HOME IS WHERE THE HEARTH IS:
DOMESTIC & PALATIAL ARCHITECTURE IN AZTEC CALIXTLAHUACA

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Introduction

> "And some of our soldiers even asked whether the things [in Tenochtitlán] that we saw were not a dream? (...) I do not know how to describe it, seeing things as we did that had never been heard of or seen before, not even dreamed about."

Bernal Díaz del Castillo describes in his *The Conquest of New Spain* a sense of wonder upon viewing Tenochtitlán's miraculous pyramids rising from floating gardens and all the wealth within that wowed European audiences and filled the imagination. For many it would remain only in the imagination: the wars between Hernando Cortés and the Mexica took their toll on Tenochtitlán, eventually leaving the majestic city in ruins with only stories of its spectacular heyday. While the ruins of the Templo Mayor and the Cerro de las Estrellas have dominated cultural memory and fascinated the world over for centuries, Tenochtitlán was home to the average as well as amazing. However, investigations of domestic architecture—both domestic palatial architecture as well as commoner domestic architecture—is fraught with difficulties.

As the Viceroyalty of New Spain's capital was subsequently built on top of its ruins, it leaves little intact archaeological sites in the Mexica capital for scholars to inquire about. Instead, studies of architecture constructed under the Aztec regime in Aztec territory are confined to explorations of sites outside the Mexica island-heartland in Lake Texcoco, in the wider territory of the Basin of Mexico and its surrounding areas.[1]

The city of Calixtlahuaca can, perhaps, serve as a microcosm of domestic architecture forms of the Aztec Empire. Calixtlahuaca is a Middle-Late Postclassical site dating from between 1100-1530 CE and is unusually large: over 264 hectares, it takes over two hilltops

[1] Smith, ME, A. Borejsza, A. Huster, CD Frederick, IR Lopez, and C. Heath-Smith. "Aztec Period Houses and Terraces at Calixtlahuaca: The Changing Morphology of a Mesoamerican Hilltop Urban Center." *Journal of Field Archaeology* 38, no. 3 (2013): 227.

(Cerro Tenismo and Cerro San Marcos) and the plains between, with a population of 5,000 at its height.[2] It is divided from the Basin of Mexico to the east by a curtain of mountains that form the Toluca Valley. Before Aztec conquest in 1476 CE,[3] the Toluca Valley was under the dominion of a city-state known as "Matlatzinco" that ruled over the valley and its constituents, made up of a diverse collection of Nahuatl, Matlatzinca, Otomi, and Mazahua speakers. Matlatzinco is now the archaeological site known as Calixtlahuaca; the site itself is located underneath the village of San Francisco Calixtlahuaca.[4] After subordination under the Aztecs, Matlatzinco (Calixtlahuaca)'s power was summarily reduced by the Aztec appointment of Tollocan (now Toluca) as the province capital.[5] Furthermore, groups of immigrants were sent into Toluca Valley while other native residents were relocated within the empire to decrease dissent.[6]

Thus Calixtlahuaca carries with it a distinct history of naturally diverse ethnic groups and willful reshuffling of the population after an already tumultuous conquest. In examining Calixtlahuaca's architecture, pre- and post-conquest chronology must be taken into account, as well as a consideration of how (if at all) architectural forms differed. A comparison between the royal palace and various domestic houses of Calixtlahuaca under Aztec rule must be textured with an understanding that the native occupants who were not ethnically Mexica themselves.

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[2] Smith, Michael Ernest. *Aztec City-state Capitals*. Gainesville: University Press of Florida, 2008: 152. Density of 50. Pg. 152 for comparison of Aztec city population range; besides Tenochtitlán, whose population was the largest, the second-largest Aztec cities were in the range of 10-25,000, with the lower end of population being roughly 500-1000 to still qualify as "city." This puts Calixtlahuaca as a mid-range city.

[3] Smith, *Capitals,* 52. Aztec conquest was carried out under Axayacatl.

[4] Smith, "Morphology," 227. Calixtlahuaca was first excavated in 1936 by José García Payón, but much of this excavation went unpublished and his notes were mostly lost, so this essay relies primarily on more modern sources and excavations.

[5] Smith, *Capitals,* 52. "[T]he city was stripped of its dynasty [after Mexica conquest]. The city of Tollocan (Toluca) was selected as the Triple Alliance provincial capital and Calixtlahuaca was demoted to a tribute-paying town under Tollocan."

