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Americae | 2, 2017, p. 7-27
mis en ligne le 27 juillet 2017
ISSN : 2497-1510

Pour citer la version en ligne:

Pour citer la version PDF:

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Markets, tribute, and class in Tarascan commodity consumption: the Lake Pátzcuaro Basin

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The Late Postclassic Tarascan society of West-Central Mexico has long been characterized as having had a state-dominated economy in contrast to the highly commercialized contemporary states in Mesoamerica. To test this model of the Tarascan political economy the production and consumption of several types of commodities within the Lake Pátzcuaro Basin is documented by direct archaeological and ethnohistoric evidence. Results of the analysis demonstrate the significant role of local, regional, and intra-regional markets and their complex relationship with tribute, elite gift exchange, and state production resulting in what Smith has characterized as an “intermediate commercialized economy” (2004: 79) functioning within the Postclassic Mesoamerican world system.

Keywords: political economy, Tarascan State, Lake Pátzcuaro Basin, markets.

As part of her many studies of the economies of the Central Mexican Postclassic, Frances Berdan has characterized the Late Postclassic Period as marked by an increase in the volume of long-distance exchange, an increase in the diversity of trade goods, and a marked commercialization of the economy (1989, 2003). This view, initially based exclusively on the documentary record, challenged the assumption that economies of states and empires of the prehispanic Americas were primarily based on redistribution; a view which dominated the economic anthropology of the 1950s, 1960s, and 1970s (Berdan 1989; Wilk 1996). In the case of the Late Postclassic Tarascan State of west-central Mexico the assumption of a centralized state-dominated economy was reinforced by the known 16th century documents and the very limited archaeological research (Pollard 1993). Thus for many years after economic anthropologists recognized the prominent role of markets, I viewed the political economy of the Tarascan State as an exception to the Central Mexican pattern proposed by Berdan; I explained this exception by the absence of Classic and Early Postclassic states and the recent and emergent process of state formation (after AD 1350) that transformed power relations and both the domestic and institutional economies (Hirth 2013).

During this same time, anthropological archaeology, with a focus on new research strategies and testing social theory, came to Mexican archaeology. Following almost 20 years of both archaeological research and critical analysis of 16th century documents it is now possible
to discern a far more complex Tarascan political economy that was well-integrated into the Late Postclassic Mesoamerican world economy and included a variety of economic strategies with market activity at the local, regional, and imperial scales. The iconic descriptions of the Tarascan political economy in the *Relación de Michoacán* [1541] are now recognized as heavily filtered through Spanish models of the “idealized” Castilian State (e.g., Afanador-Pujol 2015; Espejel Carbajal 2008; Martínez Baracs 2005; Stone 2004).

In order to test the traditional model, I have selected several key commodities exchanged and consumed within the Lake Pátzcuaro Basin, core of the Late Postclassic Tarascan State, for which there is independent evidence and which either first appeared in the archaeological record or increased markedly in frequency once the State emerged after AD 1350. Most of these commodities were used to denote sociopolitical status among the political and religious elites (Beltrán 1994; Cabrera Castro 1996; Carrasco 1986; Castro Gutiérrez and Monzón García 2008; García Alcaraz 1976; Gorenstein and Pollard 1983; Núñez Enríquez and Martínez González 2010), and mark increasing inequality of both status and wealth within Tarascan society. Many reflect a deliberate heritage from the Toltec world of Epiclassic and Early Postclassic north-central Mexico (Healan 2012; Kurnick 2016; Pollard 2016, 2017), filtered through ideologies held by Bajío elites, and adopted by social leaders in north and central Michoacán during the Middle Postclassic period.

The specific commodities considered here include: 1. Spouted vessels and spout-handled vessels, often with resist decoration, associated with use for a cacao drink (Lieto, Pollard and Jones 2016), 2. Ceramic pipes in large quantities used in ritual for smoking tobacco, 3. Small ceramic spindle whorls used for spinning cotton, 4. Obsidian prismatic blades and an obsidian lapidary industry including ear and lip plugs and disks, and 5. Metal artifacts of gold, silver, copper and various bronzes used for tools, ritual paraphernalia, and elite status markers (Hosler 2009; Maldonado 2008; Pollard 1987).

In order to limit the possible distortions introduced by distance and differential dates of incorporation into the expanding Tarascan State, my analysis is limited to archaeological survey and excavation in the Pátzcuaro Basin and only uses the available information that indicates specific artifact location (Figure 1). This largely includes the results of my own projects at Tzintzuntzan and the southern basin and the results of excavations in the *INAH Zona Arqueológica* at Tzintzuntzan when available (Bush 2012; Cabrera Castro 1977-1978, 1987, 1996; Cohen 2016; Fisher 2008; Fisher and Leisz 2013; Lieto, Pollard and Jones 2016; Pollard 1972, 1993, 2000, 2005, 2009; Rubín de la Borbolla 1939, 1941; Stawski 2008, 2012; Walton 2017).

