Foodscapes of bread in sixteenth-century New Spain using a historical gazetteer

Author names:

Ricardo Aguilar-González[1*], Godwin Yeboah[2]

Author affiliations:

[1]Department of History, University of Warwick, UK

[2]Information and Digital Group, University of Warwick, UK

[*]Correspondence: jose-ricardo.aguilar-gonzalez@warwick.ac.uk

This study focuses on the intersection between geographical features and the history of foodstuffs in the transition from pre-colonial to colonial spaces including advancing our understanding of colonialism and indigenous negotiation from the perspective of spaces of foods with an emphasis on breads. Foodscapes are man-modified environments to produce foodstuffs and to maintain conditions of access to water and salt. Foodscapes of breads require variation of soil, rivers and lakes, and an ongoing modification of the genetics of plants to meet human replenishment necessities. While breads have been studied as part of colonialism in the Americas, (Earle, 2012; Pilcher, 1998; Sahagún, 2012) we aim to situate this analysis in a spatial perspective, which also includes a brief discussion on the nature of breads.

This paper proposes an overarching definition of breads as high-starch cooked loaves and cakes made from domesticated grains, legumes and tubers. Breads, unlike readily accessible hand-picked vegetables or hunted-down animals, have to be transformed from dried grains, tubers, and legumes to portions to meet specific replenishment uses. Breads, being handmade foodstuffs are produced in matters, sizes, shapes, and colours that fit a social replenishment role. Loaves are intended for communality or feasting, while individual takeaway cakes are meant for labourers. Another consideration is that breads, specially grain-based breads, are highly sophisticated foodstuffs since annual production of viable high-yielding domesticated grains required the transformation of landscapes. Moreover, it has been the mechanical and chemical modification of grains through drying, pounding, grinding, fermentation and cooking which has allowed humans to obtain body replenishment and satiety from their landscape. Hence, we consider breads as the embodiment of landscapes.

The alchemy of bread making releases nutrients important to human diet, which unprocessed grains lack. Humans have transformed applied differentiated technological means to transform grains into breads, which are more readily nutritious, stable, and more palatable foodstuffs than the simple grain (*cf*. the Maillard effect in human taste (Coe, 1994)), different societies, Mediterranean and Mesoamerican included, have structured their labour and gender division around the production, distribution, making and ingesting of breads (Bauer, 2004; Camporesi, 1999; Martínez González, 2015; Rodríguez-Alegría, 2005; Scott, 2017). Breads of maize, mesquite, and tubers were cooked in pre-colonial Mexico and Guatemala, while Spaniards introduced barley and wheat breads. Colonialism, more precisely conquistador labour and enslavement enterprises to extract surplus on the one hand; and religious conversion on the other, aimed to change the bodies and souls of the indigenous peoples through foods and drinks (Earle, 2012; Legnani, 2020; Pilcher, 1998). Spanish officials and

entrepreneurs used the indigenous knowledge of the Mesoamerican landscapes, that is elevation, soils, and irrigation systems, and the introduction of draught animals to produce wheat, barley, and Mediterranean vegetables whose implications have been largely overlooked. We use the visualisation of the distribution of breads in sixteenth-century New Spain to analyse the relationship between the politics of bread and elevation.

We related the information about breads contained in the reports from 180 towns across the provinces of Mexico, Antequera-Oaxaca, Guatemala, Tlaxcala, and Yucatán. We obtained a primary classification of 11 breads based on two elements: the origin of grains, and the making. The result was a classification of three categories for Mediterranean breads and eight Mesoamerican. The mention of wheat and barley breads being made in towns relates to the incorporation of breads into indigenous diet. These Geographical Reports documented the production of Mediterranean grains, but these were frequently demanded as taxation, so indigenous communities did not engage with these primarily as foodstuffs, but as surplus. Second, we then create a layer of contour lines showing the three different Mesoamerican foodscapes based on the visualisation of elevation: 0-900; 900-1600; 1600-3500 meters above sea level. Using the DECM gazetteer, we visualise the production and ingestion of breads across the ancient foodscapes. Third, we relate the location of Mediterranean breads to determine the changes and continuities from pre-colonial to colonial foodscapes. Fourth, we test the extent in which a current world geocoding service can detect placenames in both the manually mined text data and DECM gazetteer.

Preliminary conclusions to this analysis are that Mediterranean wheat and barley breads did not replace the Mesoamerican breads. Maize, amaranth, mesquite, and tuber breads were in use across the sixteenth-century New Spain as basic staples, and as taxation. Although there was an attempt to introduce Mediterranean foodstuffs into the indigenous diets, the widespread absence of reported consumption shows that the change in diets, moreover the change in a highly significant foodstuff as bread, in the context of colonialism was unsuccessful.

Plateaux in Mexican Mesa Central and Petapa, and Nestiquipaque in Guatemala provided the most suited foodscapes for Mediterranean foodstuffs, and the adaptation of these foodscapes had enduring consequences for the peoples and politics of New Spain. Although more archival work would be desirable, this analysis shows that these plateaux were the focus of political contention between the indigenous communities and the Spanish officials. The possibility to create highly productive foodscapes in these plateaux put pressure on the indigenous peoples, who had to both use their croplands to produce Mediterranean foodstuffs, and to integrate wheat into their annual levies.

Limitations of this study are that terrain and elevation are considered as fixed realities in a timespan of 500 years. Geographical analysis of landscape should thus include altitude modification as a variable of historical GIS. Likewise, a more nuanced understanding of the biology of grains should be considered as to problematise whether early-modern crops were more difficult to grow (which is often assumed by agroindustry).

While we are wont to recognise and discuss the limitations of this study, we consider that the analysis of foodscapes, and the transdisciplinary approaches combining geography and history, provides a necessary discussion to the expanding historiography of foods and drinks.