

The Making of a Plaza: Public Space and a Marketplace at Tenam Puente, Chiapas, Mexico

La construcción de una plaza: espacios públicos y áreas de mercado en Tenam Puente, Chiapas, México

ELIZABETH H. PARIS
Universidad de Calgary, Canadá

ROBERTO LÓPEZ BRAVO
Universidad de Ciencias y Artes de Chiapas, México

GABRIEL LALÓ JACINTO
Instituto Nacional de Antropología e Historia, Centro Chiapas, México

ABSTRACT: This study investigates the shifting meanings and practices inscribed on the Main Plaza at the ancient Maya city of Tenam Puente. Plazas are fundamental features of ancient Mesoamerican cities that were important sites for civic activities such as mass spectacles, ceremonies, private rituals, feasting. More recently, certain plazas have also been documented as permanent or periodic marketplaces. New radiocarbon dates and stratigraphic test excavations provide evidence for several important transformations in the built landscape of Tenam Puente's Main Plaza, including renovations to the site's principal ballcourt, a large filling and resurfacing event, and a significant addition to the plaza's volume for the purpose of building a semi-enclosed marketplace plaza. These results provide insight into the evolving nature of public space at the site, from a focus on private rituals and dynastic rule, to an emphasis on mass spectacle, commercial activity, and civic engagement.

KEY WORDS: Chiapas; Maya; Tenam Puente; chronology; plaza; marketplace.

RESUMEN: El presente estudio investiga los cambiantes significados y prácticas inscritas en la Plaza Principal de la antigua ciudad maya de Tenam Puente. Las plazas son elementos arquitectónicos fundamentales en las antiguas ciudades mesoame-

ricanas que fueron sitios importantes para actividades cívicas como espectáculos, ceremonias, rituales privados y banquetes. Más recientemente, ciertas plazas se han documentado como mercados permanentes o periódicos. Nuevas fechas de radiocarbono y pozos estratigráficos aportan evidencias de varias transformaciones importantes en el paisaje urbano de la Plaza Principal de Tenam Puente, incluyendo renovaciones en la cancha del juego de pelota principal del sitio, un gran evento de relleno y repavimentación, y una adición significativa a su volumen con el propósito de construir una plaza de mercado semicerrada. Los resultados proporcionan información sobre el desarrollo del espacio público en el sitio, desde los rituales privados y el reinado dinástico, hasta los espectáculos, actividades comerciales y participación cívica.

PALABRAS CLAVE: Chiapas; mayas; Tenam Puente; cronología; plaza; mercado.

RECEPCIÓN: 21 de julio de 2020.

ACEPTADO: 18 de septiembre de 2020.

DOI: <https://doi.org/10.19130/iifl.ecm.2021.58.23862>

Introduction

Plazas are fundamental features of ancient Mesoamerican cities. Rather than the “empty spaces” left between other monumental buildings, scholars now view plazas as monumental constructions of social importance in their own right, and important public spaces in carefully constructed cityscapes (Ashmore, 1991; Doyle, 2013; Inomata and Tsukamoto, 2014; Inomata, 2006; Inomata *et al.*, 2013; Inomata *et al.*, 2020; Liendo and Zalaquett, 2011; Ossa, Smith and Lobo, 2017; Ringle and Bey, 2001). As Inomata (2006: 805) observes, plazas may also have played a central role in the development of community and cohesion in the ancient Mesoamerican world, as “public events facilitated and conditioned the integration and identity formation of a community and set the stage for the imposition and negotiation of asymmetrical power relations.”

Here, we present evidence for shifting meanings and practices inscribed on the Main Plaza at the ancient Maya city of Tenam Puente, located on the eastern edge of highland Chiapas. The site sits strategically along several important transportation corridors connecting the Central highlands to important lowland areas, and its occupation spanned the Classic and Early Postclassic periods (ca. AD 500-1100). The site’s Acropolis is built into the side of a large hilltop on the southeast edge of the Comitán Plateau and contains the Palace, important temples, and other elite architecture; in the intermountain saddle at the base of the Acropolis is an expansive Main Plaza (Plaza F). In its final iteration, the Main Plaza was dominated by a seemingly-natural large open space, flanked by Ballcourt 1 on the eastern edge, and a semi-enclosed marketplace plaza on the western edge. Our recent excavations at the site suggest that the Main Plaza was a highly iterative space that was subject to many modifications over time, and that the construc-

tion of the marketplace likely represents a sudden and massive investment in urban commerce by Tenam Puente's rulers and community members.

Plazas in Mesoamerican and Maya Cities

As many scholars have recognized, plazas were not only sites of activity, but built environments which were invented and reinvented over successive generations to serve different functions, support different clusters of activities, and communicate different meanings. Architects and planners of urban cityscapes employed nonverbal communication methods to encode meanings for an imagined community of ideal users (Rapoport, 1982: 13), attributing and redistributing meaning to specific features in order to shape experiences and actions (Latour, 1994: 33). Built environments can convey low-level meanings (the sensory experiences conveyed by particular spaces), mid-level meanings (messages regarding status, hierarchy and power), and high-level meanings (religious, cosmological, or numismatic principals), often concurrently. Built environments also frequently function as sites of social memory, where the commemoration of individuals, groups or events is inscribed on the landscape through visible markers such as monuments and memorials, or through interred features such as burials and caches, thus providing continuity for social narratives across generations (Chesson, 2001; Connerton, 1989; Hendon, 2000; Joyce, 2001; Schwake and Iannone, 2010). Thus, open spaces, walls, platforms, buildings, stelae, altars, steps, berms, ramps and slopes, serve as semi-permanent actants whose design attempts to prescribe a program of action for the human actors who engage with the space (Latour, 1994: 33). However, although designers of built environments often have normative goals, seeking to transmit meanings that define particular situations and elicit expected behaviors (Rapoport, 1982: 65), the users of these spaces may subvert their intended meanings, either through their behavior in a space that is at odds with its intended use (Scott, 1990), or, in cases where political authority is weakened, by deconstructing, defacing, or reusing built features from elite or public structures in new ways (Joyce, Bustamante and Levine, 2001). The meanings inscribed on built environments may also be more or less legible to different audiences, depending on whether they have the cultural knowledge to correctly identify and interpret inscribed cues in the landscape (Rapoport, 1982: 79).

Ancient Mesoamerican cities were highly diverse with regard to size, density, urban geographies, and their range of functions with respect to their urban and hinterland populations (Andrews, 1975; Haviland, 1970; Iannone and Connell, 2003; Marcus, 1983, 1989; Smith, 2005). Ancient cities were often, but not exclusively, political centers from which rulers and officials administered polities of varying sizes, and also important nodes within ancient commercial economic networks (Smith and Berdan, 2003: 24). They supported concentrated consumer populations, including residents of the city itself and visitors from neighboring

rural areas and also non-local visitors and merchants, as well as artisans, priests, engineers, and other occupational specialists (Iannone and Connell, 2003; Smith, 2008). Urban commerce was not static at individual cities, but waxed and waned with political and economic fortunes, including shifts in the proliferation of trade and interaction networks (Stark and Ossa, 2010).

Ossa, Smith and Lobo (2017) define five types of activities that likely took place in Mesoamerican urban plazas, using architectural features, activity areas (as defined by both macroscopic artifacts and soil chemistry patterns), and analogies from Mesoamerican ethnohistory and ethnography. First, they suggest that “private rituals” may have included bloodletting, incense burning, and ritual scattering (although some of these activities could also have been performed in public ceremonies); elite masonry tomb burials under plaza floors, and ritual cache deposits, would also pertain to this constellation of activity (Ashmore, 1991). Second, “periodic markets” may have been held in plazas, particularly on “market days” (Ossa, Smith and Lobo, 2017); towns may also have permanent market plazas, whereby adjacent streets and multiuse plazas serve as overflow space on designated market days (Dahlin *et al.*, 2007; Freidel, 1981). Third, “mass spectator ceremonies” allowed large crowds gathered into one space to witness or participate in a royal or state ceremony, such as a sacrificial. Similarly, in “participatory public ceremonies”, groups of people could participate in specific movements or activities in designated locations, such as processions, dances, sacrifices, and offerings of incense (Ossa, Smith and Lobo, 2017); in the Maya area, these may have included period-ending ceremonies and the dedication of stelae and altars (Ashmore, 1991). Finally, “feasts” and other popular celebrations may have taken place in plazas and are usually suggested due to concentrations of phosphorous in soil chemistry (Canuto, Charton and Bell, 2010; Dahlin *et al.*, 2010; Fulton, Wells and Storer, 2017).

Inomata (2006: 818) argues that the most important function of plaza spaces was their use as a venue for mass spectacles, in which a large portion of a community assembled and worked together, provided opportunities for individuals to witness and sense the bodily existence and participation of other members. These gatherings also provided rulers with important opportunities to legitimize their power and rulership through the regular celebration of period endings, the impersonation of deities in religious ceremonies, the commemoration of important events and dynastic ancestors, the celebration of victories in warfare, and the performance of ballgames that mimicked battles (Freidel and Schele, 1988; Schele and Miller, 1986). These events were not static traditions but allowed multiple generations of rulers to dynamically and periodically reiterate and recreate these spectacles in response to current events.

Increasingly, Mayanist scholars are identifying particular plaza spaces as marketplaces (Cap, 2015; Dahlin *et al.*, 2007; Dahlin *et al.*, 2010; King, 2015; Terry, Bair and Coronel, 2015). While any plaza space could potentially provide a temporary locus for vendor activity, some cities may have had permanent or semi-

permanent spaces set aside for its residents and visiting merchants to conduct commercial exchange, as many large cities in Mesoamerica do today. Dahlin *et al.* (2007: 364) identified several features that may distinguish special-purpose marketplace plazas from ritual plazas, including the remains of permanent or temporary stalls, and linear patterning of geochemical traces, particularly extractible phosphorous and heavy metals. Other cities may have had periodic markets (*tianguis*, from the Nahuatl *tianquiztli*), in which weekly open-air markets were held in multi-purpose plazas that were also used for other civic-ceremonial activities (Freidel, 1981; McAnany, 2010: 260). It is worth noting that in many Mayan languages such as Yucatekan, the word for “marketplace” is the same for “plaza” (*k’iwiik*; Barrera Vasquez, 1980: 405), as many others have observed (Dahlin *et al.*, 2010; King, 2015; McAnany, 2010; Shaw, 2012; Speal, 2014; Tokovinine and Beliaev, 2013). In Tojol-ab’al, the language spoken in the region surrounding Tenam Puente, the word for “city” is the same as the word for “marketplace” (*chonab’*), and usually refers to the colonial/modern city of Comitán, the largest city in the region (Lenkersdorf, 2005). Similarly, the verb *chono* in Tojol-ab’al means “to sell,” implying by extension that cities are places where things are bought and sold (Lenkersdorf, 2005).

Where marketplaces were located within ancient cities, they could be spatially integrated with the civic-ceremonial core (temples, palaces, administrative buildings), or explicitly located apart from these facilities. The great Tlatelolco marketplace at the heart of the Aztec empire was located in the shadow of its twin-temple pyramid and ceremonial precinct (Díaz del Castillo, 1960; see also Carrasco, 1980; Hutson, 2000); similarly, Ximénez (1929), in describing the K’iche’ and Cakchiquel capitals of Q’umarkaj and Iximche’ in highland Guatemala, observed that markets were held in spaces close to temples; this suggests a high degree of elite control over marketplaces in those cities. In the archaeological record, many Maya marketplaces seem to be located in “side plazas” adjacent to the site’s main ceremonial plaza; examples include marketplaces at Tikal (Becker, 2015; Jones, 2015), Calakmul (Carrasco Vargas, Vásquez and Martin, 2009), Buenavista del Cayo (Cap, 2015), Xunantunich (Keller, 2011); Maax Na (King, 2015), Chunchucmil (Terry, Bair and Coronel, 2015), El Perú-Waka’ (Eppich and Freidel, 2015), and Mayapán (Terry, Bair and Coronel, 2015). A similar pattern was noted for Colonial period highland Guatemala, in which markets were located adjacent to important temples (Casas, 1958: 353; see also King, 2015) or council houses (Feldman, 1985: 15). Other sites, such as Caracol (Chase *et al.*, 2015) and Yaxnohcah (Anaya *et al.*, in press) have a pattern of neighborhood markets associated with important causeway termini plazas or civic nodes across the cityscape.

