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The research and its objectives

The research that motivated this dissertation is part of the NEXUS 1492 project: New World Encounters In A Globalising World whose goal is “to investigate the impacts of colonial encounters in the Caribbean, [and] the nexus of the first interactions between the New and the Old World” (Hofman et al 2013: 1). Part of the research within the context of this project was carried out in the region of the first continuous contact between Spaniards and indigenous populations: the north of the island the local indigenous groups knew as Hayti, and which Columbus named Hispaniola, today shared by the Dominican Republic and the Republic of Haiti. Considering the history of the archaeological investigations on the north of the island, it was decided to focus the study on the coastal area of the province of Montecristi, in the Northwest of the present Dominican Republic. Likewise, the decision to explore this area responded to its location in the geographic context, the present province is located between the sectors where the first Spanish towns and fortresses were founded at the beginning of the process of conquest and colonization. These early European settlements were, to the west: the fort of La Navidad built with the materials of the wreck of Santa Maria in 1492, on the north coast of present-day Haiti as well as the town of Puerto Real, built during the Ovandino period in the vicinity of La Navidad in 1503; to the east was located the first European town in the island and the continent, founded in 1493 by Columbus as La Isabela; and finally, also to the east: La Ruta de Colón, a route that crosses the Cordillera Septentrional and part of the Cibao valley and connected La Isabela through a number of fortresses and villas, such as La Magdalena, La Esperanza, Santiago de los Caballeros, Concepción de la Vega with the fort Santo Tomás de Jánico on the banks of the Jánico river, built in 1494. Undoubtedly the people that inhabited the coast of the present province of Montecristi were affected by the development of this initial colonial context, and it was considered that in order to study the transformation of the indigenous landscape, a regional archaeological study was necessary to produce an image of the indigenous landscape. In addition, based on the use of the chronicles and the early cartographies made for both the research area and the northern region of the island, the indigenous landscape was compared to the Spanish one, to define the potential aspects where this transformation can be observed.

As part of the project’s objective of studying colonial encounters, the general goal of this research was to study the transformation of the indigenous to colonial landscape on the island of Hayti/La Española in the context of the conflicts that arose after 1492.
In order to pursue this aim, four secondary objectives were considered: 1) To study the distributions of archaeological sites and material culture from the pre-Columbian indigenous people that inhabited the coast of the present province of Montecristi. 2) To evaluate the relationships between environmental variables, archaeological site distribution and indigenous material culture in the study area. 3) To explore a sample of maps and the available early chronicles of Northern Hispaniola as evidence of the representation of the first Spanish ideas and constructions of their landscape and the “New World”. 4) To compare the indigenous patterns with the Spaniard ones in regional spatial terms to evaluate the transformation of the landscape.

- A series of research questions allowed the implementation of specific activities to operationalize these objectives. These were:
  - What is the distribution of indigenous archaeological sites on the coast of the Province of Montecristi?
  - What is the diversity of indigenous material culture on the coast of the Province of Montecristi?
  - To what extent are the distribution of sites and the specific types of indigenous material culture related?
  - To what extent are the distribution of indigenous material sites and culture related to environmental characteristics?
  - How did the first cartographies and chronicles represent the Spanish conceptions about the territory and the spatial distribution of the indigenous populations?
  - From the evidence, how can the transformation of the indigenous landscape to the colonial one be defined in the region of study?

Theoretical and methodological perspective

In order to answer the objectives and questions of the research, as well as to provide a theoretical model to develop the subject of the transformations of indigenous landscape from the pre-Columbian to colonial period, the research used two concepts: the notion of archaeological site and the concept of landscape. In the theoretical chapter the concepts of site and landscape are reviewed, from their origins to the current uses within the discipline. Theoretically, the thesis advances these concepts by defining two pragmatic solutions, this is two definitions that were develop from field evidences to explain the archaeological models, these are: sites as tendencies and contested tasksca- pes. As for the first concept, the proposal for this research takes the idea from Willey and Phillips (1958) to consider archaeological site as the basic unit of analysis, considering that a site is the set of materials and archaeological features in spatial and/or stratigraphic association (Hurst Thomas 1979; Binford 1982). Also maintaining the base idea that an archaeological site is not a self-definable category (Dunnel 1992), but rather the field registry has to be done on the basis of regional archaeological context of material culture distribution. Within this conceptual frame, the site can be considered as a tendency of human activities in the world (Foley 1981). Human actions leave a trace of their particular intentions and activities, which in addition to their spatial recurrence tend to be recurrent in time. Considering sites as tendencies of human actions
and tasks carried out in particular environmental contexts may allow the identification of what Ingold defined as taskscapes (Ingold 1993, 2017).