[6] Smith, "Morphology," 228.

Calixtlahuaca's domestic architecture has a unique place within the larger context of the imperial Aztec architectural order: its urban domestic buildings, both commoner and palatial, rigorously adhere to the pan-Basin Aztec architectural technique of duplicating the individual base form of a building type to increase the size of that same building type and increase its complexity. However, Calixtlahuaca's urban plan is a radical departure from the new urban planning innovations at Tenochtitlán influenced by Teotihuacan, instead preferring the traditional urban planning influenced by the Tula, reflecting the differences in urban planning styles but similarities of domestic building techniques between the center of Aztec power and the peripheral towns.

Chronology

Calixtlahuaca was firmly established as a solely Middle Postclassic site. There is not any evidence recovered for any occupation prior to the Middle Postclassic era.[7] The Arizona State University Calixtlahuaca Archaeological Project carried out a definitive analysis of sites around Calixtlahuaca; particularly a stratigraphic analysis of middens.[8] The team, which also carried out similar analyses at sites in Morelos and Yautepec, identified three ceramic phases: Dongu (Middle Postclassic), Ninupi (early Late Postclassic), and Yata (late Late Postclassic).[9] Calixtlahuaca under the Aztecs stretched between Ninupi and Yata, particularly the Yata, which contains shards of imported Aztec black-on-orange bowls, *comales,* and Texcoco censars and

[7] Smith, "Morphology," 227. Formative and Classic period vessels and figurines have been found in middens in Calixtlahuaca, but all of which Smith attributes to the collection of older artifacts from previous sites.
[8] Smith, "Morphology," 230.
[9] Smith, "Morphology," 231. The Yata period briefly continued into the Colonial period; San Francisco Calixtlahuaca was established decades after Spanish conquest, with "little to no spatial continuity with the Yata phase occupation" (Smith 231).

salt vessels.[10] This will be the dating system used when referring to relative dates of the structures and terraces of Calixtlahuaca.

Agriculture & Domestic Architecture

The terraces that predominate on Cerro Tenismo today, used in modern farming practices, are the same terraces date back to the Postclassic period.[11] Their relatively intact form, especially that the terraces are still in use and not completely reconstructed during the modern era, indicates that the ancient terraces' forms and functions were being kept continually since the conquest.[12] Parsing the minute modern modifications and the gradual merging of terrace treads of the centuries is not an easy task, and ultimately a useless one. The sheer presence of the terraces ringing the hill--the most sophisticated of which are near the sites of the monumental architecture--speak to the fact that agricultural terracing was not simply part of the landscape, but part of the architecture as well: all of the houses are situated within or on these terraces.[13] Most of the terraces are bench terraces, built with risers of stones set with mud mortar; ditches, too, were at the back of the tread not to serve as irrigation but instead to divert excess water that could cause potential floods, with either maguey plants or stones used for retaining walls.[14] Two of such drains (which Smith refers to as "master drains") remarkably enough transverse the entire site, all around Cerro Tenismo, and were originally paved and served as steps when it was

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[10] Smith, "Morphology," 238. The pottery is identified as Aztec III. *Comales* are a distinctive, shallow bowl used to toast tortillas.
[11] Smith, "Morphology," 239.
[12] Smith, "Morphology," 232. "Terraces are inherently unstable landforms, and in those parts of the highlands where their maintenance was discontinued in the Colonial, they have in most cases completely disintegrated. Therefore, the relatively good state of preservation at the Calixtlahuaca is in itself an indication that they have been managed and modified to a significant degree since the Postclassic."
[13] Smith, "Morphology," 236-9
[14] Smith, "Morphology," 232.

not raining.[15] In fact, Calixtlahuaca's temple, the Panteón, interrupts one of these drains, sitting atop its flow, indicating the relative antiquity of the drains in comparison to the monumental architecture.[16]

With such invisible architecture so carefully cultivated, kept, and even paved, so inured to the ground that central religious sites are comparatively young implies that the agricultural architecture of Calixtlahuaca shaped the domestic architecture as much as its inhabitants shaped the land. All of the non-elite houses from Calixtlahuaca were found on the terraces and each of them had several construction phases, indicating three matters: (1) the houses were connected to the terraces, (2) the inhabitants of the houses were the farmers of the terraces, and (3) the houses were continually inhabited and maintained through generations.