In the Maya region, scholars have reported a great deal of variation in the demarcation of marketplace spaces (King, 20015: 59). Many sites have open or semi-enclosed marketplaces, where the proposed marketplace spaces are partially delineated by temples, platform edges, low walls, or high densities of dwellings, as observed at Buenavista del Cayo (Cap, 2015), Trinidad de Nosotros (Terry, Bair and

Coronel, 2015), Coba (Terry, Bair and Coronel, 2015), Sayil (Tourtellot, 1988) and Mayapán (Masson and Peraza, 2014; Terry, Bair and Coronel, 2015); a higher degree of plaza enclosure through temples and range structures is observed at Maax Na (King, 2015). Alternatively, marketplace plazas may be effectively delineated through the positioning of *sache'* roads, as at Chunchucmil (Terry, Bair and Coronel, 2015). The most formally delineated marketplaces include the East Plaza of Tikal, which features a highly restricted space formed by the positioning of nested range structures (Becker, 2015), the Chiik Nahb complex at Calakmul (Dahlin *et al.*, 2010: 196), and Pueblito (Laporte and Chocón, 2008). The Chiik Nahb's associated temple also features murals featuring vendors and a traveling merchant (Carrasco, Vásquez and Martin, 2009). An intermediate level of formality is observed at Yaxnohcah, in which marketplaces are delineated by an outer perimeter of low mounds (less than 2 m in height), which are generally rectangular in shape. Below, we argue that a related construction technique was used for the marketplace at Tenam Puente, in which strategically positioned structures delineate the northern, eastern and southern edges of the marketplace, in tandem with the Acropolis retaining wall, the escarpment edge, and the main access path to the Main Plaza.

Importantly, plazas in ancient Mesoamerican cities were not static spaces, and the spatial layout and design of plaza spaces often underwent significant modification over time (Inomata, 2006). New generations of rulers and community members modified plazas to adapt the use of urban spaces to new sociopolitical needs and activities. Where old plazas were too small and crowded, new plazas could be created through the movement of significant amounts of limestone fill, such as the creation of the Great Plaza and Middle Plaza at Copan, coinciding with the establishment of a new dynasty by K'inich Yax K'uk' Mo' (Traxler, 2004). Platforms and other structures in the plaza could be added or removed by raising the level of the plaza floor with gravel fill and new plaster floors (Cheek, 1983: 344). Central monuments, such as stelae and altars could be added or removed to create focal points for the worship of individual rulers or the celebration of period endings (Inomata, 2006: 818). Below, we identify the ways in which Tenam Puente's Main Plaza became an important locus of urban transformation, in ways that actively promoted its commercial connections. The two portions of its Main Plaza have radically different construction histories and constellations of activities, providing an important perspective on the evolving nature of public space at the site.

Tenam Puente

Tenam Puente was an important political capital located on the southeast edge of the Comitán Plateau, at the edge of the eastern Chiapas Highlands (Figure 1; Laló and Aguilar, 1996). Its occupation spanned the transition from the Classic to

the Early Postclassic periods. The Early Postclassic period occupation has been suggested due to the presence of Tohil Plumbate and Silho Fine Orange vessels, typically dated from AD 900 to 1100 (Bishop, 2003; Neff and Bishop, 1988; Smith, 1958), as well as copper artifacts such as finger rings and zoomorphic pendants (Laló and Aguilar, 1996). Other cities on the western Maya frontier show similar patterns of material culture and longevity, including Toniná (Becquelin and Baudéz, 1982), Chinkultic (Ball, 1980; Navarrete, 2007), Yerba Buena (Bryant, 1988; Culbert, 1965), and Moxviquil (Paris, Taladoire and Lee, 2015; Paris and López, 2017). Sites in nearby regions to the east and south are built on a more open lowland plan, and include sites in the valleys surrounding Las Margaritas (Álvarez,



Figure 1. Map of the Yucatan Peninsula, with selected sites mentioned in the text
(Drafted by Paris from basemap by Sémhur, available from
Wikimedia Commons, CC-BY-SA-3.0).

2000); Tenam Rosario and neighboring sites in the Rosario Valley (De Montmolín, 1989a; 1989b; 1995), and other sites in the Upper Grijalva River Valley River Valley, including Guajilar, Lagartero, Los Encuentros, and Canajasté (Bryant, Clark and Cheetham, 2005; Blake, 2010; Rivero, 1977; 1987; 1990). Some of these sites, including Cimientos de Las Margaritas and Canajasté, are built defensively in other ways, on islands or narrow peninsulas (Álvarez, 2000; Lowe and Álvarez, 2002; Blake, 2010).

Tenam Puente has been the focus of numerous archaeological projects which established its occupational chronology, its architectural characteristics, and has resulted in the discovery of many important monuments and artifacts. Seler (1901) was the first professional archaeologist to work in the Comitán Plateau and neighboring areas such as the Lagos de Montebello and Chaculá. One of the earliest projects was the expedition undertaken by Blom and La Farge (1926), which resulted in the first site map, and they also conducted reconnaissance and site mapping at other sites in the Comitán Plateau and Chinkultic. Tenam Puente was also visited by the New World Archaeological Foundation (Lowe, 1959), although a formal project was not undertaken.

Over the last three decades, the Proyecto Arqueológico Tenam Puente has undertaken detailed mapping, excavations, and the restoration of the site's Acropolis and Main Plaza. The Acropolis is composed of approximately 50 structures, with Main Plaza and principal ballcourt, Ballcourt 1 in the saddle at its base (Figure 2). Many of the site's structures are constructed with a particular technique of *sillares*, a façade technique using limestone blocks with perfectly squared faces and a tapered posterior that is embedded in the structure's gravel fill; the technique is strongly associated with monumental zones in the eastern Chiapas highlands (Laló and Aguilar, 1996). Construction using *sillares* is associated with the site's most prolific building phase (Phase 4; Table 1), and is visually distinct from earlier *poc-ton* construction using medium-sized rectangular blocks, and later constructions using thin, hard micrite limestone slabs (*lajas*; Laló and Aguilar, 1996). The Acropolis itself contains a semi-enclosed palace courtyard (Plaza B), numerous temples of different sizes and styles, altars, sculptures, elite houses, and two small I-shaped ballcourts located adjacent to the site's palace (Laló and Aguilar, 1996). The offerings recovered in the tombs and caches of the Acropolis include diagnostic ceramics and artifacts spanning the Late Classic period and Early Postclassic periods (Laló and Aguilar, 1996). In the intermountain saddle at the base of the Acropolis lays the site's Main Plaza, Plaza F, described below.

Beyond the Main Plaza in the saddle to the south is a residential neighborhood; residential areas are also present on the hilltops abutting the monumental zone to the south and west. Laló (2005) suggested that the site was occupied from AD 500 to 1100 based on ceramic chronologies, which is supported by the new radiocarbon dates (see below). Collaborative scholarly endeavors at the site have included the detailed analysis of the site's monuments (Earley, 2015), ceramics (Aguilar, 2004) and fauna (Zúñiga, 2008).

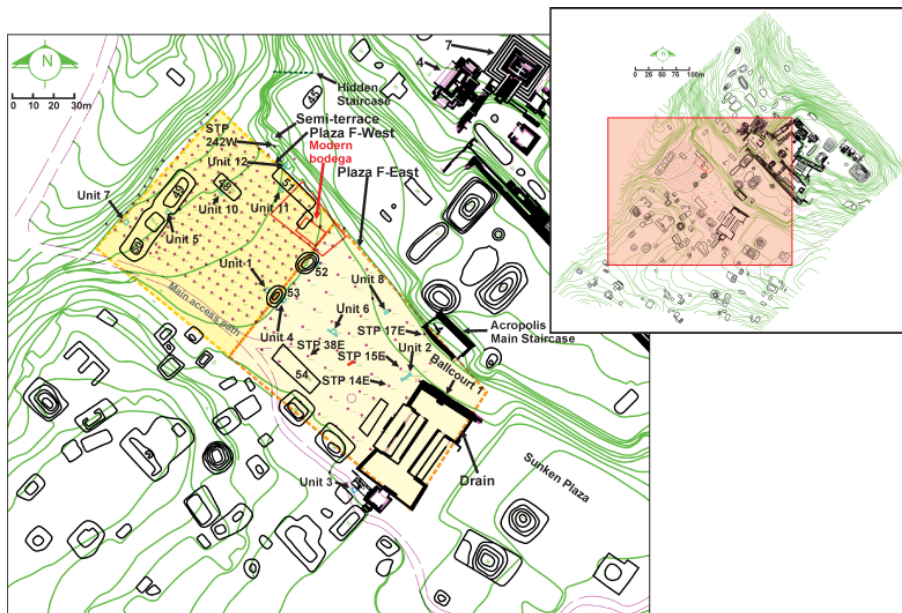


Figure 2. Plan map of the monumental zone of Tenam Puente, including the locations of excavated STPs (red) and test pits (blue) from the 2019 field season (Drafted by Stephanie Ibelles, Roberto López Bravo, Gabriel Laló and Elizabeth Paris).

The “Redes Económicas de Tenam Puente” project, co-directed by the authors, was established in 2019 with the goal of investigating its urban economic organization, with particular focus on the Late Classic to Early Postclassic period transition. Project methods included a series of small shovel test pits (STPs) to identify activity areas through spatial distributions of artifacts and soil chemistry, following methods by Cap (2015), Hutson and Terry (2006), and Terry, Bair and Coronel (2015). 56 STPs were excavated a 10 x 10 m grid in Plaza F-East, and 226 STPs were excavated on a 5 x 5 m grid in Plaza F-West. 12 test pits were placed strategically among the two plazas to investigate questions of construction history (1 x 2 m or 2 x 2 m), to obtain samples of midden refuse associated with structures surrounding the plaza, and to expand STPs over features of interest. In most cases, test could not be excavated to bedrock due to the depth of the deposits but were as deeply as could be done feasibly and safely. Numerous faunal remains were recovered; ten elements were submitted for radiocarbon dating at the A. E. Lalonde AMS Lab at the University of Ottawa, consisting of diagnostic white-tailed deer and domestic dog remains from secure contexts, to establish temporal sequences for plaza features.

Sample number	Unit	14C yr BP	±	F14C	±	cal BP	Calendar years	Construction events	Phase
RETP19-141-1	Unit 6, Capa II, Level 2	1548	34	0.8247	0.0035	1529-1365 (95.4%)	AD 421-585 (95.4%)	Residential occupation of Plaza F or nearby areas (AD 421-597)	1
RETP19-122-1	Unit 3, Capa III, Level 3	1537	37	0.8258	0.0038	1526-1353 (95.4%)	AD 424-597 (95.4%)		
RETP19-396-1	Unit 9, Capa II, Level 3	1543	26	0.8272	0.0027	1525-1374 (95.4%)	AD 425-576 (95.4%)		
RETP19-100-1	Unit 2D, Capa II, Level 7	1524	26	0.8272	0.0027	1522-1455 (32.0%) 1443-1430 (2.7%) 1424-1347 (60.7%)	AD 428-495 (32.0%) AD 507-520 (2.7%) AD 526-603 (60.7%)	Construction of Ballcourt 1 and Plaza F-East, construction of the Monument 22 platform; dedication of Monument 22. Construction utilized midden soil fill from Middle Classic houses (AD 526-667).	2a
RETP19-310-3	Unit 6G, Capa I, Level 1	1502	26	0.8294	0.0027	1517-1494 (3.9%) 1482-1462 (4.1%) 1417-1321 (87.5%)	AD 433-456 (3.9%) AD 468-488 (4.1%) AD 533-629 (87.5%)		
RETP19-181-1	Unit 6, Capa III, Level 4	1469	26	0.8329	0.0027	1399-1307 (95.4%)	AD 551-643 (95.4%)		
--	--	--	--	--	--	--	--	Dedication of the La Esperanza ballcourt marker (AD 591)	2b
--	--	--	--	--	--	--	--	Renovation of Ballcourt 1 using sillares technique (prior to AD 667)	3