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1. See the references for the four best Spanish language editions of this document.
SPOUTED AND SPOUT-HANDLED VESSELS

One of the most representative expressions of the Late Postclassic ceramic tradition are the spouted and spout-handled vessels, usually decorated with complex polychrome designs, including resist decoration (Figure 2). While all studies of the prehispanic pottery tradition of the Pátzcuaro Basin consistently support widespread, probably part-time, production using local clays and temper, exchanged through market distribution (Hirshman 2008; Hirshman and Stawski 2013; Hirshman, Lovis and Pollard 2010), the spouted vessels are delicate, highly decorated, and very limited in their consumption.

Figure 2. Spouted vessel from Urichu area 1, burial 5 (Pollard 2000).

In order to better understand the emergence of this unusual form, in 2012 Joshua Lieto and I examined the association between these vessels and the consumption of cacao. Based on previous chemical studies, spouted vessels had been related to the consumption of a cacao drink by the detection of theobromine and caffeine, the principal biomarkers of cacao, absorbed into the clay walls of the vessels. A sample of ten (n = 10) sherds from Tzintzuntzan, including several Late Postclassic spouts were analyzed in the Mass Spectrometry Laboratory at Michigan State University, under the direction of Dr. A. Daniel Jones. An additional three (3) sherds from Erongaricuaro dated to the Loma Alta phase (Early Classic period) were also tested as controls. Each sample was analyzed using liquid chromatography/mass spectrometry (UPLC or Ultra Performance Liquid Chromatography). Of the ten (n = 10) sherds from Tzintzuntzan, all six (n = 6) spouts revealed high concentrations of theobromine and caffeine, while the remaining sherds were considered to have “no” or “weak” signals; none of the Loma Alta phase sherds from Erongaricuaro had traces of either biomarker.

The distribution of spouted vessels and vessels with spout handles at the Tarascan State capital within the residential terraces sampled during the 1970 survey of Tzintzuntzan (n = 89) includes 17% of the commoner residential terraces (n = 10 of 58); 46% of the terraces of the lower elite (n = 11 of 24), and 57% of the terraces of the upper elite (n = 4 of 7) (Figure 3, see next page). Of the approximately eighty (n = 80) burials in the main platform of the INAH Tzintzuntzan Zona Arqueológica (Cabrera Castro 1987; Castro Leal 1986), about 25% of them included spouted vessels (n = 20), many with multiple spouted vessels. It is clear that the use of spouted vessels, and perhaps a cacao beverage, generally was associated with the behavior of the elite in the capital. However, this association was not unique to elite spaces; one explanation for the wider distribution of spouted vessels is that many of the terraces of commoners and the lower elite may have been spatially associated with secondary or local (barrio) public/ritual spaces (Pollard 1972).

In the southern portion of the basin, the distribution of spouted vessels is very restricted (Figure 4, see next page). In Erongaricuaro, 96% of spouted vessels (n = 27 of 28) were associated with the elite/ritual zone of this secondary administrative center. These vessels were all recovered from excavations (producing 12,814 sherds), but only one of three Late Postclassic burials was associated with a spouted vessel. In Urichu, a tertiary center tributary to Erongaricuaro during the Late Postclassic, spouted vessels (n = 27) were associated with elite residences, and 21% of elite burials (n = 4), out of a total of 29,198 sherds. Beyond these two settlements, spouted vessels have been detected through survey only on the former island of Apupato (2 of 93 sherds in unit 103), associated with a royal treasury (Relación de Michoacán [1541], Fisher 2008). Their high value, state/elite association, and rarity make these vessels, and many of the polychrome miniature tripods and jars also associated with elite/state assemblages (Stawski 2008), good candidates for specialized pottery production at the capital or other limited locales, despite the current absence of documentation of specialized production sites (see Hirshman and Stawski 2013; Jadot 2016).

The documentary evidence of State tribute/taxes does not include cacao, a product used in Mesoamerica for centuries and found in P’urépecha dictionaries of the 16th century (Table 1, see next pages). Nevertheless, as cacao’s growth is limited to the lowlands, it therefore would have likely only been available to populations in...

Figure 4. Southern spout distribution from survey and excavation. Modified from Stawski 2012 map and Pollard 2000, 2005.
the Pátzcuaro Basin through elite trade or market import. The strong association of spouted vessels with elites and the State outside the capital suggests that both the vessels and cacao were distributed by the exchange of gifts with Tzintzuntzan elites, and that large amounts of both were available at the capital.

