographico da Capitania de Goyas*⁸(1778); and *Mappa da Capitania de Minas Geraes, que mandou fazer o ilmo. exmo. senhor D. Antônio de Noronha governador e capitão genal. da mesma capitania*⁹(1777).

Mappa dos Sertões, que se comprehendem de Mar a Mar entre as Capitânicas de S. Paulo, Goyazes, Cuyabá, Mato-grosso, e Pará.



Map 1 - *Mappa dos Sertões, que se comprehendem de Mar a Mar entre as Capitânicas de S. Paulo, Goyazes, Cuyabá, Mato-grosso, e Pará* (BIBLIOTECA NACIONAL)¹⁰

Map 1 was vectorized so that the information contained could be viewed in a much clearer design, using the software Inkscape, presented as map 2:



Map 2 - Vectorization of Mappa dos Sertões, que se comprehendem de Mar a Mar entre as Capitanias de S. Paulo, Goyazes, Cuyabá, Mato-grosso, e Pará (writer's authorship)

Based on the indication of the roads and paths present in this map, as, for instance, the path of the Guayazes, the road between Cuyabá and Vila Boa, among others, we can reproduce them graphically with the use of the software *Quantum Gis*. This means that, if the document indicates a path between Cuyabá and Vila Boa, it can be reproduced linearly in the software, since often it is impossible to reproduce the genuine outlines of these routes. If the author of the map signals a specific curve without any other detailed references on this change of direction of that segment, there are no secure evidences to reproduce them accurately. In many occasions, these variations are of a geomorphological disposal, avoiding certain challenging orographic obstacles, like a mountain, for instance. In map 3 the circulation presented by the previous maps was emphasized:



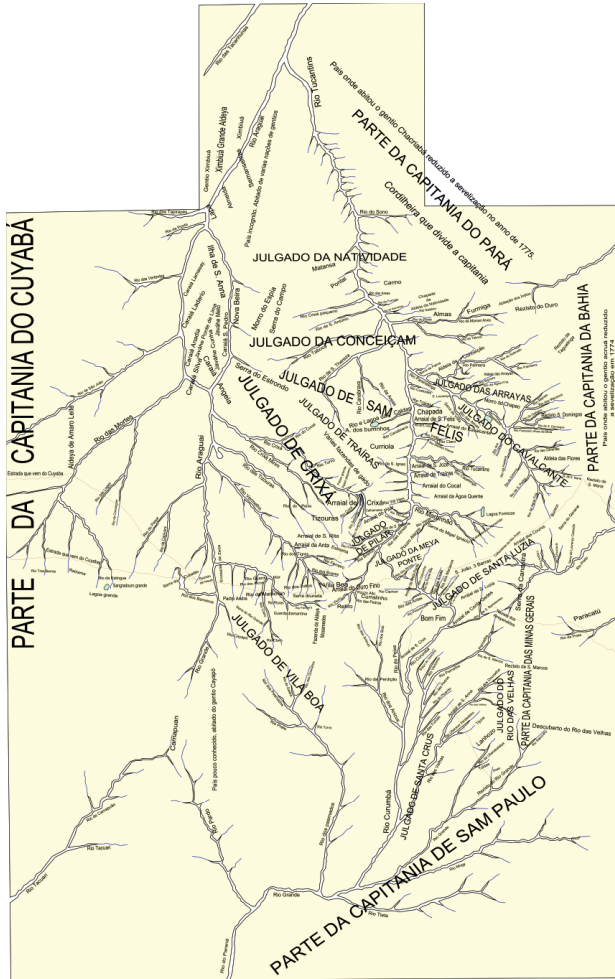
Map 3 - Geoprocessing of the paths identified in Mappa dos Sertões, que se compreendem de Mar a Mar entre as Capitanias de S. Paulo, Goyazes, Cuyabá, Mato-grosso, e Pará (writer's authorship)

Carta ou plano geographico da Capitania de Goyas

Another cartographic production is presented (map 4) with its vectorized version (map 5):



Map 4 - Carta ou plano geographico da Capitania de Goyas (Arquivo Histórico do Exército)



Map 5 - Vectorization of Carta ou plano geographico da Capitania de Goyaz (writer's authorship)

Finally, the paths identified in map 5 were geoprocessed with the software Quantum Gis in order to view the main segments that were covered at the julgados of the Captaincy of Goyaz (map 6). These were of a big significance to the colonial path system and, therefore, to the integration of the territory. They connected to the routes of the far west limits, until Vila Bela da Santíssima Trindade, reaching Cuyabá and then were redistributed in Vila Boa and, particularly, in Meia Ponte.