RETP19-063-1	Unit 3, Capa 1, Level 1	1284	38	0.8523	0.0040	1295-1172 (91.1%) 1159-1146 (1.4%) 1137-1126 (0.9%)	AD 655-778 (91.1%) AD 791-804 (1.4%) AD 813-824 (0.9%)	Renovation of Plaza F-East and construction of Ballcourt 1 attendant house; filling of Ballcourt 1 western extension; interment of Monument 22 and its platform (AD 655-778)	4a
RETP19-185-1	Unit 7, Capa I, Level 2	1263	26	0.8545	0.0027	1283-1173 (93.4%) 1158-1148 (1.0%) 1106-1095 (1.0%)	AD 667-777 (93.4%) AD 792-802 (1.0%) AD 844-855 (1.0%)	Construction of Plaza F-West (AD 667- 763)	4b
RETP19-158-3	Unit 7, Capa I, Level 1	1215	26	0.8597	0.0028	1255-1250 (0.6%) 1240-1205 (11.9%) 1187-1061 (82.9%)	AD 695-700 (0.6%) AD 710-745 (11.9%) AD 763-889 (82.9%)	Use of the marketplace (AD 763-1026)	4c
-	--	--	--	--	--	--	--	Dedication of Tenam Puente Monument 1 (AD 790)	4d
-	--	--	--	--	--	--	--	Creation of the Unit 8 feasting deposit (probably between AD 900 and 1100)	5a
-	--	--	--	--	--	--	--	Construction of the laja pavement in STP 17E, the plaster floor in STP 14E, and Gravel Surface 1 in Unit 2 (probably between AD 900 and 1100)	5b
RETP19- 5189-1	STP 38E, Capa I, Level 1	945	25	0.8890	0.0027	924-796 (95.4%)	AD 1026-1154 (95.4%)	Final use of the plaza (prior to AD 1154)	6

Table 1. Radiocarbon dates from the Tenam Puente Main Plaza. Analyses were conducted at the A. E. Lalonde AMS Lab at the University of Ottawa, calibrated using OxCal. "Capas" refers to architectural construction phases, while "Levels" are artificial levels.

The Final Built Form of the Main Plaza

In the intermountain saddle at the base of the Acropolis is the site's Main Plaza (Plaza F), which appears today as a broad, mostly level expanse of open space at the base of the main access stairway and retaining wall of the Acropolis (Figure 3). The Main Plaza has two main sections; Plaza F-East, which appears today as a broad, open rectangular space, and Plaza F-West, a smaller, semi-enclosed, roughly square space. Ballcourt 1, a large, I-shaped, sunken ballcourt, forms the eastern edge of Plaza F (Laló and Aguilar, 1996); it features two long, flat platforms on its east and west edges, and a small temple on its south edge with numerous construction phases identified through both *pocton* and *sillares* masonry. Annexed to the rear (southwest corner) of the temple is a small structure, with the foundations of a small sweatbath (*ika* in Tojol-ab'al; *temazcalli* in Nahuatl) attached to the posterior edge. The sweatbath could possibly have been used by priests and/or ballplayers preparing for competition (Laló, 2001: 554, Figure 4). The rectangular foundation of a small residential structure occupies the southwest corner, abutting both the southern edge of Ballcourt 1 and the western edge of the temple. Based on associated artifacts from the 2019 excavation season, we suggest that it may be the dwelling of a priest or attendant for the ballcourt and its temple and sweatbath. Bordering to the east is a large Sunken Plaza, which may actually represent the original level of the ground surface prior to the construction of Plaza F; a masonry drain in the eastern wall of Ballcourt 1 drains water from the ballcourt into the Sunken Plaza during the rainy season (Laló, 1994; 2002: 415).



Figure 3. Left: Ballcourt 1. Right: Plaza F-East in its final form, looking west from the northwest corner of Ballcourt 1. A fallen stela is visible in the center of Plaza F-East (Photos by the authors, courtesy of the RETP).

Our test excavations revealed that the final phase of Plaza F-East (Phase 4a) was created by a massive renovation of the space, which effectively buried earlier plaza features. The plaza was filled with large limestone cobbles, ranging roughly between 15 and 30 cm in diameter, then a layer of 8-15 cm gravel (*rajuelos*), and

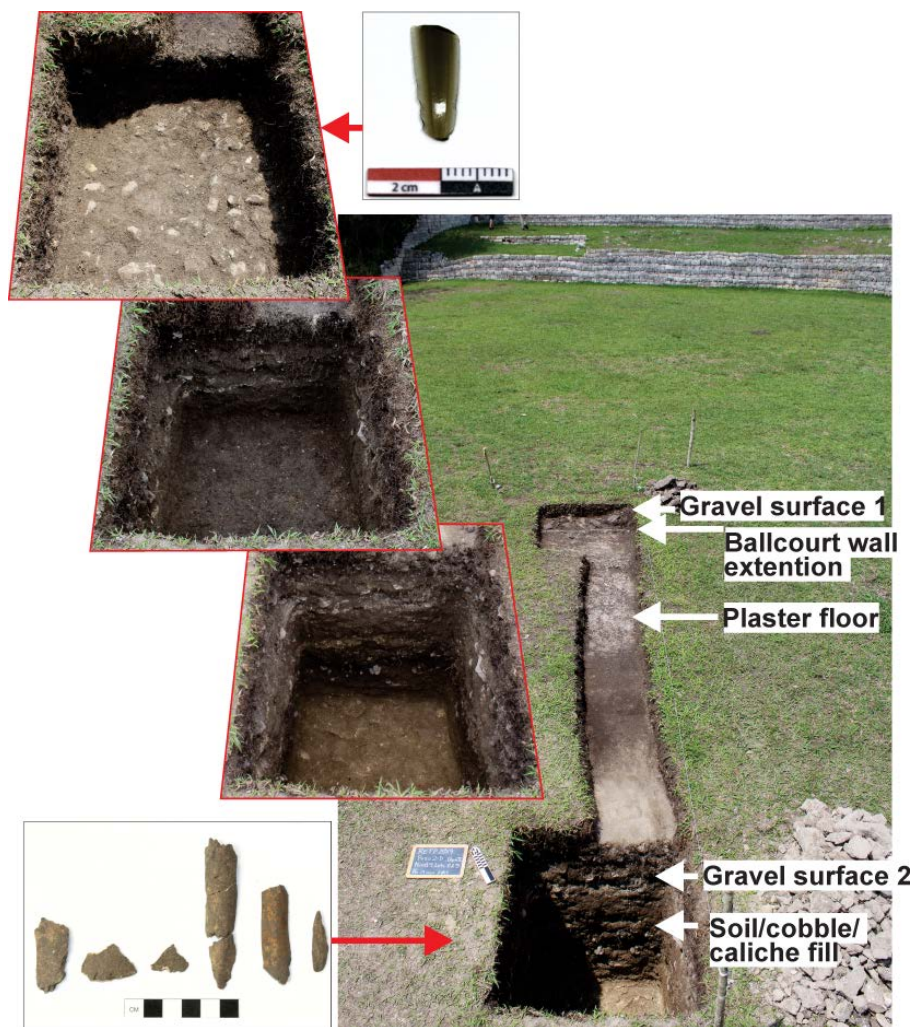


Figure 4. Excavated levels of Unit 2D in Plaza F-East, showing plaza construction phases, together with selected artifacts of green obsidian and faunal bone from the deposits (Photos by the authors, courtesy of the RETP).

finally topped with a layer fine gravel (2-3 cm); in many locations, the fine gravel was eroded away due to mid 20th century tractor farming. Radiocarbon dates suggest that this construction event most likely took place between AD 644 and AD 667 (Phase 4a; Table 1). Later, a ~10 cm layer of soil and a stucco floor were installed over a large area (approximately 5 x 5 m), preserved near the northwest corner of Ballcourt 1 (Phase 5b, Table 1, Figures 4 and 5). Notably, remnants were not preserved in any of the other STPs in the eastern portion of the plaza,

leading us to conclude that most of the final plaza surface was likely not plastered. The lack of a plaster surface is unusual for a plaza in the Maya region. A final layer of gravel abutted the plaster floor on its northern edge, while a small pavement of *laja* stones abutted the central staircase to the Acropolis at one point, identified in STP 17E (Phase 5b, Table 1, Figure 5), but appears to have only covered a small area at the base of the staircase, since *laja* paving stones were not recovered elsewhere. The fill under the *lajas* contained uncut limestone cobbles and some rounded quartz cobbles, which may have come from a nearby stream bed or seasonal arroyo. Mixed into the fill was a heavily patinated chert Archaic stemmed and barbed point, which was accidentally scooped up from the streambed by builders (Figure 5; Paris, López and Laló, 2019). This suggests that the northwest edge of the ballcourt underwent some final modifications; there are no traces of similar modifications in other parts of the plaza.



Figure 5. Left: Unit 2D and STP 14E-G, showing the plaster floor, *sillares* forming the extension of the Ballcourt 1 northern extension, and 8-15 cm gravel abutting and covering the edge of the *sillares*. Right: *Laja* stone pavement covering a small edge of Plaza F-East at the base of the Acropolis access staircase, and the Archaic period projectile point found in the fill (Photos by the authors; drawing by Elizabeth Paris; courtesy of the RETP).

Plaza F-West is a large, roughly square, semi-enclosed space; we propose that it served as a permanent marketplace. The proposed marketplace has an interior space of approximately 60 x 60 m and is surrounded by a series of mounds. It

abuts the edge of the escarpment, leading to the intermountain saddle access point to the Main Plaza from either neighboring hilltops or the plateau to the north. The western edge of the plaza is delineated by a long, rectangular (~52 x 10 m) platform supporting three small structures (49, 50A, and 50); the west edge of the platform is off-set from the escarpment by 5 m, forming a toss zone for midden debris. Defining the eastern edge are two small shrines (Structures 52 and 53). The space between the shrines is narrow but easily walkable for a single individual or two individuals passing and has a small masonry step effectively delimiting the eastern and western portions of the plaza.

The specific enclosed form of the plaza shows strong similarities to Late Classic period neighborhood marketplaces identified at Yaxnohcah by Anaya *et al.* (in press), which are characterized by a plaza area of 2000-3100 m², low perimeter platforms surrounding the plazas, multiple corner entries, easy access to pedestrian corridors, and an association with large elite households or civic complexes. Tenam Puente's marketplace plaza shares most of these features; at 3600 m² it is slightly larger than Yaxnohcah's marketplaces, which is consistent with its location in the civic center rather than outlying neighborhoods.

Consistent with the hypothesized use as a marketplace, few artifacts were associated with the surface contexts of the Plaza F-West interior space. Open, multi-use spaces are hypothesized to have been regularly swept clean, observed ethnographically (Hutson, 2000) and archaeologically (Cap, 2015; Parrott, n.d.) for pre-Hispanic marketplaces, and also observed for both ancient (Blake, 2010; Paris and López, 2019) and modern (Deal, 1985; Hayden and Cannon, 1983) highland Chiapas households. In Plaza F-West, most midden refuse was identified on the exterior edges of the structures (Units 4, 7, 9 and 12), and consisted of utilitarian ceramics, chert debitage and animal bone. A few, scattered artifacts were associated with near-surface deposits above the gravel layer in the plaza interior, mostly small chert debitage flakes. A single plain altar was identified near the center of the interior space as delineated by the surrounding structures; however, no platforms, caches, or artifact scatters were associated with it.

The rear portion of Plaza F-West is delineated by several structures. Two structures are positioned in a slightly offset arrangement to allow for narrow passage between them. One is a small, rectangular structure (15 x 6 m), and may have been a residence for an official or market attendant. The other is an L-shaped building (Structure 51), which is approximately 30 m long; it parallels and nearly abuts the retaining wall of the Acropolis, and we hypothesize that it was an administrative building for the marketplace (Figure 6). The retaining wall itself has several small rooms built into a semi-terrace, to which access from the marketplace is effectively blocked or impeded by Structure 51, suggesting private administrative spaces or secure storage areas. Behind and to the north of these structures, the construction of this area of the plaza wraps around the side of the Acropolis hilltop, leading to a hidden staircase that provides a second access point to the second terrace of the Acropolis. Based on its discrete location, we

speculate that this staircase may have provided access to the marketplace for elites and officials, and/or served to discretely facilitate the transport of valuable goods and marketplace taxes to a secure area of the Acropolis. The small rectangular building at the top of the hidden staircase (Structure 45) may have housed officials charged with ensuring that use of the staircase was by “authorized personnel only”.