CERAMIC PIPES

A second class of ceramic artifacts associated with the Pátzcuaro Basin Late Postclassic period is the ceramic pipe (Figure 5, see next page). Pipes were produced from clays and tempers using the same local pastes and firing technologies as pottery. They ranged from relatively simple pipe bowls and stems with only slip while others were finely decorated with incised and stamped designs (Pollard 1972; Castro Leal 1986). According to the documentary record, tobacco was cultivated in the lowlands of the Pacific coast and the Balsas Basin (Acuña 1987; Cerda Farias 2002; Sánchez Díaz 1985). It was used both for the production of smoke to communicate with their patron deity Curicaueri (Espejel Carbajal 2008; Martínez González 2009; Relación de Michoacán [1541]) and as an herb to cure disease. It is unclear whether the use of pipes in State ceremonies was developed from a more general practice of tobacco consumption from earlier periods, but Gilberti (1989 [1559], p. 121) translated “el tabaco” as andumuqua and pipes (sinchaqua) as the objects “with which one takes the herb called andumuqua” (“con que toman la llerba quedicen andumuqua”).

Pipes and pipe fragments (n = 329 in the 1970 survey) were widely distributed in the capital. They are present in 62% of the residential areas of commoners (n = 40 terraces, 116 pipes), 96% of the lower elite residential areas (n = 23 terraces, 148 pipes), and 100% of the residential areas of the upper elite (n = 7 terraces, 153 pipes) (Figure 6, see next page). However, the presence of pipes in the elite burials of the Main Platform in the INAH Zona Arqueológica is rare. For example, in the 1977-1978 season, of the 33 burials, only one contained a pipe (3%) (Cabrera Castro 1977-1978).

In the southern part of the Basin, pipes were also widely distributed (Figures 7 and 8, see next pages). However, unlike at Tzintzuntzan, most were associated with public ritual spaces of the local elite (Erongarícuaro [55 of 56 pipes], Urichu [175 of 183 pipes], Xarácuar [8 of 11 pipes], Apupato [5 of 7 pipes]). None are known to come from burials.

The large quantities of pipes and pipe fragments associated with elites and public ritual spaces suggests that access to tobacco was much greater during the Late Postclassic period than, for example, access to cacao. In Relación de Michoacán [1541] only men are associated with pipes and tobacco, but the rarity of pipes in burials (and published studies of specific burial goods) makes it impossible for an archaeological test of this gender association. However, while the consumption of tobacco is mentioned in documents of the 16th century, it does not appear in the Tarascan State tribute/tax records. This suggests that tobacco circulated by means of markets, long-distance State merchants, or gift exchange among elites. Given its association with elites and ritual outside the capital, and large quantities of pipes and pipe fragments recovered, I suggest that tobacco was moved from the lowlands within the Tarascan territory north to the Pátzcuaro Basin by long-distance traders. Tobacco consumption by means of ceramic pipes had stimulated the production of pipes. But there is no evidence that this production was specialized or limited to State-associated potters.

COTTON SPINDLE WHORLS

A last class of new ceramics forms associated with the Tarascan State in the Lake Pátzcuaro Basin is the spindle whorl used for spinning cotton thread (Figure 9, see next pages). Cotton whorls are known in the region, including the Zacapu Basin and Lerma valley, from the Epiclassic period, but in extremely small quantities. For the Late Postclassic, to my knowledge, there are no documents that state that cotton garments were to be worn only by members of the nobility. However, the distribution of cotton spindle whorls in survey and excavation (see below) strongly skews to the nobility. The only surviving cotton fabric (in very small pieces) is associated with metal bells sewn on to garments and in Relación de Michoacán [1541] cotton bolts or blankets (mantas) are used by nobles to purchase slaves and to

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**Diccionario Grande** (Warren [ed.] 1991)

<table>
<thead>
<tr>
<th>Term</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inch/thumb (pulgada, pulgar)</td>
<td>Cahequa</td>
</tr>
<tr>
<td>Cacao seed (almendra)</td>
<td>Cahequa</td>
</tr>
<tr>
<td>Cacao drink (beuida)</td>
<td>Cahequa ytsimaqua (cacao + agua + beber)</td>
</tr>
</tbody>
</table>

Gilberti (1989 [1559])

| Cacao drink (se behuen)       | Cahequa                              |

Table 1. 16th century P’urépecha terms for cacao.