Since the research seeks to understand the transformation of landscape through the use of a spatial analysis perspective, for the second pragmatic solution, it was necessary to develop a concept that articulated these two requirements. The idea of the taskscape allows one to integrate the archaeological evidences (for example, the sites) to theoretical notions that are fundamental to evaluate cultural transformations of the movement, use and knowledge of the land by the indigenous people at the regional level. On the other hand, the contestation was based on the historical characteristics regarding the relations between indigenous people and the Spaniards. In addition, this helped to observe how the cultural conflicts materialize spatially in patterns of different areas in the north of the island.

In order to operationalize these theoretical ideas, the methodological chapter was divided into five sections. In the first section, a discussion is presented on the spatial and temporal scales of research. This section discusses the definition of the areas, regions and macro-region of work, as well as other relevant spatial and temporal elements. In the second section, the methods for the description and classification of spatial data are discussed, where the methodological perspective for the definition and classification of an archaeological site is presented, based on previous research as well as theoretical proposals. In the third section, the regional archaeological perspective of the investigation is explained and contextualized, and the three methods of field work are developed: systematic prospecting, opportunistic prospecting and predictive models. In the fourth section, the methods of documentation and processing the evidence are addressed, which relate to the recording and management of data from field work to the laboratory. This section includes the processing of field data, the recording of spatial data sets, and historical and cartographic evidence. In the fifth section, I discuss different methods statistical and spatial statistical analyses, such as: Multiple Correspondence Analysis, Principal Component Analysis, Logistic Regression, Point Process Models and Weighted Geographic Regression. The outcomes permitted observations of associations, combinations and spatial patterns between material culture, archaeological sites and environmental variables. From these associations a model was created to interpret the indigenous landscape and its transformation.

Main Results
The presented research has generated results at different spatial scales. The broadest scale comprises the distribution of archaeological sites and their relationship to material culture and environmental variables in the research area. From the different statistical analyses, two results were highlighted in the form of characteristic sites and ecological regions. Characteristic sites were composed of different analytical categories, such as habitation sites and resource exploitation sites, site size and the presence of artificial earth mounds. Depending on the quantitative results of the statistical analysis, characteristic sites can be divided into two groups: the first one is composed of 9 sites, whose associated material culture encompasses the variability of all material culture recorded in the study area for all archaeological sites. For example, the MC-77 and MC-101 exploitation of sea resources sites (ESR) contain a sample of mollusk species
that represents the variability of this type of evidence for the research area, and the same happens for the different types of material culture present in the habitation sites. The second group of characteristic sites contains 25 sites. In this case, these sites represent as a group the variability of the material culture of the research area, unlike the previous case that the variability is represented in each individual site. That is, these 25 sites contain a sample of materials that explains the material culture variability of the area’s 102 archaeological sites.

As for the ecological regions, these are clearly divided in two sectors, the northern one, and one comprising the western part of the research area. This category is the result of environmental variables that had a relation of significance between the total sample of environmental variables and the distribution of archaeological sites. The Ecological Region A, is composed of soils suitable for non-intensive agriculture (i.e. conuco), and the endemic areas of Hutia (Capromyidae) and Hispaniolan Solenodon (Solenodon paradoxus). Although in the north of the study polygon the largest number of sites were recorded, and the area is largely a coastal environment, the environmental variables related to marine aspects were not highlighted by the different statistical analyses. In fact, the result of the variables with associations resided in aspects related to agriculture and the hunting of mammals. In terms of material culture these activities can be confirmed, also on the basis of recent research in neighboring areas, as it is known that agricultural activities were carried out within the settlement itself, in the form of “garden” agriculture (Hofman et al., 2016; Ulloa Hung 2014). The Ecological Region B indicates activities related to the exploitation of marine resources, salt production and agriculture in limited areas but with good irrigation. The activities inferred from the combinations of the material culture reinforce the importance of these variables, since in this sector of the area the exploitation of sea resource sites (ESR) with the greater variability of shells of species of mollusks were registered.