Figure 6. Structure 51, a long, L-shaped structure along the southern edge of Plaza F-West (Photo by the authors, courtesy of the RETP).

Artifacts from above the final gravel and plaster surfaces of Plaza F-East are consistent with previous evidence from the Acropolis that suggest an occupation into the Early Postclassic period. A single Early Postclassic period radiocarbon date was obtained from a deer bone fragment above the gravel fill, in the center of Plaza F-East (STP 38E), dating to AD 1026-1154 (95.4% probability, Phase 6, Table 1). Tohil Plumbate fragments are associated with surface contexts in multiple areas of the Main Plaza, including the rear of Plaza F-West (STP 242W) and the Ballcourt 1 complex (Unit 3). The exchange of Tohil Plumbate and Silho Fine Orange is traditionally ascribed to the period AD 900-1100 (Bishop, 2003; Neff and Bishop, 1988; Smith, 1958). Several of the elite residences, tombs and altars of the Acropolis are also associated with Early Postclassic artifacts, such as Tohil Plumbate and Silho Fine Orange pottery vessels, and metal ornaments such as copper rings, zoomorphic pendants, and gold sheet ornaments, which is also consistent with activity in the monumental zone during that period (Laló and Aguilar, 1996).

The Construction History of the Main Plaza

Test excavations immediately revealed that the eastern and western sides of the Plaza had very different construction histories and different construction techniques. Units in Plaza F-East (Units 2, 3, 4, 6, 8 and 9) indicated that the early strata of the eastern side of the plaza had been carefully constructed: heavy limestone boulders at the base served as ballast fill, followed by large amounts of yellowish brown soil containing dispersed *rajuelos* and lenses of *caliche* (crushed powdery limestone). These layers are visibly distinct as earlier strata below the final construction layer of cobbles and gravel that served to raise and level the plaza (Figure 4; see below). Diagnostic ceramics and other domestic artifacts from the Middle Classic period suggest that nearby middens from earlier residences may have been harvested to serve as construction fill for a major construction effort that created a leveled and open surface of Plaza F-East, likely in conjunction with the construction of Ballcourt 1 and the initial constructions on the Acropolis. Radiocarbon dates from animal bones from the lower strata of Units 3, 6 and 9 coincide remarkably, between AD 421 and 597 (95.4% probability; Phase 1, Table 1), consistent with relative dates for Tenam Puente's initial occupation based on ceramic chronologies, ca. AD 500 (Laló, 2005). One date from 2 m below surface in the plaza fill layers near the northwest corner of the ballcourt (Unit 2D), and two other faunal elements from the construction fill associated with the stela platform (Unit 6), form a second cluster of dates between AD 526 and AD 643 (between 60.7 and 95.4% probability, Phase 2a, Table 1). This suggests that the initial construction of Plaza F-East and Ballcourt 1 took place no earlier than AD 526, but prior to the major renovation of the plaza that occurred between AD 667 and 778. We did not find any evidence of buried residential structures under Plaza F-East itself; rather, we speculate that baskets of dirt were brought from earlier residences, presumably in the near vicinity. The earliest archaeological evidence of the ballgame in the eastern Chiapas highlands comes from the Long Count date on La Esperanza marker, which contains an image of a ballplayer, the Chinkultic emblem glyph, and a date of 9.7.17.12.14, or AD 591 (Kowalski, 1989: 13). It is plausible that the construction of Ballcourt 1 at Tenam Puente could have occurred around this date.

The possible Ballcourt 1 attendant house was placed over layers of light yellowish brown fill containing a large amount of domestic refuse. The refuse contained large densities of chert flakes, faunal remains, bone tools, and jute snail shell, and likely came from nearby residences. As in other areas of Plaza F-East, the plaza surface was remodeled, sealing the fill under a layer of limestone cobbles and gravel. A radiocarbon date from the first level of the unit, excavated just south of the structure wall, suggests that it was constructed shortly after the plaza's major renovation between AD 655-778 (91.1% probability, Phase 4a, Table 1). Notably, the south wall of the house is constructed using *sillares*, integrating its construction with the renovation of Ballcourt 1.

Some time after AD 600, but prior to the plaza's major renovation, the central area of Plaza F-East underwent several major architectural changes. The features uncovered in Unit 2 and associated shovel tests indicate that the northern edge of Ballcourt 1 initially extended at least 5 m to the west, with at least two strata of *sillares* defining the northern edge; the façade of Ballcourt 1 itself was reconstructed using the same technique, and these construction events likely occurred in tandem between AD 527 and 667 (Phase 2a, Table 1). The western side was defined by wall of *sillares* placed at a slight diagonal; the area was later filled with 8-15 cm gravel (Figure 7). The southern edge of the filled area was defined by a small stone foundation, which was only partially excavated.



Figure 7. STPs 14E-D, 14E-E, and 15E, showing the Ballcourt 1 north wall extension, and the intersecting diagonal wall (Photo by the authors, courtesy of the RETP).

New ritual activities also began to define the plaza space and sphere of activity. Two other carved stelae were documented by Blom and La Farge (1926) in the yard of the nearby ranch, Finca El Puente, but they may once have been located at Plaza F-East. Monument 1 bears a date corresponding to the k'atun period ending of 9.18.0.0.0 (October 9, AD 790), and depicts a standing figure, probably

a ruler, wearing Tlaloc goggles, a headdress, and carrying an *atlatl* (dart-thrower) and incense bag; Monument 2 depicts a multi-tiered headdress similar in style to stelae at Toniná (Earley, 2015). Three uncarved stelae currently remain in Plaza F-East, and appear to be roughly in situ, although we cannot be entirely certain of this, since the stelae and their platforms have not yet been excavated (Figure 2). Monument 22 is a stela located in the center of the plaza; our excavations revealed that it was originally positioned on a low platform that was at least 8 m long on its northern edge (Unit 6; Figure 8); the platform was completely buried by the final construction sequence of cobble and gravel fill so as to no be longer visible on the ground surface. Along the northern edge of the platform were artifacts suggestive of ritual paraphernalia along with other midden debris; decorated figurines, ceramic earspools, bone implements and ornaments, perforated dog tooth pendants, and a barbed element carved from a large mammal bone. The barbs are generally suggestive of stingray spines, which were important ritual objects in Maya autosacrificial rituals (Maxwell, 2000). However, actual stingray spines have been found in Acropolis cache deposits (Fossa 2, Structure 11), so the purpose of the possible effigy implement is not readily apparent. The stela was toppled at some point and broken into multiple small pieces; it is not yet clear whether it was “terminated” on purpose, or whether it occurred after the site’s abandonment. The other two stela were relatively intact, located in the south-center zone, and the southwest corner, respectively. Two radiocarbon dates from both Level 1 and Level 4 of the construction fill layers returned dates between AD 533 and 643, suggesting that the dated faunal elements were from the same recycled midden debris, and that the platform post-dated AD 533 (Table 1). However, the construction technique of the platform combines early-style *poc-ton* blocks and later-style *laja* slabs; if, as we suspect, the blocks are recycled from other civic structures, the platform is likely later than the radiocarbon dates from also-recycled fill artifacts would suggest.

The early phase of the plaza also contains evidence of feasting, provided by a large sheet midden near the edge of the Acropolis retaining wall, to the north of the buried Monument 22 platform (Unit 8; Figure 9). It was located just below the final gravel surface of the platform, and contained very high densities of smashed ceramic serving vessels, along with smaller densities of obsidian blades, faunal remains, an olive shell tinkler (of the type used as currency and ornaments; Mason and Freidel, 2012), and a small number of human bone fragments. Given the number of faunal remains, serving vessels, and small number of luxury items, we suggest that this feature represents the deliberate interment of the remains of an important ritual feast, given for or sponsored by elite patrons. The midden was associated with large limestone blocks, possibly the remains of another buried platform. Unfortunately, the radiocarbon samples from this context did not contain sufficient collagen to return dates.

The construction of Plaza F-West (Phase 4b) appears to have occurred much later than the initial construction of Plaza F-East (Phase 2a), using a very differ-

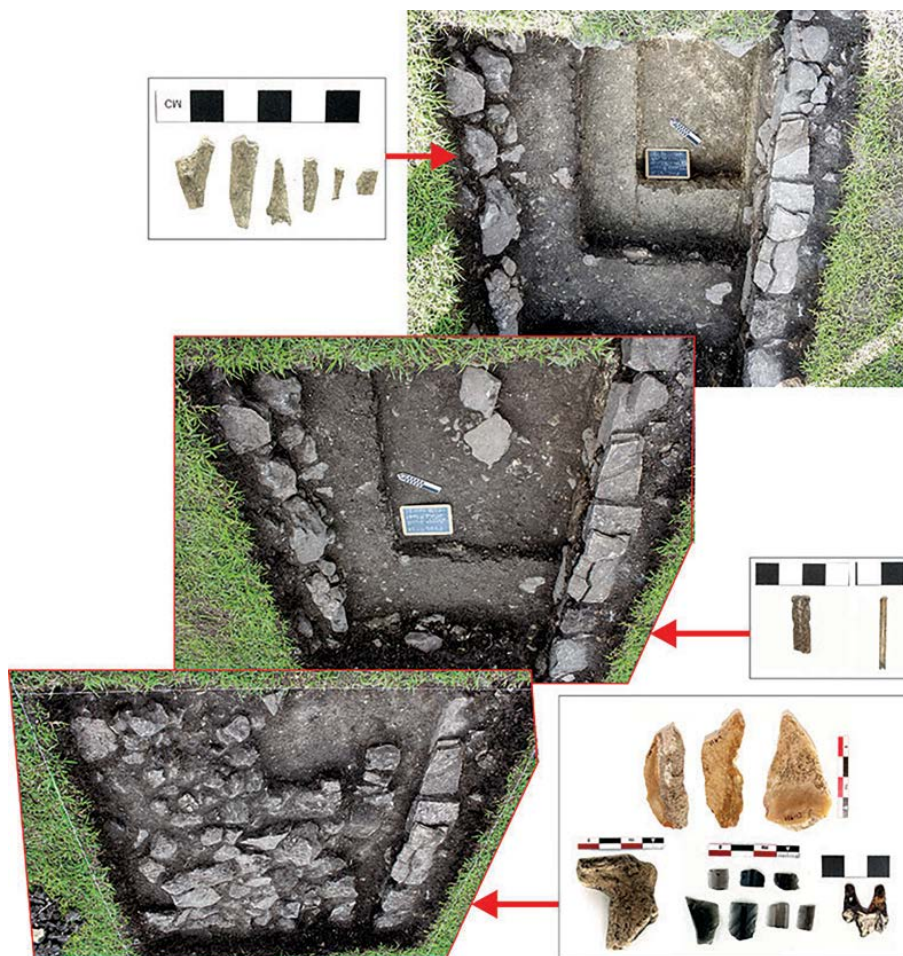


Figure 8. Pozo 6, showing the construction history of the central portion of Plaza F-East and the placement of the Monument 22 stela platform. Selected artifacts include a figurine foot, obsidian blades, a perforated dog tooth and chert percussion blades from Levels 1 and 2; chert artifacts, an effigy stingray spine and a bone needle from Level 4; and animal bone fragments from Level 7, recovered from the earliest construction phase (Photos by the authors, courtesy of the RETP).

ent construction technique, and likely occurred within a very short timeframe. Excavations in Units 1 and 4 revealed that the entire area comprising Plaza F-West was an immense area created through loosely packed layers of irregular limestone fills of different sizes (Figure 10). The large ballast fill below 2 m in depth consisted of very large limestone boulders (over 1 m diameter), with little to no soil; above that was a layer of smaller limestone cobbles (20-40 cm diameter) with some loosely packed soil, and similar to Plaza F-East, a layer of



Figure 9. Pozo 8, showing a thick sheet midden of smashed ceramics, together with selected artifacts: chert artifacts, an olive shell tinkler, and fragments of a white-tailed deer metatarsal. Below the midden, Layer 4 included large limestone blocks, possibly the remnants of a masonry-faced platform (Photos by the authors, courtesy of the RETP).