The houses excavated in Calixtlahuaca are emblematic of the entire typology of commoner domestic architecture across the Basin of Mexico: patio-compounds. The basic form of the patio-compound is not only used throughout all of the Basin, including Tenochtitlán, but the reduplication technique of maintaining a singular form but duplicating that same form to increase the size of the larger building is the basis of all Aztec domestic architecture, including the magnificent palaces across the empire. A close examination of the houses excavated at Calixtlahuaca will reveal in detail the construction and techniques needed to understand the larger order of Aztec domestic architecture, both commoner and palatial.

Reduplication: Domestic Architecture from Commoner to Elite

Unit 307 of Calixtlahuaca included an excavation of a Dongu-phase house situated between the palace and the circular temple and continually inhabited throughout the Postclassic

[15] Smith, "Morphology," 231.
[16] Ibid.

period.[17] The remains of a terrace wall were found only five meters from the house; the walls of the house itself included the upsloping wall which extended several meters east beyond the north-south wall, indicating that it could perhaps not only be simply the eastern wall, but perhaps even an interior dividing wall.[18] Notably, while the floor of the house is presumed to be an earthen floor, several large square pavements were found, paving an exterior sort of patio. This indicates that the outdoor space—connecting the house with its residence on the terrace—was in equally as much use as the interior of the house. Unit 316 and 309 were also noted to have exterior pavements, but interior earthen floors.[19] The stone work was noted to have been "carefully constructed using large stones with flattened upper surfaces;" additionally, Unit 309's stone walls included geometric designs and glyphs.[20] All three of these houses had the same flooring as well as exterior stone walls, while a house of Unit 315 which was located directly downslope from Unit 316 had a direct reversal: wattle-and-daub walls, but a heated clay floor.[21] Additionally, out of multiple structures surrounding a central patio for Unit 317, one structure surrounding or on the main pavement was of wattle-and-daub make.[22] This presents two types of exterior commoner architecture: wattle-and-daub and stone.

In terms of structure, both types of houses, whether wattle-and-daub or stone, followed a similar pattern: quadrilateral, inward-facing, and with a patio. Several houses had multiple structures surrounding the patio, such as Unit 309 and 317. Notably, the houses that had majority stone construction with only additional wattle-and-daub auxiliary structures had at least a second

[17] Smith, "Morphology," 235.
[18] Ibid.
[19] Ibid 237.
[20] Ibid 239.
[21] Ibid.
[22] Ibid, 239.

if not series of construction phases, the latest was during the Yata period, during which Calixtlahuaca was under Aztec domination.

The type of structure outlined above—quadrilateral, inward-facing, with a patio—appears to be ubiquitous within the Basin of Mexico for domestic architecture, no matter the urban or rural nature of the site.[23] Variation in size is only a reduplication of the previously established form of architecture. The original form is completely unchanged in size, but instead duplicated and attached together to increase the total size of the building in question. For example, the simplest houses observed at Yautepec (an urban site) and Cuexcomate (a rural site) were two enclosed square spaces.[24] At Yautepec, these two blocks shared a dividing wall; at Cuexcomate they were placed closely to one another, both sites again related to patio.[25] At Cihuatepan (rural), where a larger house was found, the house itself was essentially double the Yautepec example: four square rooms (instead of two) adjoined with a shared wall, along with a smaller, fifth room added as an addition and attached patio.[26] Instead of changing the form and enlarging two base rooms, the Cihuatepan duplicates the two smaller blocks, retaining their original form, to make the larger four-room house.[27] At Mexicaltzinco (urban, near Tenochtitlán), the basic form is again reduplicated for a larger space; however, the Mexicaltzinco site has a larger, interior, semi-enclosed patio with a smaller block of rooms attached, sharing dividing walls.[28]

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[23] This statement must be tempered with the fact that comparatively little excavations have been done on non-elite domestic architecture, done only at the sites of Cihuatecpan, Otumba, Mexicaltzinco, Yautepec, Cuexcomate, and Calixtlahuaca. Smith, 163.
[24] Smith, *Capital,* 164.
[25] Ibid.
[26] Ibid.
[27] Ibid.
[28] Ibid.