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3. Historically, cane was used instead of ceramic pipes along the coast (Sánchez Díaz 1985) or tobacco leaves were smoked as cigars; neither would leave archaeological evidence.
Figure 5. Ceramic bowls, stems, and bits from the 1970 Tzintzuntzan survey (Pollard 1972).

Figure 7. Excavated pipe stem fragments from Urichu (Pollard 2000, 2009).

Figure 8. Distribution of pipes from survey and excavation in the southern zone. Modified from Stawski 2012 map and Pollard 2000, 2009; Fisher 2008.
Again, as in the case of cacao and tobacco, cotton is a plant that cannot grow in the highlands of the Pátzcuaro Basin (tierra fría). However, unlike the first two products discussed, raw cotton appears as an article of tribute from at least ten communities named in the Relaciones geográficas de Michoacán (Acuña 1987). Cotton yarn to produce fabric required both a spindle and a spindle whorl; but it is the small whorls and bone batons appearing archaeologically that document local production of cotton fabric. The whorls themselves are simple and similar to those found across the Central Plateau (Mesa Central) of Mexico during the Postclassic period (Parsons 1975; Parsons and Parsons 1990) and could easily have been produced locally. The P'urépecha term for spindle whorl vixucata appears in two of the 16th century dictionaries (Diccionario Grande [Warren ed. 1991]; Gilberti 1989 [1559]) along with the phrase vixucata tepaparari or “coarse spindle whorl” (huso grueso), probably referring to the larger whorls used for spinning maguey which was grown locally and found archaeologically in deposits of all phases.

In the Tzintzuntzan survey, the small spindle whorls (n = 11, diameters 2.6-1.3 cm, wt. 8.0-3.0 gm) (Figure 9 illustrating n = 9) were found in only 5% of the terraces of commoners (n = 3 terraces, 3 whorls), in 17% of the terraces of the lower elite (n = 4 terraces, 4 whorls), and 43% of the residential terraces of the upper elite (n = 3 terraces, 4 whorls) (Figures 9 and 10). They were found in five (n = 5) of the 33 burials (15%) excavated in 1977-1978 in the main platform of the INAH Zona Arqueológica (the number of whorls is not yet available as the field notes often indicate “several” and the full analysis of the field season is still in process).

In the southern part of the basin (Figure 11), the distribution is more strongly clustered. In Erongarícuaro, the few whorls for spinning cotton recovered through either the site survey or excavations were found in the elite residential area (n = 6). In Urichu, all cotton spinning whorls recovered were from burials within elite households (n = 16) (Figure 12, see next page). Excavations at Urichu produced larger maguey whorls (e.g., Figure 12. Upper row left: wt. 54.8 gm) and 16 smaller and lighter whorls [full details Pollard 1996: diameters 2.6-1.5 cm, wt. 11.2 gm, 7.9 gm, 6.3 gm, 5.6 gm, 5.4 (n = 3) gm, 5.2 gm, 5.0 (n = 2) gm, 3.9 gm, 3.7 (n = 2) gm, 3.5 gm, 3.1 gm, and 3.0 (n = 2) gm (Figure 12 illustrates 11 of the 16)].

This highly limited distribution contrasts strongly with the wide distribution found in the Late Postclassic Basin of Mexico, despite it also being a region where cotton needed to be imported (Parsons 1975). Despite written and pictorial documents that associate all spinning and weaving as female duties, both adult men and adult women were buried with cotton spindle whorls. However, in Urichu, the female burials included a greater number of whorls (3-6 vs. 1-2) and one female burial also included two bone batons for weaving (Figure 13, see next page).

Based on the quantity and distribution of these whorls it would be difficult to understand how the majority of elites could be provisioned with adequate numbers of cotton bolts (“mantas”). However, the Relaciones geográficas de Michoacán make clear that while ten (n = 10) communities sent loads of raw cotton as tribute to Tzintzuntzan, at least 18 communities sent loads of bolts of woven cotton. Therefore the ceramic spindle whorls reflect only part of the cotton fabric that was available in the Pátzcuaro Basin. While paste and temper
Figure 10. Distribution of survey and excavation cotton spindle whorls.

Figure 11. Southern distribution of cotton spindle whorls from survey and excavation.
Figure 12.

Figure 13.
Urichu area 1, burial 8, bone batons. Carved above is white-tailed deer; below is human bone (humerus longitudinal splinter), O. Polaco in Pollard 1996.

Figure 14.
analysis indicate that the whorls were locally produced, all raw and woven cotton entering the Pátzcuaro Basin apparently came through the State tribute system.