8-15 cm gravel covering the whole surface, and in some small areas, a layer of smaller 2-3 cm gravel still intact, suggesting that the entirety of the original Plaza F-West surface was covered with an un-plastered fine gravel layer. Based on the presence of some well-preserved areas, we hypothesize that the entire plaza was once also covered with thin earthen floors as well (Cap, 2015). Both the earthen floors and fine gravel subfloor layer have significantly eroded postdepositionally in many areas of the plaza, but were preserved in a few, scattered contexts; such erosion is common in highland Chiapas sites (Paris, 2012). We did not find evidence of permanent stalls (Dahlin *et al.*, 2007), and propose that temporary stalls were used instead (Hirth, 2009: 98); however, the erosion of the earth and fine gravel floor prevented the identification of postholes associated with temporary stalls (Hirth, 2009). The construction technique of graded limestone fill is much more similar to marketplaces at Yaxnohcah (Anaya *et al.*, in press; Parrott, n.d.) than to those in Belize (Cap, 2015) although, notably, few marketplaces

have been explored through deep test excavations. While our excavations were not able to reach bedrock due to safety concerns, we estimate that the depth of Plaza F-West was around 6 m near the western edge, based on the height of the west profile, and closer to 3 m on the eastern edge, as reflected in Units 1 and 4. Not counting the hidden staircase area, the area of fill that constituted the plaza was approximately 90 x 80 m; using an average depth of 4.5 m, we calculate a construction volume of 32,400 m³, a massive undertaking of human labor and collective effort.

The use of massive artificial terraces and limestone fills served to amplify horizontal space in a mountain environment, and similar techniques are observed at other highland Chiapas monumental zones, including Moxviquil (Paris, 2012), Yerba Buena (Bryant, 1988), Chinkultic (Ball 1980: 109), and Toniná (Becquelin and Taladoire, 1981; Taladoire, 2016). More broadly, they are also part of a long history of horizontal monumental architecture in southeast Mesoamerica, specifically artificial plateau and large platform construction, as exemplified by large artificial plateaus at the site of Aguada Fénix, Tabasco, dated to 1000-800 BC (Inomata *et al.*, 2020). In our excavations in the midden behind Structure 50 (Unit 7), the earlier of two stratigraphic layers returned dates of AD 667-777 (93.4% probability, Table 1), suggesting that the construction of the marketplace and the massive renovation of Plaza F-East both took place during that interval. The later, below-surface midden layer of Unit 7 returned a date of AD 763-889 (82.9% probability, Table 1), suggesting that the apogee of commercial activity at the site coincided with that period. The use of *sillares* in Structure 50, as documented in Unit 5, links it architecturally with the techniques used at Ballcourt 1 and the major building program of the Acropolis.

Discussion

Main Plazas in ancient Mesoamerican cities were important sites of civic activity, in which discourse and everyday practice, rulers and commoners, ritual and commerce, were all inscribed on the urban cityscape. At particular moments of Tenam Puente's history, particular generations of rulers managed to inspire (through either collective spirit or fear of reprisal) important building projects in the city center. Rather than a single type of activity, its Main Plaza provides a window into the multifunctional nature of ancient plazas, together with important modifications to the built environment, to emphasize certain meanings and programs of action over others.

Revisiting the five major types of activities taking place in Mesoamerican plazas as defined by Ossa, Smith and Lobo (2017), we observe a major shift from the constellation of activities organized in Tenam Puente's Main Plaza in its early construction phases, to those associated in its final form. The numerous small platforms that filled the plaza during its early construction phases likely served

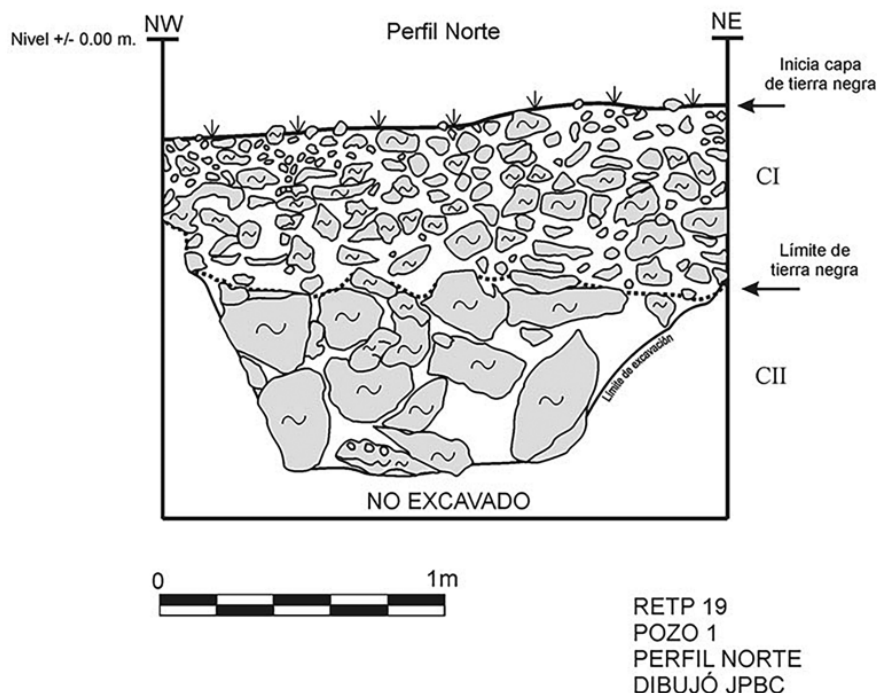


Figure 10. North profile of Unit 1, showing the layers of loosely backed limestone gravel, cobbles, and ballast fill, with the size of the fill increasing with the depth of the deposit (Drawing by José Pablo Bravo, courtesy of the RETP).

as focal points and nodes for public rituals associated with stelae and feasting activities; the later construction phases created a formal space for commercial activities, and increased the number of individuals who could attend public rituals. Prior to its expansion, the Main Plaza was also about half of the size of the later version, and the extension of the north wall of Ballcourt 1 created a slight barrier between the central plaza area and the access staircase to the Acropolis. Monument 22 platform was likely the site of numerous dedicatory and commemorative rituals; the bone effigy stingray spine suggests that these could have included autosacrifice. The removal of the stela platforms would have added a lot of accessible surface area to the plaza, and allowed spectators to more easily view ceremonies on the Acropolis stairway and to view or overhear ballgames in Ballcourt 1.

A second platform near the northern edge of the plaza was the locus of at least one important feasting ritual, featuring a very large number of ceramic serving dishes, and meat consumption. Such events may have served to commemorate an important occasion or ruler, or may have been used to promote cohesion among

elite families; between a ruler and their secondary lords or clients; or between rulers and their allies in contemporary Maya cities, such as Chinkultic or Toniná; it is unfortunately not possible to tell. Interestingly, the carved olive shell tinkler found in the sheet midden is nearly identical to those found in a small elite tomb in a small altar at the base of Structure 7 (Burial 4, Individual 2), a large temple in the western portion of the Acropolis that overlooks the marketplace. The tomb contained 47 olive shell tinklers, an enormous concentration of ceramic vessels above the masonry tomb, and offerings including two Silho Fine Orange vessels, a Tlaloc effigy vessel, alabaster vases, a zoomorphic copper pendant in the shape of a turtle, and jade beads (Laló, 1994). While speculative, the inclusion of the shell tinkler and the emphasis on smashed ceramic vessels suggest stylistic parallels between the deposits, and that the same or related members of Tenam Puente's elite may have been involved in their creation. The Silho Fine Orange vessels and copper pendant suggest that the tomb dates to the Early Postclassic period (AD 900-1100; Bishop, 2003; Neff and Bishop, 1988; Smith, 1958), and the Unit 8 midden may date to the same period.

It should be emphasized just how much the construction of Plaza F-West, with approximately 32,400 cubic meters of fill, represents an immense investment of urban planning and collective labor. The scale of the project increases even more if we consider that the renovations to Plaza F-East may have occurred around the same time, or at least within the same general phase of urban renewal and building. First, the final surface of Plaza F-West is similar in construction technique to the cobbles and gravel used to create the final construction layer of Plaza F-East. Second, renovations to the ballcourt, including the filling of the north wall extension, the addition of the east and west lateral platforms (possibly spectator viewing areas), and the renovation of the southern temple façade, share *sillares*-based construction techniques, together with the ballcourt attendant house and Structure 50 in Plaza F-West. Third, the radiocarbon date ranges from the ballcourt attendant house overlap precisely with those of the earliest midden deposits of Structure 50. However, the earlier phases of Ballcourt 1 likely pre-date the construction of Plaza F-West. Thus, in designing and constructing the marketplace in a newly constructed space on the far west side of the Main Plaza, the architects and builders deliberately retained and expanded the multi-use space of Plaza F-East, and maintained the water drainage systems on the eastern edge of Ballcourt 1.

There are clear distinctions between the construction techniques used in different plaza features, suggesting that they were built under different labor conditions. In the original construction of Plaza F-East (Phase 2a), domestic midden soils were collected and repurposed from Middle Classic residences, presumably from the areas surrounding the Main Plaza. Because these areas remained occupied during the Late Classic period, this suggests that the midden soils were likely obtained from highly-established or founding-lineage households (McAnany, 1995). It seems plausible that the midden soils were transported to the plaza

with the consent and likely participation of the household members, suggesting that its construction represents a type of collective action, possibly coordinated by the site's rulers and officials (Blanton and Fargher, 2016). In contrast, the relative lack of soil utilized in the Plaza F-West construction, leads us to speculate that midden soil deposits were no longer easily available. Instead, the fill for Plaza F-West, as well as the new gravel/cobble surface for Plaza F-East, was likely mined from a quarry, and transported through significant amounts of human labor. It is not possible to say whether the labor force was the result of coercive or collective action, as these construction efforts could result variously from community efforts, *corvée* labor (as a form of taxation), or even coerced labor by prisoners or slaves (Blanton and Fargher, 2016). We can assert, however, that it was a massive and highly-coordinated, highly-organized effort that likely took place rapidly, and almost certainly with a high degree of coordination by the site's rulers, as the resurfacing of Plaza F-East significantly modified important ritual features.

The effect of the renovations was to create a large expanse of open plaza space, which may have facilitated mass spectacles by increasing the number of possible spectators. New structures such as the shrines along the division between the East and West plaza spaces (Structures 52 and 53), would have re-focused ritual activity from the plaza center to its edges. Equally important, the construction of a designated marketplace plaza may have positioned the city into a regional hub for commerce, increasing the flow of staple foods from highland and lowland areas; attracting foreign merchants peddling exotic luxury items such as marine shell, jade, copper and fine pottery; and potentially providing rulers with a new source of revenue in the form of marketplace taxes levied on merchants and vendors (Sahagún, 1959). Earlier marketplaces have not been identified to date in the monumental zone of Tenam Puente or elsewhere at the site, but they may have existed; however, positioning a large, formal marketplace at the base of the Acropolis would have provided the site's rulers and officials with a significant amount of control over its construction and operation. The significant investment of time and labor required for its creation, suggest its importance to the rulers who likely planned and organized its creation, and the community members who provided the heavy labor for its creation. The marketplace's architects may have aimed to formalize and centralize previous commercial activity in the city, possibly periodic vending in the Main Plaza; neighborhood marketplaces (Anaya *et al.*, in press) have not been located to date. We observed no evidence for permanent stalls in Plaza F-West, suggesting that they were likely temporary awnings, in contrast to more formal marketplaces at Tikal (Becker, 2015) and elsewhere. As a deliberate design choice, we speculate that this may have allowed the marketplace to occasionally serve as a "spillover arena" for especially large ceremonies in Plaza F-East, consistent with modifications to the latter space.

In tandem with the expansion of public and commercial space at the site, the building program may have also served to fortify the city's defensive capa-

bilities. The Acropolis and most of the outlying residential groups all occupy strategic and defensive locations on adjacent hilltops on the southeast edge of the Comitán Plateau. Even so, the Main Plaza expansion created several useful defensive features. It effectively created a 50 meter-high retaining wall with a near-vertical drop from the marketplace plaza to the intermountain saddle below, which would have been highly defensible from above. Secondly, the expansion created a principal access point to the Main Plaza from the intermountain access road that circumnavigates the western edge of the Acropolis. Much like modern visitors do today, most ancient travelers would have traversed a single, narrow, ramp-like entrance from the intermountain road, entering the Main Plaza at the southwest corner of the marketplace plaza, traversing its southern edge, then cutting diagonally across the Main Plaza itself, before navigating a series of steep, highly-defensible single access-point staircases. A second, less visible staircase in the northwest corner of the Acropolis would also have served as a defensible bottleneck. The tallest temples of the Acropolis also command a wide view of both the Comitán Plateau and the hilltops to the south, giving its residents ample time to assemble their defenses against military attack.