A second result, on a larger spatial scale, was the definition of taskscapes, both for indigenous and Spanish patterns. The combination of characteristic sites with ecological regions allowed presenting an image of human actions on the ground; all together this image represents the different indigenous taskscapes in the study area. Given the conditions of the archaeological data used and processed in this research, the reconstructed taskscapes refer to a limited series of activities, but show how they are integrated from the material culture present in each site, the site distribution itself, to the relationship of these two cultural aspects with different environmental characteristics. The first scale was defined by a set of tasks that are, in addition, intimately interrelated, and found in both sectors of the research area. The general activities that can be summarized from the patterns of each sector are related to the exploitation of resources and the other to the general dwelling activities, which include tasks of production, work and use of objects and activities for agriculture, hunting and fishing. This first level of indigenous taskscapes has to do directly with daily activities, and probably with the decisions and actions at the scale of particular communities and their dwelling in the world. Another scale of indigenous taskscapes occurs at the research area level. On this scale it was possible to identify tasks that link the two sectors. For example, the presence of specific materials at particular sites in the two sectors (i.e. mollusk shells and lithic assemblages) indicates tasks related to specialized exploitation of resources and exchange and/or trade activities. This taskscapes suggests daily activities, but be-
between different communities and/or villages, and possibly between culturally different populations. This last conclusion is based on the different ceramic series combinations registered in the archaeological sites of both sectors.

Finally, a third scale of taskscape was presented when comparisons were made between different archaeological areas. In the first place, the tasks related to the habitation and exploitation of resources seem to be maintained at regional level, given the evidence of sites and materials of different types (ceramic, lytic, etc.). Secondly, the particular patterns of distribution of sites related to Meillacoid ceramics between the coastal areas of the province of Montecristi and Puerto Plata, as well as the characteristic distribution patterns of the Chicoides sites in the region, present a possible political taskscape. This taskscape may have been based on the relationships and interactions between communities and the “right” to inhabit certain areas.

The final result of the investigation occurred when comparing the indigenous patterns with the Spanish one. The main conclusion from this investigation is that the transformation of the indigenous landscape occurred in two analytical levels that, although related, can be considered separately. These levels have been conceptualized here as, everyday level and level of the imaginary. The first one explains the change that occurred in the indigenous populations in terms of the tasks, practices and movements that characterized the everyday indigenous activity before the arrival of the Spaniards, and which was (re)constructed throughout this dissertation using evidence from archeology and historical cartography. This aspect was developed through the discussion of contested taskscapes. The second level, that of the imaginary, has to do with the representation made by the first Spaniards of the indigenous world and how that model collaborated in the actual transformation of the indigenous landscape. For this part the results of the archaeological research presented here were used, as well as the references in the chronicles and early maps.

**Future Directions**

The results of this research open new ways to expand the knowledge of the archeology in the region and in the Caribbean. First, it would be important to carry out extensive excavations and/or test pits at the characteristic sites 1, in order to corroborate regional spatial patterns with evidence from stratigraphic contexts. This type of comparison between regional surface results and a sample of sites excavated from that database, could even serve as a test to determine the efficiency and accuracy of regional surface records in the island and the Caribbean. In addition, it would be advisable to extend the surveys to the interior of the province, that is to say in the valleys of Yaque river to corroborate, and to validate the models proposed for the coastal area with evidence of the sector inland of the province. In terms of the work with historical and cartographic evidence, the creation of a digital and georeferenced database for the early colonial mapping of the island will help in clarifying the Spanish and indigenous spatial patterns.