PRISMATIC BLADES AND LAPIDARY OBJECTS

Large quantities of obsidian prismatic blades and blade segments were associated with ritual plazas, structures and elite residences (Darras 2008, 2009; Healan 2002, 2009; Pollard 1993, 2000, 2005; Rebnegger 2013), but were also widely available and “transformed into products of mass consumption” (Darras 2014: 45), despite the need to import all obsidian from outside the basin. Obsidian blades were used in small quantities in Pátzcuaro Basin communities from their earliest occupations, but the sheer quantities increased dramatically in the Late Postclassic period (Table 2).

In the survey at Tzintzuntzan (Pollard 1972), prismatic blades were found in 71% of commoner terraces (n = 41) and 100% of both lower (n = 24) and upper elite (n = 7) residential terraces, but in only two (12%) of the 33 burials excavated in 1977-1978 in the main platform of the INAH Zona Arqueológica (Figure 14) (Cabrera Castro 1987). An analysis of the lithic artifacts from the Main Platform and adjacent areas excavated in 1977-78 has recently been published (Walton 2017). The analysis supports the high proportion of blade consumption by number and weight seen in the settlement survey (Walton 2017: 7). The dominant gray obsidian (untested but probably from Ucareo, see Table 4) is associated with prismatic blade segments that are longer on average than those from the southern basin sites, and which Walton suggests were probably imported as polyhedral cores. As found in the 1970 survey, most prismatic blade cores and proximal blade segments show that the core platforms were pecked and ground. Finally, the frequency of obsidian blade production debitage is interpreted as supporting “local on-site blade production, mostly outside of the Great Platform” (Walton 2017: 10).

In the southern part of the basin, prismatic blades were also widely distributed (Figures 16 and 17, see next page) being present in 1.34 of the 36 surface collection units (94%) at Erongarícuaro, and 2. all areas of the Late Postclassic Urichu excavation, including ritual and elite and commoner residential zones (Figure 15, see next page). Among the elite burials at Urichu, only two (n = 2) or 11% included blades (one male with one blade and one female with two blades). In the southwest survey zone of 91 sites, 63 (69%) survey collections included prismatic blades. Prismatic blades were located in five (n = 5) of the units at Apupato, and eight (n = 8) of 47 loci (17%) recorded in the southeast Basin in 2009 (Figure 17). The detailed study of obsidian cores and prismatic blades at Late Postclassic Erongarícuaro and Urichu (Rebnegger 2013: 81 f.) indicated that prismatic blade cores were exported to Erongarícuaro for its local blade industry, but that smaller prismatic blade cores came to Urichu often with evidence of errors or flaws. In fact, the frequencies of errors and blade core platform rejuvenation were higher at both Erongarícuaro and Urichu compared to Tzintzuntzan.

The quantities of blade cores, core preparation flakes, core rejuvenation flakes, error correction flakes and other debitage found at Tzintzuntzan and Erongarícuaro suggest that most prismatic blades were locally produced, possibly in many of the households from which they have been recovered (Rebnegger 2013; Walton 2017). They were made from imported prismatic blade cores, as research at obsidian workshops close to the two primary obsidian mining zones has indicated (Darras 2008, 2009; Healan 2002, 2009). Archaeological investigations by Darras completed at two Late Postclassic sites processing Zináparo obsidian from the Zacapu region (Mich. 407-Durazno and Mich. 101-Iglesias del Cerro de la Cruz), demonstrated that all the stages linked to prismatic blade production were carried out at the household level by independent groups of peasants living in rural zones in the vicinity of the urban settlements of Zacapu, and practicing intermittent craft production as a way to diversify and complement household economy (Darras 2008, 2009). It should be noted that in the Zacapu Basin Postclassic sequence, the Milpillas phase (AD 1200-1450) overlaps the Middle and Late Postclassic of the Pátzcuaro Basin, with the Tariacuri

<table>
<thead>
<tr>
<th>Phase</th>
<th>Tzintzuntzan</th>
<th>Erongarícuaro</th>
<th>Urichu</th>
<th>SW Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tariacuri</td>
<td>514</td>
<td>1589 (91%)</td>
<td>680 (82%)</td>
<td>105 (47%)</td>
</tr>
<tr>
<td>Late Urichu</td>
<td>–</td>
<td>45</td>
<td>5</td>
<td>68</td>
</tr>
<tr>
<td>Early Urichu</td>
<td>–</td>
<td>0</td>
<td>60</td>
<td>40</td>
</tr>
<tr>
<td>Lape</td>
<td>–</td>
<td>0</td>
<td>43</td>
<td>10</td>
</tr>
<tr>
<td>Loma Alta 3</td>
<td>–</td>
<td>35</td>
<td>42</td>
<td>0</td>
</tr>
<tr>
<td>Loma Alta 2</td>
<td>–</td>
<td>72</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 2. Prismatic blades in the Lake Pátzcuaro Basin.