The only difference in form that can be observed is that on the urban sites of Yautepec and Mexicaltzinco, the structures that face their patio share adjoining walls. This concurs with colonial descriptions of Tenochtitlán, where patio groupings were more densely clustered together and all the rooms sharing diving walls even when grouped around a patio, which Smith alleges that "Tenochtitlan houses seem to have been designed to save space, an important consideration in the very densely settled island-city."[29] While there is no doubt that space-saving is always a paramount concern of dense cities, in Cihuatepan, a rural site, the structures are similarly grouped with shared dividing walls. This suggests that patio-compounds are not exclusive to urban sites.

Each house, large or small, urban or rural, had a stone foundations and floors that were either sand-covered stone or lime plaster.[30] The walls were built most commonly with adobe. There is no surviving record for the material of roofs.[31]

Calixtlahuaca's domestic commoner sites follow an architectural order established all across the Basin that situate enclosed quadrilateral structures around a patio. Every domestic site excavated in Calixtlahuaca follows the exact pattern mapped out across the Basin of Mexico, with at least one square room and patio. Units such as 317 and 309 which included more than one structure followed the reduplication effect outlined above: the growth of the patio-compound did not alter in form when it grew in size, but instead duplicated its form to grow in size, adding on more rooms and auxiliary attachments around the patio.

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[29] Smith, *Capital,* 166.
[30] Ibid.
[31] Ibid.

This same technique of reduplication that made modest, middle-class commoner houses allowed fantastical palaces to grow to enormous scales. Michael E. Smith in *Aztec City-State Capitals* defines the basic plan of palaces with four attributes.

> "(1) rooms were arranged around a central rectangular courtyard, (2) rooms were elevated above the level of the courtyard (and above ground level) on platforms, (3) the courtyard had a single entrance to the outside, and (4) a special platform was located opposite from the entrance." (Smith 115)

Palaces also included fine decorations, expensive building materials, and an expansive scale to support the palace's function as an administrative as well as domestic center.[32] The emphasis Smith puts on the existence of raised platforms, however, is indicative of how similar the fundamentals of palatial architecture were to commoner architecture. The palaces of Calixtlahuaca and Yautepec are roughly the same size in scale as Motecuhzoma Ilhuicamina's palace in Tenochtitlán.[33] Despite that, the scale of the rooms in Calixtlahuaca that surround the massive patio are roughly the same scale as the rooms of commoner architecture: at the maximum, ten meters in length.[34] The scale of the palace of Calixtlahuaca is determined by the reduplication of multiple smaller blocks—the same blocks that form the patio-compounds—while not altering their form, size, or shape to increase the overall scale of the building to palatial-level proportions. This technique is not solely used in Calixtlahuaca: it is the same technique that built the palaces at Yautepec and Tenochtitlán, and is reflective of the Calixtlahuaca's larger adherence to the domestic architectural order of the Aztecs that pervaded the entire Basin.[35] Reduplication used as a principal technique within the order of Aztec building

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[32] Smith, *Capital,* 115.
[33] Smith, *Capital,* 117. Area in meters squared: Motechuzoma, 7,950; Yautepec 6,200; Calixtlahuaca, 6,800.
[34] Smith, *Capital,* 116-164. Comparison in scale of Figures 6.3 (Smith 164) and 4.9 (Smith 116).
[35] Smith, *Capital,* 117.

construction allowed buildings to remain centered upon the patio, a key part of self-conception within family groups. The prevalence of this building technique used from urban to rural and commoner to elite showcases a wider commonality between all domestic architecture throughout the entire Aztec Empire, from heartland to hinterland.

Aztec Urban Planning: Teotihuacan to Tula

While the domestic architecture of the Aztec Empire is congruous across the Basin, the cities that these houses rested within are not. Aztec urban planning drew from rich background of ancient Mesoamerican planning principles, Teotihuacan, Tula, and Aztec innovations, the wider Basin breaks from Tenochtitlán with regards to which types of plans the city utilized.[36] Calixtlahuaca and the other peripheral Basin cities retained much more traditional Tula

City Planning: Aztec City Planning. Table 1 Historical sources of planning principles employed in Aztec cities

Principles of Urban Planning	Aztec Towns	Tenochtitlan
Ancient Mesoamerican Planning Principles:		
1. Inventory of public architecture	x	x
2. Urban epicenter	x	x
3. Central public plaza	x	
4. Astronomical orientations	x	x
5. Unplanned residential zones	x	
Teotihuacan Innovations:		
6. Huge size of the city		x
7. Massive scale of main temples		x
8. Orthogonal planning of entire city		x
9. Layout dominated by central avenue		
10. Lack of central public plaza		x
11. Standardized housing		x?
Tula Innovations:		
12. Formalization of the epicenter	x	x
13. The largest temple on the east side	x	x
14. Circular Quetzalcoatl temples	x	x
Aztec Innovations:		
15. Twin-temple pyramids	x	x
16. Multiple small altars	x	x
17. Walled ceremonial precinct		x

[36] Smith, Michael E. "City Planning: Aztec City Planning," Edited by Helaine Selin, *Encyclopaedia of the History of Science, Technology, and Medicine in Non-Western Cultures* 1 (2004): 557.

techniques, while Tenochtitlán built the Aztec imperial capital on a grand scale and radically different urban plan.

