WOMEN, WHEAT, AND WAFERS: THE NEGLECTED STORY OF THE HORNO OVEN IN NEW MEXICO

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Abstract

The iconic horno oven has been featured on innumerable postcards and stock photos of New Mexico, but no known attempt has been made to survey the varying styles and cultural uses of this once ubiquitous feature of traditional homesteads. This presentation will attempt to compile known history, current cultural uses (taking particular interest in the survival of hornos as customary tools of modern Pueblo food cultures), and the outlook for horno survival into the future.

Because of its need for continual maintenance, the adobe horno's permanence hinges on the degree to which there are people available with the skills to build and maintain it. Very few builders are left in northern New Mexico, either in the Pueblos or in traditional Spanish-speaking communities. It is likely there are less than five traditional horno builders practicing. Thus, the survival probability for any natural adobe hornos is low, highlighting concern not only for the survival of the craft of building them, but also the survival of the technique and culture of use.

This presentation will attempt to compile horno information from both historical accounts and from firsthand testimony of builders. Attention will be given to styles that vary by builder as well as to the highlighting of commonalities across styles. Weaving together an engaging history and surveying current distribution and culture of use should provide some missing exposure for this humble yet integral adobe tradition.

Keywords: Adobe, horno, New Mexico

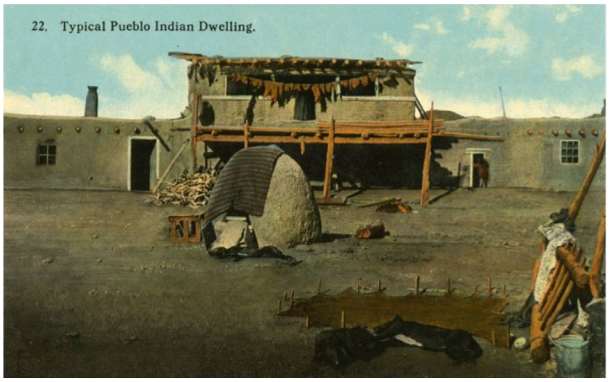

Figure 1. Postcard, 1920(?). Courtesy of the Palace of the Governors Photo Archives (NMHM/DCA), Negative No. 040796

Introduction: Who are hornos?

It's not hard to say what hornos are - they are dome-shaped ovens made from adobe, or stones set in adobe mortar, designed to bake leavened wheat bread using radiant heat. They are part of a larger adobe architectural system that has been adapted over the centuries to permit comfortable village life in the arid southwestern part of North America. Very little other information about hornos exists in popular literature, except the belief that the design came to the Spanish from North Africa, via the Moorish occupation of Spain.

The paradox of the horno oven is that it is so widely known as a visual component of the New Mexico architectural aesthetic, and yet so poorly documented in the Western historical record. The horno is illegible - invisible even - to science, to academia, and to mainstream American culture. Nothing serious has been written specifically about hornos, as if studying them would reveal little about the region. Their close association with the realm of women's work, and specifically that of Indigenous women, means that European colonizers, even though they imported the design, have had little to say about the horno over the last five centuries. The horno, like female Indigeneity, is only present as an aesthetic motif in the Western narrative, as a symbol of exotic domesticity.

This paper seeks to explore the connection between the proliferation of wheat in North America, the adoption of the horno oven in post-colonial New Mexico, and the role of Indigenous women in the design, construction, maintenance, and use of horno ovens. I am guided by the question, Who are hornos? This question probes at the cultural history of these ovens, for they are more than objects: they are markers that indicate people making choices over time about cuisine, land use, political relations, and survival.

The first wheat, the first hornos

The conquistador Juan de Oñate led the first Spanish colonial expedition into New Mexico from the south, and established the territorial capital at Ohkay Owingeh pueblo, located at the confluence of the Chama and Rio Grande rivers. Popular accounts often gild this process with unlikely tranquility: "The Puebloans agreed to make the Yunque pueblo, located… [across the Rio Grande from Ohkay Owingeh], available as a compound for the Spanish, and its residents were evacuated to Ohkay." ("San Gabriel de Yungue-Ouinge", n.d.)