For Erongarícuaro, the Tariacuri total includes some mixed Tariacuri/Late Urichu levels; for Urichu, the Early Urichu includes 14 blades from Area 5, Tomb 1. The numbers for Tzintzuntzan and Erongarícuaro are from Rebnegger 2013; from Urichu and the SW Survey from Pollard 2000.
Figure 15. Urichu excavated obsidian from area 2, test pit 1, level 5; a Late Postclassic commoner residential area (Pollard 2000; Rebnegger 2013).

Figure 16. Erongaricuaro survey obsidian from field 1; a Late Postclassic elite residential/ritual zone (Pollard 2005; Rebnegger 2013).

phase only beginning with the incorporation of the Zacapu basin into the Tarascan state (Jadot 2016).

Evidence of lapidary production was recovered from both Tzintzuntzan and Erongarícuaro (Rebnegger 2013: 99), but consumption was rarely documented from survey data and was restricted primarily to elite burials (Figures 18 and 19, next page). At Tzintzuntzan seven (n = 7) of 17 burials with offerings (or 41%) included ear or lip plugs, disks or lunates (Cabrera Castro 1977-1978), while at Urichu only one of the 19 burials (5%) included a lip plug. Walton’s recent analysis of the 1977-1978 (10th season) excavations at the Main (or Great) Platform led him to conclude that “lapidary production and the consumption of ear flares, labrets, and highly polished disks or cylinders also took place on the Great Platform” (2017: 12). His evidence for production includes a recycled blade core with abrading, a polisher, and ear and lip plug preforms (see Figure 20 for similar artifacts, next page). Walton suggests that this production took place in the priest’s residence on the Platform (Edificio B) and at Structures A, C, and D on the Platform (2017: 16). Away from the ritual platform at Tzintzuntzan, the type 2 lithic zones, associated with lapidary production, were located near primary and secondary ritual zones in lower elite residential areas. Obsidian lip plugs with inlays of turquoise, gold, amber and other valuable rare materials of various sizes, depending on the political status of the wearer, were used by the Tarascan rulers to designate holders of political office, so their restricted distribution, and greater frequency at Tzintzuntzan, is not surprising.

At Erongarícuaro, a documented lapidary production area was excavated within an elite household (field 2) adjacent to the primary ritual zone of the community. Similar production areas were located in the survey of fields 7, 8, and 16, all in the northwest elite/ritual center of the settlement (Figures 20 and 21, next page). The zone was associated with perforators and preforms from “recycled” prismatic blade cores (Rebnegger 2013: 86). In 1565, Pablo Coyote, an oficial of Pátzcuaro, testified to having been a lapidary of the lord of Ihuatzio in the past (Kuthy-Saenger 1996: 313, Appendix 1). In 1565 he was listed among the nobles of Pátzcuaro. This suggests that artisans associated with the most precious or valued raw materials and finished goods may have been elites attached to upper nobility households.

METAL ARTIFACTS

Perhaps the best-known commodities associated with the Late Postclassic Tarascan State are the metal artifacts of gold, silver, copper, and a variety of alloys used for both utilitarian and status marking purposes (Hosler 2009). The distribution and quantity of these goods known from the Lake Pátzcuaro Basin has been compromised by both the natural processes of decay and the great losses of the first decade after the Spanish Conquest of Michoacán. Large quantities of these objects were sent to Cortés, looted by Spaniards from elite burials, and extorted from Tarascan nobles following the seizing of the king by Nuño de Guzmán.

Figure 20. Erongarícuaro survey fields 8 and 16; steps in production of obsidian lip plugs (Rebnegger 2013).

Figure 21a and b. Erongarícuaro survey, Martin Rivera Collection; step in production of polished obsidian mirror (Rebnegger 2013; photographed 2003).
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(Warren 1985). This included emptying of the treasuries located in the capital and around the Basin (Relación de Michoacán [1541]). The archaeological data from the capital only includes evidence from elite burials excavated in the main platform of the INAH Zona Arqueológica. Of the seventeen (17) burial groups excavated in 1977-1978 at the base of Yácatá 3, ten (n = 10) included metal objects (59%). Most common were rings, bells, and needles, but also awls, axes, and tweezers.

Outside the capital, metal artifacts were excavated from Urichu and Erongarícuaro. Among the elite burials from Urichu, seven (n = 7) included metal objects (37%) with the majority being bronze rings with shell pendants, but awls, needles, and one tweezer were also present (Figures 22 and 23). At Erongarícuaro, a single copper bell was recovered from within an elite residence located adjacent to a pyramid.