The timing of these public works projects may be particularly significant within the arc of Maya political history. The dates from Unit 7 suggest that the massive renovation of the Main Plaza occurred sometime from AD 667 to 777. This interval coincides roughly with a prolonged interval of conflict in the Western Maya region, including mutual captive-taking between Palenque, Toniná, and their allies; and the expansionist reigns of Baknal Chak (AD 688-727) of Toniná, K'inich Kan Balam of Palenque (AD 635-702) and Itzamnaaj Balam (Shield Jaguar III; AD 681-742) and Yaxun Balam (Bird Jaguar IV; AD 752-768) at Yaxchilán (Anaya *et al.*, 2003; Martin and Grube, 2000; Taladoire, 2016). Significant construction activity also took place at Chinkultic ca. AD 770, including the construction of the upper Acropolis and the main ballcourt (Ball, 1980: 95) and the dedication of several associated monuments, including Monument 1 dated to AD 771 (Proskouriakoff, 1950; Navarrete, 1984) and Monument 7, dated to 9.17.10.0.0, or November 30, AD 780 (Blom and La Farge, 1926: 433; Morley, 1938: 317-318). This suggests that a flurry of public architecture construction and monument dedication took place at both Tenam Puente and Chinkultic in the period between AD 760 and 790. Notably, it falls just prior to the century of political turmoil between AD 800 and 900 that led to the abandonment of many political capitals across the southern Maya Lowlands (Martin and Grube, 2000). At this moment in history, Tenam Puente's rulers may have seen significant value in de-emphasizing private rituals and feasts, in order to promote community solidarity through the expansion of public space and mass spectacle, and organize the construction of a new central marketplace to promote commerce and prosperity.

While we cannot presume to know the true motivations of Tenam Puente's rulers and constituents, we can observe significant shifts in official public building programs and everyday practice, as encapsulated in radical changes to the

design of the built cityscape and the archaeological traces of everyday use of public space. The Main Plaza expansion took planning, leadership, coordinated effort, and community buy-in and cooperation order to successfully execute the project. We can identify a shift in elite discourse as manifested in the built environment of the Main Plaza, interring the remains of stela rituals and feasting from previous generations, and creating spaces to foster commercial activity and mass spectacles such as ceremonies, performances, and ballgames, enabling larger number of people to participate in civic life, accrue wealth, and access exotic luxury goods. Rather than the stela rituals, sacrifices and feasts that centered around rulership and lineage, the renovations to the Main Plaza are suggestive of a new emphasis on civic engagement and prosperity. While Tenam Puente's rulers were undoubtedly the primary beneficiaries of the building program and urban renewal, its residents may also have seen some benefit for the expense of their resources and labor, as a way of enhancing their own economic opportunities, and as a bulwark against the instability that gripped many of their political allies and/or rival kingdoms in northeast Chiapas.

Acknowledgments

Special thanks to the staff, students, and workers of the Redes Económicas de Tenam Puente project, and to the community of Ejido Francisco Sarabia. This project was undertaken with the permission of the Consejo de Arqueología, Instituto Nacional de Antropología e Historia, with funding from the Social Sciences and Humanities Research Council of Canada (SSHRC ref.: 430-2018-00629), the University of Calgary (URGC SSH Faculty Seed Grant RSO Number: 1045964), and the Universidad de Ciencias y Artes de Chiapas.

References

- Aguilar Rojas, María de la Luz
2004 "La cerámica arqueológica de Tenam Puente", tesis de maestría en Arqueología. Puebla: Universidad de las Américas.
- Álvarez Asomoza, Carlos
2000 *El patrón de asentamiento en Las Margaritas, Chiapas*. México: Universidad Nacional Autónoma de México, Instituto de Investigaciones Filológicas, Centro de Estudios Mayas.
- Anaya Hernández, Armando, Stanley P. Guenter, and Marc U. Zender
2003 "Sak Tz'i', a Classic Maya Center: A Locational Model Based on GIS and Epigraphy", *Latin American Antiquity*, 14 (2): 179-191. DOI: <https://doi.org/10.2307/3557594>.

- Anaya Hernández, Armando, Kathryn Reese-Taylor, Debra S. Walker, and Nicholas P. Dunning
In press "The Neighborhood Marketplaces of Yaxnohcah", *Archeological Papers of the American Anthropological Association*, accepted with revision.
- Andrews, George F.
1975 *Maya Cities: Placemaking and Urbanization*. Norman: University of Utah Press.
- Ashmore, Wendy
1991 "Site-Planning Principles and Concepts of Directionality Among the Ancient Maya", *Latin American Antiquity*, 2: 199-226. DOI: <https://doi.org/10.2307/972169>.
- Ball, Joseph W.
1980 *The Archaeological Ceramics of Chinkultic, Chiapas, Mexico*. Provo: Brigham Young University (Papers of the New World Archaeological Foundation, 43).
- Barrera Vásquez, Alfredo (dir.)
1980 *Diccionario Maya Cordemex: Maya-Español, Español-Maya*. Mérida: Ediciones Cordemex.
- Becker, Marshall J.
2015 "Ancient Maya Markets: Architectural Grammar and Market Identifications", *The Ancient Maya Marketplace*, pp. 90-110, Eleanor M. King (ed.). Tucson: University of Arizona Press.
- Becquelin, Pierre, and Eric Taladoire
1981 "Informe de la Cuarta Temporada de Excavaciones en Toniná, Chiapas, 1979", *Estudios de Cultura Maya*, 13: 349-371.
- Becquelin, Pierre, and Claude F. Baudéz
1982 *Tonina, Une Cité Maya Du Chiapas*. Paris: Mission archéologique et ethnologique française au Mexique (Editions recherche sur les civilisations, Etudes Mésoaméricaines, 4).
- Bishop, Ronald L.
2003 "Five Decades of Maya Fine Orange Ceramic Investigation by INAA", *Patterns and Process: A Festschrift in Honor of Dr. Edward V. Sayre*, pp. 81-92, Lambertus van Zelst (ed.). Washington: Smithsonian Center for Materials Research and Education.
- Blake, Michael
2010 *Colonization, Warfare and Exchange at the Postclassic Maya Site of Canajasté, Chiapas, Mexico*. Provo: Brigham Young University (Papers of the New World Archaeological Foundation, 70).
- Blanton, Richard E., and Lane F. Fargher
2016 *How Humans Cooperate: Confronting the Challenges of Collective Action*, Boulder: University Press of Colorado.

- Blom, Frans, and Oliver La Farge.
1926 *Tribes and Temples*. New Orleans: Tulane University (MARI Publications 1 and 2).
- Bryant, Douglas D.
1988 "Excavations at House 1, Yerba Buena, Chiapas Central Highlands, Mexico", *Archaeology, Ethnohistory, and Ethnoarchaeology in the Maya Highlands of Chiapas, Mexico*, Douglas Bryant, Edward Calnek, Thomas A. Lee and Bryan Hayden (eds.). Provo: Brigham Young University (Papers of the New World Archaeological Foundation, 54-56).
- Bryant, Douglas Donne, John E. Clark, and David Cheetham
2005 *Ceramic Sequence of the Upper Grijalva Region, Chiapas, Mexico, volume 2*. Provo: Brigham Young University (Papers of the New World Archaeological Foundation, 67).
- Canuto, Marcello A., James P. Charton, and Ellen E. Bell
2010 "Let No Space Go to Waste: Comparing the Uses of Space Between Two Late Classic Centers in the El Paraíso Valley, Copán, Honduras", *Journal of Archaeological Science*, 37 (1): 30-41. doi: <https://doi.org/10.1016/j.jas.2009.08.021>.
- Cap, Bernadette
2015 "How to Know It When We See It: Marketplace Identification at the Classic Maya Site of Buenavista Del Cayo, Belize", *The Ancient Maya Marketplace*, pp. 111-137, Eleanor M. King (ed.). Tucson: University of Arizona Press.
- Carrasco, Pedro
1980 "Market and Merchants in the Aztec Economy", *Journal of the Steward Anthropological Society*, 11 (2): 249-270.
- Carrasco Vargas, Ramón, Verónica A. Vásquez López, and Simon Martin
2009 "Daily Life of the Ancient Maya Recorded on Murals at Calakmul, Mexico", *Proceedings of the National Academy of Science*, 106: 19245-19249. doi: <https://doi.org/10.1073/pnas.0904374106>.
- Casas, fray Bartolomé de las
1958 *Apologética Historia. Biblioteca de Autores Españoles, tomo CVI. Obras Escogidas de Fray Bartolomé de Las Casas, IV*. Madrid: Ediciones Atlas.
- Chase, Arlen F., Diane Z. Chase, Richard E. Terry, Jacob M. Horlacher, and Adrian S. Chase
2015 "Markets Among the Ancient Maya: The Case of Caracol, Belize", *The Ancient Maya Marketplace*, pp. 226-250, Eleanor M. King (ed.). Tucson: University of Arizona Press.
- Cheek, Charles D.
1983 "Excavaciones en la Plaza Principal: resumen y conclusiones", *Introducción a la arqueología de Copán, Honduras*, pp. 319-348. Tegucigalpa: Secretaría de Estado en el Despacho de Cultura y Turismo (Proyecto Arqueológico Copán, 2).

- Chesson, Meredith S.
2001 "Social Memory, Identity, and Death: An Introduction", *Archaeological Papers of the American Anthropological Association*, 10 (1): 1-10. doi: <https://doi.org/10.1525/ap3a.2001.10.1.1>.
- Connerton, Paul
1989 *How Societies Remember*. Cambridge and New York: Cambridge University Press.
- Culbert, T. Patrick
1965 *The Ceramic History of the Central Highlands of Chiapas, Mexico*. Provo: Brigham Young University.
- Dahlin, Bruce H., Daniel Bair, Matthew Moriarty, and Richard Terry
2010 "The Dirt on Food: Ancient Feasts and Markets among the Lowland Maya", *Pre-Columbian Footways: Interdisciplinary Approaches to Food, Culture, and Markets in Ancient Mesoamerica*, pp. 191-232, John E. Staller and Michael D. Carrasco (eds.). New York: Springer Science.
- Dahlin, Bruce H., Christopher T. Jensen, Richard E. Terry, David R. Wright, and Timothy Beach
2007 "In Search of an Ancient Maya Market", *Latin American Antiquity*, 18 (4): 363-384. doi: <https://doi.org/10.2307/25478193>.
- Deal, Michael
1985 "Household Pottery Disposal in the Maya Highlands: An Ethnoarchaeological Interpretation", *Journal of Anthropological Archaeology*, 4: 243-291. doi: [https://doi.org/10.1016/0278-4165\(85\)90008-X](https://doi.org/10.1016/0278-4165(85)90008-X).
- De Montmollin, Olivier
1989a *Settlement Survey in the Rosario Valley, Chiapas, Mexico*. Provo: Brigham Young University (Papers of the New World Archaeological Foundation, 57).
1989b *The Archaeology of Political Structure: Settlement Analysis in a Classic Maya Polity*. Cambridge: Cambridge University Press.
1995 *Settlements and Politics in Three Classic Maya Polities*. Madison: Prehistory Press (Monographs in World Archaeology, 24).
- Díaz del Castillo, Bernal
1960 *Historia verdadera de la conquista de la Nueva España*. 2 vols. México: Editorial Porrúa.
- Doyle, James A.
2013 "Early Maya Geometric Planning Conventions at El Palmar, Guatemala", *Journal of Archaeological Science*, 40 (2): 793-798. doi: <https://doi.org/10.1016/j.jas.2012.08.006>.
- Earley, Caitlin C.
2015 "At the Edge of the Maya World: Power, Politics, and Identity in Monuments

from the Comitán Valley, Chiapas, Mexico”, PhD Dissertation. Austin: University of Texas.