Such breezy narratives omit some crucial historical realities, namely that the expedition fared poorly, experienced a high degree of dissent among the colonists, and most likely would have failed if not for their plundering of the Pueblos they encountered enroute. As Barrett (2012) notes, "The Spaniards, having exhausted their stores of grain even before they reached New Mexico, mainly lived off the dwindling number of livestock they brought with them and food supplies requisitioned from the pueblos, often by force." The colonists also "were not farmers, and initially they made little effort to grow crops, despite the irrigation ditch that [Oñate] ordered constructed for them.(65)"

In spite of this atmosphere of dissent and the colonists' disinclination to cooperative production, it seems that the Yunque Owingeh settlement - promptly renamed San Gabriel - did produce wheat during its twelve years of existence, evidenced by several horno ovens found during excavations of the site in the 1960s ("San Gabriel de Yungue-Ouinge", n.d.). The Spanish colonists were thus able to replicate some of the aspects of their preferred European diet, including the production of wheat, despite the fact that "Spanish crops required considerably more care and effort than indigenous crops," and "European-introduced grains required plowing, sowing, harvesting, threshing, winnowing, and hand sorting, and in New Mexico, wheat and barley could be grown only under irrigation." (Trigg 2004)

Why were colonists so eager to replicate Spanish agriculture and cuisine? First, at the time, "humoral theory" formed the basis of beliefs about bodily health - contemporaries of the Spanish conquistadores thought that diet was responsible for a person's appearance, constitution, and characteristics. The Spanish believed that due to the inadequate Indigenous diet that "the Indians had lost their Old World temperament. The result was the disappearance of their beards (Earle 2010)." Unsurprisingly, diet was thought to cause race: "Spaniards needed to eat nourishing Old World foods if they were to retain their health and their Spanish complexion (Earle 2010,702)." And it was wheat bread that "... occupied a significant place within humoral medicine, as it was generally held to be the most nutritious food (Earle 2010)."

Second, the Catholic Church promoted wheat as a civilizing food: "From the Middle Ages, Catholic doctrine required that communion be celebrated using only wheat bread and grape wine (Earle 2010)." As Trigg (2004) notes, "Wheat was desired not only for its food value, but because it was a religious necessity as the main ingredient in Communion wafers."

Third, Spanish colonists carried an anxiety about Indigenous New World foods, and "individual explorers and settlers insisted—often in the face of considerable contrary evidence—that they sickened when deprived of their familiar diet (Earle 2010)." Maize, which Europeans had never eaten, was initially thought to be a dangerous staple, causing sickness (705). Earle concludes that the European concept of humoral health also gave conquistadores an explanation for the differences between themselves and the Indigenous people they encountered. Thus diet became a way to not just explain difference, but to demarcate superiority and inferiority (Earle 2010). "Wheat bread and other European foods provided cultural markers for the colonists in the face *ofmestizaje* (miscegenation) and the vast numerical superiority of indigenous peoples (Trigg 2004)."

For these cultural reasons, Spanish authorities in New Mexico insisted on the production of wheat, even though cultivation was more labor intensive than maize, and "temperate maize and potato yield over 30% more calories per hectare than wheat (Hancock 2022, 143). Still, wheat never eclipsed the adopted maize as a staple for Spanish colonists, and Trigg notes that the archaeological record shows that hornos were rare in 17th century New Mexico. "Maize is common, but access to wheat, which was socially important to Spaniards, seems to vary from ranch to ranch (Trigg 2020, 21)." Thus, while wheat was an important marker of European identity, its dietary importance was secondary to that of the adopted maize.

Pueblo adoption of wheat and horno ovens

The contemporary Pueblo consumption of wheat bread baked in hornos, particularly during syncretistic feast day celebrations, seems at first glance hard to square with the history of Spanish colonial oppression, including the imposition of wheat. During my research, I often wondered why Pueblos adopted wheat. There may be no one answer, for the reasons may vary from Pueblo to Pueblo, from individual to individual.

This adoption was not immediate or enthusiastic, even though Indigenous people observed and participated in the cultivation and use of wheat from 1598 onwards. Trigg (2020) states that wheat was not a "common component of Pueblo diets of the time (21)", and that "the wholesale incorporation of Spanish-introduced wheat, at least at Zuni, appears to be a nineteenth-century manifestation (ibid)." Other Pueblos having a closer relationship to the Church may have incorporated wheat sooner, but "The nature and timing of acceptance of novel traits probably depended on a number of factors: the presence or absence of Franciscan missions, the proximity to Spanish settlements, and the cultural dynamics within each Pueblo village (ibid)."