Subsequently, there opened the possibility to extend the journey up to the ports of Bahia or those of São Paulo and Rio de Janeiro, representing a effectively continental crossroad.



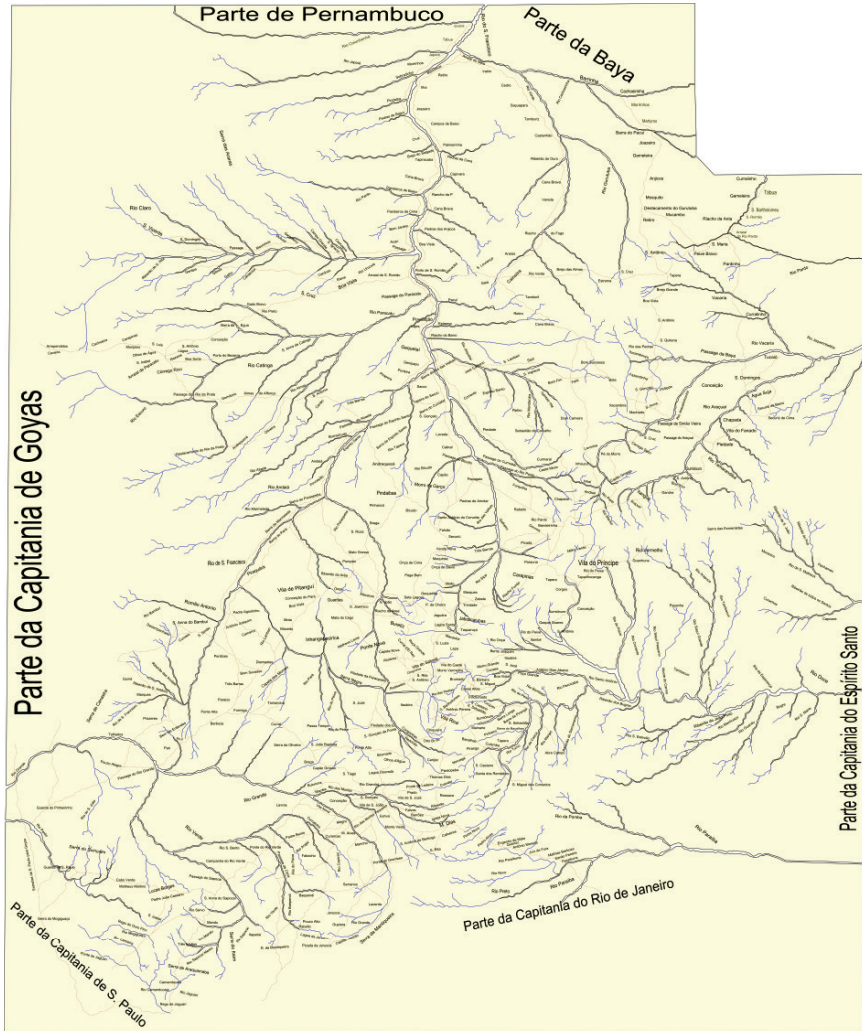
Map 6 - Geoprocesing of the paths identified in Carta ou plano geographico da Capitania de Goyas (writer's authorship).

Mappa da Capitania de Minas Geraes, que mandou fazer o ilmo. exmo. senhor D. Antônio de Noronha governador e capitão genal. da mesma capitania

The next cartography is reproduced (map 7) and after ward its vectorized version (map 8):



Map 7 - Mappa da Capitania de Minas Geraes, que mandou fazer o ilmo. exmo. senhor D. Antônio de Noronha governador e capitão genal. da mesma capitania (BIBLIOTECA NACIONAL)¹¹



Map 8 - Vectorization of *Mappa da Capitania de Minas Geraes, que mandou fazer o ilmo. exmo. senhor D. Antônio de Noronha governador e capitão genal. da mesma capitania* (writer's authorship).