Recent archaeological and ethnohistoric research has documented smelting facilities outside the Pátzcuaro Basin, but north of the zone of copper mines at Itziparátzico (Maldonado 2013) and Jicalán el Viejo (Roskamp and Réiz 2013). The first is located just south of the Pátzcuaro Basin, with the second to the west of Uruapan. Jicalán is associated with the Relación de Jicalán (or Relación de Jucutacuto) in which Nahuatl-speaking artisans claim to have migrated into the region from eastern and central Mexico and formed a metal-producing community with permission of a Tarascan king in Tzintzuntzan. There is currently no archaeological evidence of smelting or production of finished goods from within the Pátzcuaro Basin. 16th century documents indicate that metal goods moved into the basin through the Imperial tribute system and by direct control of mines and labor by the ruling dynasty (Pollard 1987, 1993), while small quantities of primarily utilitarian goods (especially axes and hoes) probably circulated through local and regional markets. Long-distance merchants undoubtedly exchanged metal goods beyond the State, perhaps provisioned by the royal dynasty as indicated in the Relación de Michoacán.

PRODUCTION, EXCHANGE, AND CONSUMPTION

Previous studies of paste, temper, and formal attributes of fine ware jars and bowls support a non-standardized household-based production of pottery from local clays and market-acquired temper (volcanic ash), followed by market exchange within the Pátzcuaro Basin for households of both commoners and elites (Hirshman 2008; Hirshman and Ferguson 2012; Hirshman and Stawski 2013; Hirshman, Lovis and Pollard 2010). While not yet chemically studied, the plain wares were made of similar pastes (that were more coarsely ground), and were also unstandardized, and are believed to have been locally produced and exchanged through local markets.

Figure 22. Metal artifacts excavated at Urichu area 1, burial 4 (adult male); three bronze awls and one bronze tweezer (Hosler 2009; Pollard 1996, 2000).

Figure 23. Metal artifacts excavated at Urichu area 1, burial 8 (adult female); seven bronze rings (six with shell pendants) and one copper wire fragment (Hosler 2009; Pollard 1996, 2000).
For the specialized goods presented here the pattern is more varied and complex. Each of these classes of artifacts, except most prismatic blades, is associated with some aspect of state ritual or marking elite status. However, each also has a very different distribution in the capital and in the southern portion of the Pátzcuaro Basin, reflecting different patterns of consumption. In Tzintzuntzan, elites generally consumed the ceramic products, including miniature vessels (see Table 3) and the polychrome vessels, often with resist decoration (n = 1014 of 1750 survey sherds, see Table 3), and their associated commodities (cacao, tobacco, cotton), in higher frequencies than non-elite (note: metal goods were not found in the 1970 survey so are not included in Table 3). However, the extent to which commoner and lower elite households had access to these goods varied considerably (Table 3), as did the extent to which these goods were present in elite burials.

The spouted vessels, the delicate miniature bowls and jars, and the more complex polychromes with resist decoration were probably produced in or near Tzintzuntzan by pottery specialists working for the royal family or the State. They were distributed to office holders and ritual specialists of subject centers as part of the exchange of gifts during State ceremonies. The pipes were probably made locally, and in Tzintzuntzan, may have been available in the market. The extremely delicate and finely made pipes may have been made by pottery specialists in Tzintzuntzan. Whorls for spinning cotton were probably produced in households where other ceramic objects were made. Their restricted distribution was not due to the production costs of the whorls, but due to the limited access to raw cotton.

A petrographic study of pottery from three sites in the Zacapu Basin dating to the local Milpillas phase suggests that up to four ceramic pastes, and their associated vessels, came from the Pátzcuaro basin (Jadot 2016: 401-403). As indicated earlier, the Milpillas phase (AD 1200-1450) overlaps the Middle and Late Postclassic phases of the Pátzcuaro basin, with the Tariacuri phase only beginning with the incorporation of the Zacapu basin into the Tarascan state (Darras 2009). Thus the first century of the Tariacuri or Late Postclassic Pátzcuaro phase is contemporary with the Zacapu basin Milpillas phase. Jadot (2016: 403) indicates that many of these “foreign” vessels are polychromes with resist and associated with ritual activities. In the Relación de Michoacán it is made clear that the royal dynasty associated the elite center of Zacapu (probably the site of El Palacio/Mich. 23) with their patron deity and their ancestors’ early occupation of the region, and it was encompassed very early in the process of Tarascan state expansion (Espejel Carbajal 2008, Tomo II: 298; Pollard 1993). While the distribution of cacao and tobacco probably depended on long-distance merchants based in Tzintzuntzan and operating within the State territory (see Monzón, Roskamp and Warren 2009; Roskamp 2012), raw cotton and cotton fabrics moved to the Pátzcuaro Basin as part of the Imperial tributary/tax network.