Smith categorizes different aspects of Aztec urban planning by their larger architectural heritage (Figure 1).[37] Notably, Calixtlahuaca has every feature of listed under the subsection "Tula Innovations." This includes a formal epicenter (atop Cerro Tenismo, with the Pantéon and palace), the largest temple to the east side (a single-temple pyramid), and a circular Quetzalcoatl temple (specifically for Quetzalcoatl's avatar, the wind god Ehecatl).[38] Not only does Calixtlahuaca lack all of the categories listed under the subsection "Teotihuacan Innovations" (notably, Tenochtitlán includes all of the above in the aforementioned subsection), Calixtlahuaca also lacks any of the "Aztec Innovations:" twin-temple pyramids, multiple small altars, and a walled ceremonial precinct.

New building and construction projects continued Calixtlahuaca after Aztec domination. Despite the fact that domestic architecture conformed stringently to the previously established Aztec order, Calixtlahuaca does not bear any similar urban planning techniques. Instead, Calixtlahuaca's urban plan is dominated by the previously discussed terraces, which serve both as neighborhood organization (as patio-compounds are confined to their specific terrace) and public streets (as the terraces were paved and served as steps up and down Cerro Tenismo). Calixtlahuaca completely lacks a central avenue or orthogonal plan. The great difference cannot be accurately correlated to lack of exposure to Tenochtitlán. Calixtlahuaca was not only under Aztec dominion, but had also had an influx of native Mexica after its conquest. Yet it still

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[37] Figure 1. Smith, "City-Planning," 577. "Historical sources of planning principles employed in Aztec cities." The table differentiates the commonly used planning principles in Tenochtitlán as opposed to Aztec cities either built under the Mexica or under Mexica domination.
[38] Figure 4.2, Smith, *Capitals,* 98.

retained its original plan, sculpted by terraces, and made no move to insert Aztec innovations into place. Despite the imperial standard exemplified in Tenochtitlán, the surrounding Basin cities as a majority did not adopt the new techniques and conform to Aztec imperial influence because the Tenochtitlán urban plan required the population, density, and prior planning of Tenochtitlán.

The Teotihuacan innovations that the Aztecs adopted better served a monumental city like Tenochtitlán than it Calixtlahuaca. Tenochtitlán was a "monumental city" in two senses: firstly, its population, which was far greater than any of the other Basin cities. Secondly, Tenochtitlán's scale was built to magnify and glorify the imperial city. The orthogonal plan, the main avenue, and massive scale of temples all solved this two-fold problem. It solved the matter of accommodating the size of the city, and it also differentiated Tenochtitlán as capital by its scale, which no neighboring city could compete with. But these elements of the urban plan, as well as the standardized housing and walled ceremonial precinct (other elements Aztec cities lack) could only be accomplished with a pre-planned city like Tenochtitlán that artificially constructed its own island as a base for the city. Cities like Calixtlahuaca which grew organically did not naturally grow in straight lines.

The differences in urban plan between Calixtlahuaca and Tenochtitlán highlight the relationship between the imperial city center and the tribute-paying periphery. Calixtlahuaca and the rest of the Basin of Mexico maintained uniform domestic structures, both commoner and palatial, a consistency in typology that would not have been possible without the technique of reduplication. This homogeneity spoke to a continuous relationship and connection between all the Basin abodes that was facilitated directly by the empire. However, Tenochtitlán maintains a

unique plan and several radical departures from the Postclassic cities under its domain like Calixtlahuaca, demonstrating Tenochtitlán's superiority in both scale, size, and splendour.