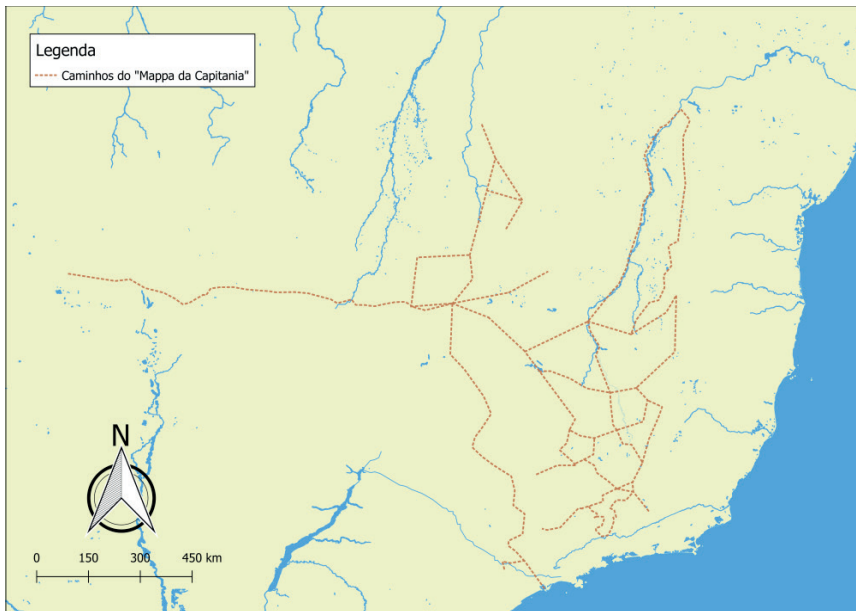
As conducted previously, the paths present in map 8 were geoprocessed with the software *Quantum Gis* (map 9):



Map 9 - Geoprocessing of the paths identified in *Mappa da Capitania de Minas Geraes, que mandou fazer o ilmo. exmo. senhor D. Antônio de Noronha governador e capitão genal. da mesma capitania* (writer's authorship)

Overlapping of the paths

The geoprocesed maps distinguish only identified paths of the 18th century cartography due to the goal of this article, but the remaining information presented in these historical sources (as the limits of captaincies and *julgados*, urban nuclei and rivers, for example) assisted on the definition of these traces in the software. With the digitalization of maps, it is also possible to manipulate other types of information in accordance to the objective of each research. Therefore, a cartographic source can foster different comprehensions on how each cartographer visualized the 1700s space. For our purpose, the paths of the three historical maps were overlapped so that a synthesis-map could be assembled (map 10), presented consequently:



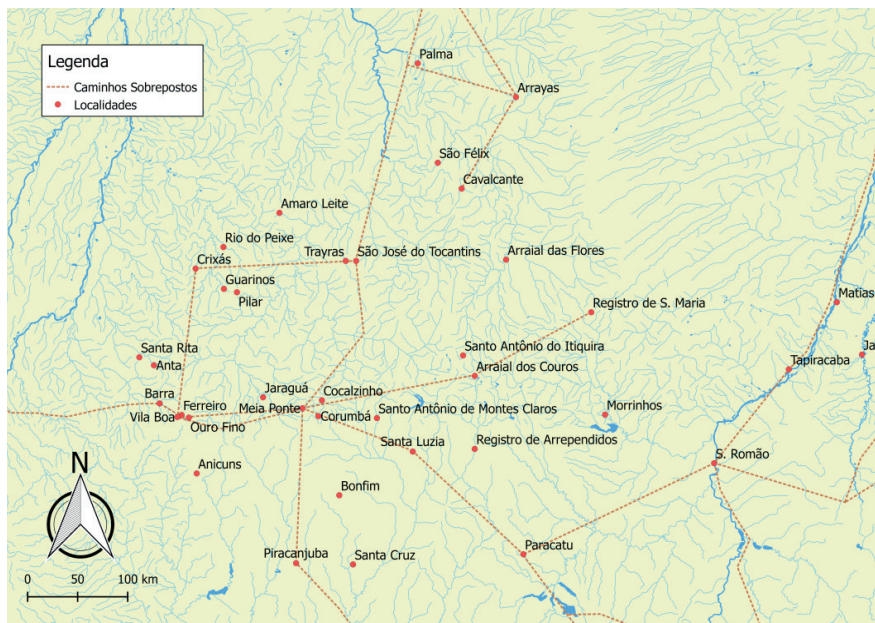
Map 10 - Overlapping of the identified paths in the three historical maps analyzed (writer's authorship)

Although the maps individually present clear limits to their colonial paths, circulation must be understood as a whole, depending on the given necessities of exploration. For this reason, these paths integrate in this synthesis-map in accordance to the connections observed in the *limits* of

the source. The immediate is, thus, extrapolated and unfolded without detaching from the cartography and its features.