- Eppich, Keith, and David Freidel
2015 “Markets and Marketing in the Classic Maya Lowlands”, *The Ancient Maya Marketplace: The Archaeology of Transient Space*, pp. 195-225, Eleanor M. King (ed.). Tucson: The University of Arizona Press.
- Feldman, Lawrence H.
1985 *A Tumpine Economy: Production and Distribution Systems in Sixteenth-Century Eastern Guatemala*. Lancaster: Labyrinthos.
- Freidel, David A.
1981 “The Political Economics of Residential Dispersion among the Lowland Maya”, *Lowland Maya Settlement Patterns*, pp. 371-382, Wendy Ashmore (ed.). Albuquerque: University of New Mexico Press, School of American Research.
- Freidel, David A., and Linda Schele
1988 “Kingship in the Late Preclassic Maya Lowlands: The Instruments and Places of Ritual Power”, *American Anthropologist*, 90 (3): 547-567. doi: <https://doi.org/10.1525/aa.1988.90.3.02a00020>.
- Fulton, Kara A., E. Christian Wells, and Donald A. Storer
2017 “Ritual or Residential? An Integrated Approach to Geochemical Prospection for Understanding the Use of Plaza Spaces at Palmarejo, Honduras”, *Archaeological and Anthropological Sciences*, 9 (6): 1059-1076. doi: <https://doi.org/10.1007/s12520-013-0170-3>.
- Haviland, William A.
1970 “Tikal, Guatemala and Mesoamerican Urbanism”, *World Archaeology*, 2 (2): 186-198. doi: <https://doi.org/10.1080/00438243.1970.9979473>.
- Hayden, Brian, and Aubrey Cannon
1983 “Where the Garbage Goes: Refuse Disposal in the Maya Highlands”, *Journal of Anthropological Archaeology*, 2 (2): 117-163. doi: [https://doi.org/10.1016/0278-4165\(83\)90010-7](https://doi.org/10.1016/0278-4165(83)90010-7).
- Hendon, Julia A.
2000 “Having and Holding: Storage, Memory, Knowledge, and Social Relations”, *American Anthropologist*, 102 (1): 42-53. doi: <https://doi.org/10.1525/aa.2000.102.1.42>.
- Hirth, Kenneth
2009 “Craft Production in a Central Mexican Marketplace”, *Ancient Mesoamerica*, 20 (1): 89-102.
- Hutson, Scott
2000 “Carnival and Contestation in the Aztec Marketplace”, *Dialectical Anthropology*, 25 (2): 123-149. doi: <https://doi.org/10.1023/A:1011058318062>.

- Hutson, Scott R., and Richard E. Terry
 2006 "Recovering Social and Cultural Dynamics from Plaster Floors: Chemical Analyses at Ancient Chunchucmil, Yucatan, Mexico", *Journal of Archaeological Science*, 33 (3): 391-404. doi: <https://doi.org/10.1016/j.jas.2005.08.004>.
- Iannone, Gyles, and Samuel V. Connell
 2003 "Perspectives on Ancient Maya Rural Complexity: An Introduction", *Perspectives on Ancient Maya Rural Complexity*, pp. 1-6, Gyles Iannone and Samuel V. Connell (eds.). Los Angeles: University of California (The Cotsen Institute of Archaeology, Monograph 49).
- Inomata, Takeshi
 2006 "Plazas, Performers, and Spectators: Political Theaters of the Classic Maya", *Current Anthropology*, 47 (5): 805-842. doi: <https://doi.org/10.1086/506279>.
- Inomata, Takeshi, Daniela Triadan, Kazuo Aoyama, Victor Castillo, and Hitoshi Yonenobu
 2013 "Early Ceremonial Constructions at Ceibal, Guatemala, and the Origins of Lowland Maya Civilization", *Science*, 340 (6131): 467-471. doi: <https://doi.org/10.1126/science.1234493>.
- Inomata, Takeshi, and Kenichiro Tsukamoto
 2014 "Introduction. Gathering in an Open Space: Introduction to Mesoamerican Plazas", *Mesoamerican Plazas: Arenas of Community and Power*, pp. 3-18, Takeshi Inomata and Kenichiro Tsukamoto (eds.). Tucson: University of Arizona Press.
- Inomata, Takeshi, Daniela Triadan, Verónica A. Vázquez, Juan Carlos Fernandez-Díaz, Takayuki Omori, María Belén Méndez, Melina García, Timothy Beach, Clarissa Cagnato, and Kazuo Aoyama
 2020 "Monumental Architecture at Aguada Fénix and the Rise of Maya Civilization", *Nature*, 582: 530-533. doi: <https://doi.org/10.1038/s41586-020-2343-4>.
- Jones, Christopher
 2015 "The Marketplace at Tikal", *The Ancient Maya Marketplace*, pp. 67-89, Eleanor M. King (ed.). Tucson: University of Arizona Press.
- Joyce, Arthur A., Laura A. Bustamante, and Marc N. Levine
 2001 "Commoner Power: A Case Study from the Classic Period Collapse on the Oaxaca Coast", *Journal of Archaeological Method and Theory*, 8 (4): 343-385. doi: <https://doi.org/10.1023/A:1013786700137>.
- Joyce, Rosemary A.
 2001 "Burying the Dead at Tlatilco: Social Memory and Social Identities", *Archaeological Papers of the American Anthropological Association*, 10 (1): 12-26. doi: <https://doi.org/10.1525/ap3a.2001.10.1.12>.
- Keller, Angela H.
 2011 "A Road by Any Other Name: Trails, Paths, and Roads in Maya Language and

Thought", *Landscapes of Movement: Trails, Paths, and Roads in Anthropological Perspective*, pp. 133-157, James Snead, Clark Erickson, and Andrew Darling (eds.). Philadelphia: University of Pennsylvania Press.

King, Eleanor M.

- 2015 "The Ethnohistoric Evidence for Maya Markets and Its Archaeological Implications", *The Ancient Maya Marketplace*, pp. 33-66, Eleanor M. King (ed.). Tucson: University of Arizona Press.

Kowalski, Jeff Karl

- 1989 *The Mythological Identity of the Figure on the La Esperanza (Chinkultic) Ball Court Maker*. Washington: Center for Maya Research (Research Reports on Ancient Maya Writing, 27).

Laló Jacinto, Gabriel

- 1994 "Proyecto Arqueológico Tenam Puente", Informe de la Primera Temporada de Campo 1992-1993. México: Consejo de Arqueología del Instituto Nacional de Antropología e Historia, mecanuscrito.
- 2001 "Los juegos de pelota en Tenam Puente, Chiapas", *XIV Simposio de Investigaciones Arqueológicas en Guatemala, 2000*, pp. 553-563, Juan Pedro Laporte, Ana Claudia Suasnávar and Bárbara Arroyo (eds.). Guatemala: Museo Nacional de Arqueología y Etnología.
- 2002 "La arquitectura de Tenam Puente", *Memorias del Tercer Congreso Internacional de Mayistas*, volumen II, pp. 406-419. México: Universidad Nacional Autónoma de México, Instituto de Investigaciones Filológicas, Centro de Estudios Mayas, Universidad de Quintana Roo.
- 2005 "Exploraciones arqueológicas en Tenam Puente, Chiapas", *IV Coloquio Pedro Bosch Gimpera: Arqueología Mexicana*, pp. 755-774, Ernesto Vargas (ed.). México: Universidad Nacional Autónoma de México, Instituto de Investigaciones Antropológicas.

Laló Jacinto, Gabriel, and María de la Luz Aguilar

- 1996 "El Postclásico Temprano en Tenam Puente", *Quinto Foro de Arqueología de Chiapas*, pp. 23-37. Tuxtla Gutiérrez: Gobierno del Estado de Chiapas (Serie Memorias).

Laporte, Juan Pedro, and Jorge E. Chocón

- 2008 "¿Será un Palacio?... ¡No! ¿Será una Acrópolis?... ¡No!: un conjunto de función desconcertante en el centro de Pueblito, Petén", *XXI Simposio de Investigaciones Arqueológicas en Guatemala, 2007*, pp. 696-712, Juan Pedro Laporte, Bárbara Arroyo, and Héctor Mejía (eds.). Guatemala: Museo Nacional de Arqueología y Etnología.

Latour, Bruno

- 1994 "On Technical Mediation", *Common Knowledge*, 3 (2): 29-64.

Lenkersdorf, Carlos

- 2005 *Tojolabal para principiantes. Lengua y cosmovisión mayas en Chiapas*, México: Plaza y Valdés.

- Liendo, Rodrigo, and Francisca Zalaquett
 2011 *Representaciones y espacios públicos en el área maya: un estudio interdisciplinario*. México: Universidad Nacional Autónoma de México.
- Lowe, Gareth W.
 1959 *Archaeological Exploration of the Upper Grijalva River, Chiapas, Mexico*. Orinda: New World Archaeological Foundation (Papers of the New World Archaeological Foundation, 2).
- Lowe, Lynneeth, and Carlos Álvarez A.
 2002 "Informe preliminar de las exploraciones realizadas en el sitio Cimientes de Las Margaritas, Chiapas, Segunda Temporada (1995)," *Memorias del Tercer Congreso Internacional de Mayistas*, volumen II, pp. 429-443. México: Universidad Nacional Autónoma de México, Universidad de Quintana Roo.
- Marcus, Joyce
 1983 "The Nature of the Mesoamerican City", *Prehistoric Settlement Patterns: Essays in Honor of Gordon R. Willey*, pp. 195-242, Evan Z. Vogt and Richard M. Leventhal (eds.). Albuquerque: University of New Mexico Press.
 1989 "From Centralized Systems to City-States: Possible Models for the Epiclassic", *Mesoamerica After the Decline of Teotihuacan A.D. 700-900*, pp. 201-208, Richard A. Diehl and Janet Catherine Berlo (eds.). Washington: Dumbarton Oaks Research Library and Collection.
- Martin, Simon, and Nikolai Grube
 2000 *Chronicle of the Maya Kings and Queens: Deciphering the Dynasties of the Ancient Maya*. London: Thames and Hudson.
- Masson, Marilyn A., and David A. Freidel
 2012 "An Argument for Classic Era Maya Market Exchange", *Journal of Anthropological Archaeology*, 31: 455-484. doi: <https://doi.org/10.1016/j.jaa.2012.03.007>.
- Masson, Marilyn, and Carlos Peraza Lope
 2014 *Kukulcan's Realm: Urban Life at Ancient Mayapán*. Boulder: University Press of Colorado.
- Maxwell, David
 2000 "Beyond Maritime Symbolism: Toxic Marine Objects from Ritual Contexts at Tikal", *Ancient Mesoamerica*, 11: 91-98.
- McAnany, Patricia A.
 1995 *Living with the Ancestors: Kinship and Kingship in Ancient Maya Society*. Austin: University of Texas Press.
 2010 *Ancestral Maya Economies in Archaeological Perspective*. Cambridge: Cambridge University Press.
- Morley, Sylvanus G.
 1938 *The Inscriptions of Peten. 5 Vols*. Washington: Carnegie Institution of Washington (Publication No. 16).