Conclusion

The examination of Calixtlahuaca's domestic architecture, both commoner and palatial, compared to other Aztec city sites, both urban and rural, begin to reveal the connections and continuity between Tenochtitlán and all the cities in the Basin. The strict order of domestic architecture that Calixtlahuaca and the rest of the empire followed, rarely modified, sheds light on the "look" that was maintained throughout the empire: an architectural order used from the top-down that demanded congruity wherever possible, in urban, rural, palatial, and common settings. The use of reduplication discussed in this essay as the technique by which form was unmodified but duplicated to increase size, was an intrinsic part of the Aztec domestic architectural order that is only beginning to be fleshed out. However, the difference between the center and periphery remains stark. Tenochtitlán's highly different, almost exclusive, urban planning, allowed for its true monumentality to shine through, denying the tribute-paying states like Calixtlahuaca an avenue to ever architecturally outdo Tenochtitlán. Calixtlahuaca has shown itself to have an unexpected wealth of information about commoner and palatial domestic architecture as well as connections with Tenochtitlán that can help to continually explore and define Tenochtitlán's relationship to its empire in the future.

Annotated Bibliography

De Lucia, Kristin. "Domestic Economies and Regional Transition: Household Multicrafting and Lake Exploitation in Pre-Aztec Central Mexico." *Journal of Anthropological Archaeology* 32, no. 4 (2013): 353-367.

De Lucia analyzes a domestic structure in Xaltocan, Mexico at a micro-archaeological level to look for evidence of domestic production of goods to be sold at markets. In doing so, De Lucia breaks down the house space into separate areas such as food preparation, fish, netting, and pottery production, and sleeping spaces that may assist me at looking at plans for houses in the future. De Lucia contends that the majority of all households ran small business/manufacturing practices, which I should take into account while examining domestic architecture: it had secondary functions as workshops as well as places of inhabitance.

Isendahl, C. and ME Smith. "Sustainable Agrarian Urbanism: The Low-Density Cities of the Mayas and Aztecs." *Cities* 31, (2013): 132-143.

This article explores both Maya and Aztec city-state organizations from the top-down level; the Aztec portion focusing not on Tenochtitlan but the city-states, most of which were the capitals of their state and housing a royal family. The article codifies and generalizes the average Aztec city and examines organizational city structures, influenced by Toltec regimes, to districts/neighborhoods within the cities and the household (usually multi-family) domestic level. This article will be a real benefit to help understand categorization and the social site of domestic architecture in my essay.

Iverson, Shannon Dugan. "The Enduring Toltecs: History and Truth during the Aztec-to-Colonial

Transition at Tula, Hidalgo." *Journal of Archaeological Method and Theory* 24, no. 1 (2017): 90-116.

Iverson's article addresses the question of whether or not Tula was really the Aztecs' predecessors Tollan. In doing so, she assesses the Aztec cultural memory and history in regards to the Toltecs, and which inventions they attributed to them, including architecture. Considering the Smith/Isendahl (2013) article which argues that Aztec city-state organizations were heavily dependent upon their Toltec predecessors, I feel that this background knowledge and assessment of Toltec/Aztec relations will be helpful in addressing the predecessors of Aztec domestic architecture.

Huster, Angela C., and Michael E. Smith. "A New Archaeological Chronology for Aztec-Period Calixtlahuaca, Mexico." *Latin American Antiquity* 26, no. 1 (2015): 3-25. doi:10.7183/1045-6635.26.1.3.

Olson, JM and ME Smith. "Material Expressions of Wealth and Social Class at Aztec-Period Sites in Morelos, Mexico." *Ancient Mesoamerica* 27, no. 1 (2016): 133-147.

Olson and Smith use this article to determine and quantitative and qualitative way to measure wealth and regard social class at Aztec sites. They examine the possibilities of house size with regards to wealth, comparing it with artifacts found at the site, particularly ceramic serving ware, as wealth indicators, examining sites in Capilco, Cuexcomate, and Yautepec (a village, town, and city, respectively) to determine whether wealth/social class could be inferred through architecture. The pattern and assumption the authors establish for reading wealth through architecture will be useful to me in my examination of non-royal domestic residences and how they varied from class and place.

Ossa, Alanna, Michael E. Smith, and José Lobo. "THE SIZE OF PLAZAS IN MESOAMERICAN CITIES AND TOWNS: A QUANTITATIVE ANALYSIS." *Latin American Antiquity* 28, no. 4 (2017): 457-75. doi:10.1017/laq.2017.49.