It is verifiable that the *arraial* of Meia Ponte and the *Vila* of Paracatu offer an interconnection between the segments that link all maps. Both urban nuclei are recurrently acknowledged in colonial Brazil investigations for their strategic positions in accordance to the motion that was nourished by the mining activities and that continued throughout the next centuries, even after the decay of gold extraction. In regard to land paths, both nuclei were central and polarizing.¹²

Colonial localities were pinpointed according to their cartographical nomenclature and this focal view is presented in map 11:



Map 11 - Interconnection between the three maps and nominal cartographic references (writer's authorship)

Conclusion

This article presents, as a final product, a synthesis-map resulting from the three colonial cartographic sources that assists in understanding these colonial routes as an *incipient network of paths* that integrated the

territory of the 18th century. This spatial formation derived mostly from the gold extraction economy that deepened the colonial limits to west, but this enlargement continued even after the decrease of mining activities. Paths and their arrangements can help comprehend the reasons why the occupation of the hinterland did not succumb and return to the coast, maintaining itself in lands that were not attractive by the gold extraction perspective.

This research certainly does not end here for only three cartographic sources were manipulated and in a focused area of the colony. This analysis is expected to be amplified to other portions of the Brazilian territory, overlapping a bigger amount of maps, using the same cartographic digitalization process (vectorization techniques) and the subsequent graphic reproduction of paths.

Lastly, the synthesis-map was not intended to promote exact layouts of the paths that connected the captaincies of Mato Grosso, Goyaz and Minas Geraes, but possible approaches, stimulating a more plural awareness of gold circulation in the 1700s. There are also routes that weren't presented in the historical documents (as the route of the *Monções*, crucial for the western expansion of the colony). A cartographic product was elaborated using GIS and based on historical cartography and a geohistorical method that could bring together historiographic discussions, historical sources of information and a suitable geographical epistemology, providing a renewed discussion of the subject.¹³

Note

1 Master's student in Geography at the University of Brasília (supervision of professor Everaldo Batista da Costa e co-supervision of professor Adriano Andrade), component of GECIPA (Grupo de Pesquisas [CNPq] Cidades e Patrimonialização) and researcher in Historical Geography and Cartography at Atlas Digital da América Lusa (guidance of professor Tiago Luís Gil).

2 These quick notes on fixed arrangements and flows are better outlined in the geographical theory of space of Milton Santos. For further references, see: SANTOS, M, **Metamorfoses do espaço habitado: fundamentos teóricos e metodológicos da geografia**. 6. ed. São Paulo: EDUSP, 2008, p. 83–94.

3 MORAES, A. C. R., **Bases da formação territorial do Brasil: o território colonial brasileiro no "longo" século XVI**. São Paulo: Hucitec, 2000, p. 234.

4 QUEIROZ, P.R.C, "Caminhos e fronteiras": vias de transporte no extremo oeste do Brasil., *in*: **Transportes e formação regional: contribuições à história dos transportes no Brasil**. São Paulo: FEA-USP, 2011, p. 63.

- 5 STRAFORINI, R., *Tramas que brilham: sistema de circulação e a produção do território brasileiro no século XVIII*. Tese de Doutorado, Universidade Federal do Rio de Janeiro, Rio de Janeiro, 2007, p. 114–115.
- 6 For further references, see: GEIGER, P., **Evolução da rede urbana brasileira**. Rio de Janeiro: Instituto Nacional de Estudos Pedagógicos, 1963, p. 64–67.; COSTA, E., **A dialética da construção destrutiva na consagração do patrimônio mundial: o caso de Diamantina (MG)**. Dissertação de mestrado, Universidade de São Paulo, São Paulo, 2009, p. 92–93.
- 7 “*Map of the hinterlands located from sea to sea between the Captaincies of São Paulo, Goyazes, Mato-grosso and Pará*” (approximate translation by the author).
- 8 “*Map or urban layout of the Captaincy of Goyas*” (approximate translation by the author).
- 9 “*Map of the Captaincy of Minas Geraes requested by the honorable and distinguished sir D. Antônio de Noronha, governor and general captain of this Captaincy*” (approximate translation by the author).
- 10 BIBLIOTECA NACIONAL, *Mappa dos Sertões, que se comprehendem de Mar a Mar entre as Capitánias de S. Paulo, Goyazes, Cuyabá, Matogrosso, e Pará*. Available at: <http://objdigital.bn.br/objdigital2/acervo_digital/div_cartografia/mss1033414/mss1033414.jpg>. Accessed: june 10, 2016.
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- 12 BERTRAN, P., **Formação econômica de Goiás**. Goiânia: Ed. Oriente, 1978, p. 24–25.; BERTRAN, P., **História da Terra e do Homem no Planalto Central: eco-história do Distrito Federal**. Brasília: Universidade de Brasília, 2011, p. 211–216.
- 13 This research is the result of the ongoing Master’s studies, funded by Fundação Capes (valid until december 2017).

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Received for publication on 13 February 2017

Accepted for publication 18 April 2017