- Navarrete, Carlos
 1984 *Guía para el estudio de los monumentos esculpidos de Chinkultic, Chiapas, México*. México: Universidad Nacional Autónoma de México.
 2007 "El complejo escénico de Chinkultic, Chiapas", *XX Simposio de Investigaciones Arqueológicas en Guatemala*, pp. 987-1006, Juan Pedro Laporte, Bárbara Arroyo and Héctor Mejía (eds.). Guatemala: Museo Nacional de Arqueología y Etnología.
- Neff, Hector, and Ronald L. Bishop
 1988 "Plumbate Origins and Development", *American Antiquity*, 53 (3): 505-522. doi: <https://doi.org/10.2307/281214>.
- Ossa, Alanna, Michael E. Smith, and José Lobo
 2017 "The Size of Plazas in Mesoamerican Cities and Towns: A Quantitative Analysis", *Latin American Antiquity*, 28 (4): 457-475. doi: <https://doi.org/10.1017/laq.2017.49>.
- Paris, Elizabeth H.
 2012 "Political Economy on the Postclassic Western Maya Frontier", Ph.D. dissertation. Albany: University at Albany, SUNY.
- Paris, Elizabeth H., Eric Taladoire, and Thomas A. Lee Jr.
 2015 "Return to Moxviquil: Form and Function in a Small Maya City", *Ancient Mesoamerica*, 26 (1): 81-112. doi: <https://doi.org/10.1017/S0956536115000048>.
- Paris, Elizabeth H., and Roberto López Bravo
 2017 "Los mayas de los Altos de Chiapas y sus vecinos occidentales: interacción, identidad e intercambio en una frontera cultural", *Estudios de Cultura Maya*, 49: 39-66. doi: <https://doi.org/10.19130/iifl.ecm.2017.49.765>.
 2019 "Gulf Coast Influence at Moxviquil, Chiapas, Mexico", *Cambridge Archaeological Journal*, 30 (2): 1-17. doi: <https://doi.org/10.1017/S0959774319000465>.
- Paris, Elizabeth H., Roberto López Bravo, and Gabriel Laló Jacinto
 2019 "An Archaic Period Stemmed and Barbed Point from Tenam Puente, Chiapas, Mexico", *Arqueología Iberoamericana*, 43: 62-66.
- Parrott, Nathan D.
 n.d. "Sakjol: An Ancient Maya Neighborhood Marketplace at Yaxnohcah", M. A. thesis. Calgary: University of Calgary.
- Proskouriakoff, Tatiana
 1950 *A Study of Classic Maya Sculpture*. Washington: Carnegie Institution of Washington (Publication No. 593).
- Rapoport, Amos
 1982 *The Meaning of the Built Environment*. London: Sage.
- Ringle, William M., and George J. Bey III
 2001 "Post-Classic and Terminal Classic Courts of the Northern Maya Lowlands",

Royal Courts of the Ancient Maya: Data and Case Studies, volume 2, pp. 266-307, Takeshi Inomata and Stephen D. Houston (eds.). Boulder: Westview Press.

Rivero Torres, Sonia E.

- 1977 "Los Cimientos: análisis del patrón de asentamiento," tesis de licenciatura en Arqueología. México: Escuela Nacional de Antropología e Historia.
- 1987 *Los Cimientos, Chiapas, Mexico: A Late Classic Maya Community*. Provo, UT: Brigham Young University (Papers of the New World Archaeological Foundation, 51).
- 1990 *Patrón de asentamiento rural en la región de San Gregorio, Chiapas, para el Clásico Tardío*. México: Instituto Nacional de Antropología e Historia (Colección Científica, Serie Arqueología).

Sahagún, fray Bernardino de

- 1959 *Book 9. The Merchants*. Santa Fe: Monographs of the New School of American Research and the Museum of New Mexico.

Schele, Linda, and Mary Ellen Miller

- 1986 *Blood of Kings: Dynasty and Ritual in Maya Art*. New York and Fort Worth: Goerge Brazillier and Kimbell Art Museum.

Schwake, Sonja A., and Gyles Iannone

- 2010 "Ritual Remains and Collective Memory: Maya Examples from West Central Belize", *Ancient Mesoamerica*, 21 (2): 331-339. doi: <https://doi.org/10.1017/S0956536110000283>.

Scott, James C.

- 1990 *Domination and the Arts of Resistance: Hidden Transcripts*. New Haven: Yale University Press.

Seler, Eduard

- 1901 *Die Alten Ansiedelungen von Chacula in Distrikte Nenton Des Departamente Huehuetenango Der Republik Guatemala*. Berlin: Dietrich Reimer (E. Vohsen).

Shaw, Leslie C.

- 2012 "The Elusive Maya Marketplace: An Archaeological Consideration of the Evidence", *Journal of Archaeological Research*, 20 (2): 117-155. doi: <https://doi.org/10.1007/s10814-011-9055-0>.

Smith, Michael E.

- 2005 "City Size in Late Postclassic Mesoamerica", *Journal of Urban History*, 31: 403-434. doi: <https://doi.org/10.1177/0096144204274396>.
- 2008 *Aztec City-State Capitals*. Tallahassee: University Press of Florida.

Smith, Michael E., and Frances F. Berdan

- 2003 "Spatial Structure of the Mesoamerican World System", *The Postclassic Mesoamerican World*, pp. 21-31, Michael E. Smith and Frances F. Berdan (eds.). Salt Lake City: University of Utah Press.

- Smith, Robert E.
1958 "The Place of Fine Orange Pottery in Mesoamerican Archaeology", *American Antiquity*, 24 (2): 151-60. doi: <https://doi.org/10.2307/277476>.
- Speal, C. Scott
2014 "The Evolution of Ancient Maya Exchange Systems: An Etymological Study of Economic Vocabulary in the Mayan Language Family", *Ancient Mesoamerica*, 25 (1): 69-113. doi: <https://doi.org/10.1017/S0956536114000078>.
- Stark, Barbara L., and Alanna Ossa
2010 "Origins and Development of Mesoamerican Marketplaces: Evidence from South-Central Veracruz, Mexico", *Archaeological Approaches to Market Exchange in Ancient Societies*, pp. 99-126, Christopher P. Garraty and Barbara L. Stark (eds.). Boulder: University Press of Colorado.
- Taladoire, Eric
2016 "Las bases económicas de una entidad política maya. El caso de Toniná", *Estudios de Cultura Maya*, 48: 11-37. doi: <http://dx.doi.org/10.19130/iifl.ecm.2016.48.753>.
- Terry, Richard E., Daniel A. Bair, and Eric G. Coronel
2015 "Soil Chemistry in the Search for Ancient Maya Marketplaces", *The Ancient Maya Marketplace*, pp. 138-67, Eleanor M. King (ed.). Tucson: University of Arizona Press.
- Tokovinine, Alexandre, and Dmitri Beliaev
2013 "People of the Road: Traders and Travelers in Ancient Maya Words and Images", *Merchants, Markets, and Exchange in the Pre-Columbian World*, pp. 169-200, Kenneth G. Hirth and Joanne Pillsbury (eds.). Washington: Dumbarton Oaks Research Library and Collection.
- Tourtellot, Gair
1988 *Excavations at Seibal, Department of Peten, Guatemala: Peripheral Survey and Excavation, Settlement and Community Patterns*. Cambridge: Peabody Museum of Archaeology and Ethnology (Memoirs of the Peabody Museum of Archaeology and Ethnology, 16).
- Traxler, Loa P.
2004 "Redesigning Copan: Early Architecture of the Polity Center", *Understanding Early Classic Copan*, pp. 53-64, Ellen E. Bell, Marcello A. Canuto and Robert J. Sharer (eds.). Philadelphia: University of Pennsylvania Museum of Archaeology and Anthropology.
- Ximénez, fray Francisco
1929 *Historia de la provincia de San Vicente de Chiapa y Guatemala*. Guatemala: La Tipografía Nacional.
- Zúñiga Arellano, Belem
2008 "Evidencias arqueológicas del uso de la fauna en Palenque y Tenam Puente,

Chiapas”, *El Territorio Maya. Memoria de la Quinta Mesa Redonda de Palenque*, pp. 41-67, Rodrigo Liendo Stuardo (ed.). México: Instituto Nacional de Antropología e Historia (Cuadernos CICOSUL, Serie Mesas Redondas).

Elizabeth H. Paris. Estadounidense. Licenciada en Antropología por la Universidad de Colorado-Boulder, maestra y doctora en Antropología por la Universidad Estatal de Nueva York en Albany. Adscrita al Departamento de Antropología y Arqueología de la Universidad de Calgary, Alberta, Canadá. Sus especialidades son la arqueología de unidades habitacionales y la producción artesanal. Actualmente realiza investigaciones en Tenam Puente y el valle de Jovel, en Chiapas, y en Mayapán, Yucatán, y desarrolla el proyecto “Redes Económicas de Tenam Puente”. Entre sus últimas publicaciones se encuentran: “Hunting, Husbandry, Exchange and Ritual: Animal Use and Meaning at Moxviquil, Chiapas Mexico”, “A Funerary Cave at Moxviquil, Chiapas, Mexico” y “An Archaic Period Stemmed and Barbed Point from Tenam Puente, Chiapas, Mexico”, todas en coautoría.

elizabeth.paris@ucalgary.ca

Elizabeth H. Paris. American. B.A. in Anthropology from the Colorado-Boulder University, M.A. and Ph.D. in Anthropology from the New York State University at Albany. Attached to the Department of Anthropology and Archaeology at Calgary University, Alberta, Canada. Her specialties are archaeology of housing units and craft production. She is currently conducting research in Tenam Puente and the Jovel Valley, Chiapas, and in Mayapán, Yucatán, and is developing the project “Economic Networks of Tenam Puente”. Among his latest publications are: “Hunting, Husbandry, Exchange and Ritual: Animal Use and Meaning at Moxviquil, Chiapas Mexico”, “A Funerary Cave at Moxviquil, Chiapas, Mexico” and “An Archaic Period Stemmed and Barbed Point from Tenam Puente, Chiapas, Mexico”, all co-authored.

elizabeth.paris@ucalgary.ca

Roberto López Bravo. Mexicano. Licenciado en Arqueología por la Escuela Nacional de Antropología e Historia y doctor en Antropología por la Universidad de Pittsburgh. Profesor-Investigador de la Licenciatura en Arqueología de la Universidad de Ciencias y Artes de Chiapas. Sus especialidades son la arqueología de unidades habitacionales y el patrón de asentamiento. Ha realizado investigaciones en Palenque y su región, y actualmente se dedica al estudio del periodo Postclásico en la Depresión Central del Chiapas, el valle de Jovel y Tenam Puente, donde co-dirige el proyecto “Redes Económicas de Tenam Puente”. Entre sus publicaciones recientes se encuentran: “Hunting, Husbandry, Exchange and Ritual: Animal Use and Meaning at Moxviquil, Chiapas Mexico” y “En el corazón de la an-

tigua Chiapan: elementos para el estudio del paisaje Postclásico de la Depresión Central de Chiapas”, ambas en coautoría.

roberto.lopez@unicach.mx

Roberto López Bravo. Mexican. B.A. in Archaeology from Escuela Nacional de Antropología e Historia and Ph.D. in Anthropology from Pittsburgh University of. Professor-Researcher of the bachelor’s degree in Archaeology at Universidad de Ciencias y Artes de Chiapas. His specialties are the archaeology of housing units and settlement patterns. He has conducted research in Palenque and its region, and is currently dedicated to the study of the Postclassic period in the Central Depression of Chiapas, the valley of Jovel and Tenam Puente, where he co-directs the project “Redes Económicas de Tenam Puente”. Recent publications include “Hunting, Husbandry, Exchange and Ritual: Animal Use and Meaning at Moxviquil, Chiapas Mexico” and “En el corazón de la antigua Chiapan: elementos para el estudio del paisaje Postclásico de la Depresión Central de Chiapas”, both co-authored.

roberto.lopez@unicach.mx

Gabriel Laló Jacinto. Mexicano. Licenciado en Antropología con especialidad en Arqueología por la Universidad Veracruzana; cursó la maestría en Estudios Mesoamericanos en la Universidad Nacional Autónoma de México. Adscrito al Centro INAH Chiapas, es profesor de asignatura en la Universidad Intercultural de Chiapas (Las Margaritas) y director del Proyecto Tenam Puente; desarrolla actualmente el proyecto “Redes Económicas de Tenam Puente”. Entre sus últimas publicaciones se encuentran “An Archaic Period Stemmed and Barbed Point from Tenam Puente, Chiapas, Mexico” (en coautoría), “Introducción al paisaje ritual de la meseta comiteca” y “Un acercamiento al Balun Canan Prehispánico”.

lalojacinto@hotmail.com

Gabriel Laló Jacinto. Mexican. He has a degree in Anthropology with a major in Archaeology from the Universidad Veracruzana, and a Master’s degree in Mesoamerican Studies from the Universidad Nacional Autónoma de México. He is a professor at the Universidad Intercultural de Chiapas (Las Margaritas) and director of the Tenam Puente Project; he is currently developing the project “Redes Económicas de Tenam Puente”. Among his recent publications are “An Archaic Period Stemmed and Barbed Point from Tenam Puente, Chiapas, Mexico” (co-authored), “Introducción al paisaje ritual de la meseta comiteca” and “Un acercamiento al Balun Canan Prehispánico”.

lalojacinto@hotmail.com