Women, hornos, and invisibility

Trigg explores the dynamics of cross-cultural exchange occurring in the households and kitchens of Spanish estancias during the 17th century, where Indigenous, Spanish, African, and European women would have shared labor, under varying arrangements including peonage and slavery. Out of this

Figure 2. Carter H. Harrison. Unidentified woman, Santa Clara Pueblo, New Mexico, 1905-1919(?). Courtesy of the Palace of the Governors Photo Archives (NMHM/DCA), Negative No. 042728

environment of exchange grew ideas and technologies that Trigg calls 'hybrid practices'. Key to the hybrid outcomes from this environment is the element of unequal power. Trigg defines hybridity as "the mixing of practices from distinct cultural groups under circumstances of power (Trigg 2020, 5)."

Two thirds of the Spanish colonial population in New Mexico lived on rural ranches during the 17th century (Trigg 2020, 7), and this is also where the majority of hornos in New Mexico would have been used. Because of the value of their labor to the survival of the colony, servants and slaves on these ranches may have had a degree of freedom to introduce new practices or hybridize existing ones. Trigg writes that this status "afforded the opportunity for the practices of Spanish, Pueblo, and perhaps Plains peoples to be negotiated in the context and daily functioning of these Spanish households (*ibid*)." Trigg also notes that while high-status work associated with men retained the European culture of the colonizers, low-status work associated with women, such as cooking, retained Indigenous influences, as evidenced through the archaeological record (Trigg 2004). This suggests an environment of strong cross-cultural exchange.

It is reasonable to assume that the design and use of the horno evolved in this environment, and that a working knowledge of wheat and hornos proliferated throughout the region, including onto Pueblos, even though, as previously noted, this knowledge may not have been applied there until the 19th century. Roxanne Swentzell says of this environment of cultural exchange that "There is also a very strong characteristic of the pueblo people of curiosity. I believe the people (Pueblos) were curious about these strange people with their metal and different foods and animals. They quickly took in the fruit trees and brightly colored scarfs as they did the hornos (Swentzell 2024)." Trigg's 'hybridization' would depend not just on the imposition of ideas by the colonizers, but also on the gestation and active adoption of certain of those ideas by the colonized. In other words, successful colonial domination by the Spaniards depended on the adaptation and survival of the Pueblos - it depended, to some extent, upon their agency.

Peering into the domestic environment of 17th century Spanish estancias is difficult, because primary documents from that period focus on military events, governmental affairs, and the activities of male landowners. Little academic writing exists to shed light on the role of women in household services. Looking away to the present can provide clues to the early years of horno use. Anita Rodriguez, an

enjarradora (female plasterer) and horno builder in Taos relates the obscurity of horno history to the invisibility of women:

> *"The invisibility of women, Hispanic women in particular, is one of the reasons why the history of the horno and all the processes of the enjarradora, including the grossly mis-named "kiva" fireplace, have been erased from history. Women are the universal, original hearth-builders. A function so indispensable and ubiquitous that it is invisible - the transmission of not only the horno but other adobe techniques was not documented." (Rodriguez 2024)*

As mentioned previously, the excavation of Yunque Owingeh, the first Spanish New Mexican settlement, revealed the presence of several hornos. And as noted previously, the knowledge of horno design and purpose is often said to have originated in North Africa, and traveled with the Spanish to the New World. Even if true, this doesn't mean that male Spanish colonists built the first hornos in New Mexico, especially given their aforementioned aversion to hard labor. Accompanying Oñate were other people who also would have been intimately exposed to hornos in their lives: "...female servants… sometimes identified as Tlaxcalans, but… more likely Mexicas from central Mexico," and "a few individuals identified as Africans (Trigg 2020, 5-6)." Whether or not the male Spanish colonists had the knowledge and desire to personally build the colony's first hornos, it is almost certain that these women had the skill to do so, as well as the imperative *vis a vis* their forced or coerced labor. I propose the theory that regardless of the path by which the concept of the horno reached New Mexico, the first hornos here were built by American Indigenous and African women, using knowledge that they themselves had acquired in their own lives.

Conclusion

The complex role of horno ovens in the dietary evolution of the inhabitants of New Mexico has been wrongfully overlooked, in part due to the horno's conceptual location in the often-overlooked work environment of Indigenous women. Its importance should continue to be investigated and interpreted, especially in the field of Native American Studies.

The future enrichment in understanding of the horno will unfortunately coincide with a diminishment in the knowledge of the construction and use of hornos. Very few builders remain in New Mexico, as those with this practical knowledge are aging beyond their ability. So far, I know of only a handful of other builders, and there are many hundreds of hornos in need of repair or rebuilding. Therefore, the future of hornos as a practical tool and symbolic entity seems destined as a return to the soil.

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