Pennock, Caroline Dodds. 2011. "'A Remarkably Patterned Life': Domestic and Public in the Aztec Household City." *Gender & History* 23 (3): 528–46. doi:10.1111/j.1468-0424.2011.01652.x.
Pennock examines households in a much more metaphorical way, examining the roles men and women played from birth until death with their responsibilities towards the family. While I am skeptical of how much I will use concerning this, Pennock includes some very good citations from the Florentine Codex that I would like to examine more closely and draw from.

Smith, Michael Ernest. *Aztec City-state Capitals*. Gainesville: University Press of Florida, 2008.

Smith, Michael E. "City Planning: Aztec City Planning." Edited by Helaine Selin. *Encyclopaedia of the History of Science, Technology, and Medicine in Non-Western Cultures* 1 (2004): 557-87. Accessed December 10, 2018. doi:10.1007/springerreference_77878.

Smith, Michael E. "Peasant Mobility, Local Migration and Premodern Urbanization." *World Archaeology* 46, no. 4 (2014): 516-533.
Smith's discussion of peasant mobility and migration under Aztec rule is important to my paper because it situates land and house-owners within the social structure of the Aztec Empire. His revelation that peasants could not be forced back onto their land, unlike European serfs, and that a full sixteen percent of the population was mobile, leads me to believe that the houses left today must be understood as belonging to the upper end of the peasant social class.

Smith, ME, A. Borejsza, A. Huster, CD Frederick, IR Lopez, and C. Heath-Smith. "Aztec Period Houses and Terraces at Calixtlahuaca: The Changing Morphology of a Mesoamerican Hilltop Urban Center." *Journal of Field Archaeology* 38, no. 3 (2013): 227-243.
This article records the Arizona State State University project at Calixtlahuaca, re-excavating the hilltown with the attempt to flesh out a chronology of the city pre- and

post-Aztec conquest in 1476, prior to which it had been a regional power. While it is removed from the Basin of Mexico and comes under the Aztec Empire's control later in history, the study records lots of domestic architecture excavated and includes a discussion of the differences in the town pre- and post-conquest that I feel will be useful to examining how Aztec monumental and domestic architecture differed or did not from neighboring styles. It also discusses agriculture morphology, such as terracing and aqueduct architecture, that the authors argue is linked intrinsically to domestic architecture.

Smith, Michael E., Cynthia Heath-Smith, and Lisa Montiel. "Excavations of Aztec Urban Houses at Yautepec, Mexico." *Latin American Antiquity* 10, no. 2 (1999): 133-50. doi:10.2307/972199.
Michael Smith and his team excavated a series of houses in Yautepec, Mexico, within the basin of Mexico. Their examination of the structure and materials is useful to me not only in categorizing the general formation of domestic structures and the materials used to build them, but also Smith's larger categories of domestic architecture in around the Basin of Mexico for commoners, as well as his assertion that Yautepec has more varieties of domestic architecture than most excavated Aztec towns and villages, arguing this demonstrates greater social class diversity.

Stark, Barbara L. "Urban Gardens and Parks in Pre-Modern States and Empires." *Cambridge Archaeological Journal* 24, no. 1 (2014): 87–115. doi:10.1017/S0959774314000079.
Stark's article examines the use of garden and greenspace compared to grayspace in Aztec urban and domestic architecture; this is particularly useful for assessing domestic structures because of the low-density city, high-intensity farming going on Aztec cities. Greenspaces were used for dancing, religious shrine/ritual use, social visits, defense from attack, hunting, bathing, and promenades or processions in Aztec urban centers. They included sculptural displays, waterworks, and rocky effigies. While they mostly seem to have been contained to elite, religious spaces, I felt it was important to gather an understanding of how Aztec cities conceptualized nature within urban areas and whether or not that transferred to domestic architecture.

Umberger, Emily, and Casandra Hernández Faham. "Matlatzinco Before The Aztecs: José García Payón And The Sculptural Corpus Of Calixtlahuaca." *Ancient Mesoamerica* 28, no. 1 (2017): 1-19. doi:10.1017/S0956536116000419.

Van Essendelft, Willem. "What's in a Name? A Typological Analysis of Aztec Placenames." *Journal of Archaeological Science: Reports* 19, (2018): 958-967.

This study discusses the meaning of Nahuatl toponyms and how they would relate to Aztec conception and interaction with the environment. It could be a possible in examining how and why villages were settled in specific places; for example, perhaps the name relates to good water or a large supply of fish.