The obsidian prismatic blades were probably locally produced within households, while lapidary production was highly restricted to artisans working in or adjacent to elite households. All obsidian was imported into the Pátzcuaro Basin, primarily from the two major source zones located within Michoacán: Ucareo to the northeast and Zinápajo to the northwest. Smaller quantities of obsidian, especially the bottle-green Pénjamo and the golden-green Pachucu obsidians, were obtained by long-distance merchants. According to the Relación de Michoacán, the exchanges took place at fortified sites along the Tarascan border, such as Taximaroa. When the obsidians that have been chemically sourced from collections are compared, the patterns of consumption vary considerably (Table 4). Obsidian at Tzintzuntzan was overwhelmingly from the Ucareo zone (85%), while at elite centers in the southern basin, such as Erongaricuaro, Urichu, and Pareo, it constitutes half of that. At smaller communities the Tzintzuntzan pattern is reversed, with Zinápajo zone obsidian used at levels of 80%. This pattern leads me to suggest that Zinápajo zone obsidian was obtained from local and regional markets (see Darras 2008, 2009), but that at least some of the Ucareo obsidian was allocated by the State to production facilities near the mines (Healan 2009). Whether the higher proportions of Ucareo obsidian at centers with local elites represent gift exchange or tribute distribution is not clear.

The ethnohistoric documents and the 16th century P’urépecha dictionaries (Acuña 1987; Gilberti 1989 [1559]; Warren [ed.] 1991) document the existence and significance of markets and marketing in the Late Postclassic state. Terms exist for market, merchandise, one who buys and one who sells, and the verb “to exchange” (Table 5). In addition the dictionaries record specific goods and services sold in markets. They include servants, slaves, clothing, perfumes, ointments, books (siranda), and “a woman selling her body in the market.”

<table>
<thead>
<tr>
<th>Residential terraces (#)</th>
<th>Obsidian prismatic blades (n = 514)</th>
<th>Spouted vessels (49 spouts)</th>
<th>Miniature bowls/jars (n = 67)</th>
<th>Polychrome/resist (n = 1014)</th>
<th>Pipes (n = 329)</th>
<th>Cotton spindle whorls (n = 11)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commoner (58)</td>
<td>71% (41)</td>
<td>17% (10)</td>
<td>26% (15)</td>
<td>12% (7)</td>
<td>62% (40)</td>
<td>5% (3)</td>
</tr>
<tr>
<td>Lower elite (24)</td>
<td>100% (24)</td>
<td>46% (11)</td>
<td>82% (20)</td>
<td>33% (8)</td>
<td>96% (23)</td>
<td>17% (4)</td>
</tr>
<tr>
<td>Upper elite (7)</td>
<td>100% (7)</td>
<td>57% (4)</td>
<td>100% (7)</td>
<td>71% (5)</td>
<td>100% (7)</td>
<td>43% (3)</td>
</tr>
</tbody>
</table>

Table 3. Percentage and number of residential terraces with each artifact type at Tzintzuntzan from 1970 survey.
The illustrations in the *Relación de Michoacán* show prepared food, fish, fruit and vegetables, the *Relaciones geográficas* include maize, beans, chile peppers, salt, and dried fish as marketed, and the analysis here has suggested other goods probably traded in the markets. The phrase *mayapeto quehpayarani* means “to bring something to the market; to go and put on the market” (Table 5) probably reflecting local households selling and buying in local markets.

Together these suggest the Late Postclassic Tarascan economy can be characterized as an “intermediate commercialized economy” (Smith 2004: 79). We know where the markets of the Pátzcuaro Basin were located at Spanish Contact and how they shifted location during the Colonial Period (Gorenstein and Pollard 1983). The reduction of hostilities among elites and the marked growth of Basin population between the Middle and Late Postclassic periods provided the conditions for increased market participation on local and regional scales (Pollard 2008), assisted by the transport efficiencies provided by the lake itself (Hirshman and Stawski 2013).

In 2009 Monzón, Roskamp and Warren published a translation, transcription, and analysis of a document dated to 1543, in which an earlier document is summarized in *P’urépecha* (Monzón, Roskamp and Warren 2009). In it a *Nahua* lord claims to be a descendant of one of twenty *Nahua* merchants who came to the military aid of the Tarascan king Tzitzipandáquare in “reconquering” Tzintzuntzan to his rule. In return they are rewarded with rights and privileges including the right to settle in a barrio of the capital, the right to noble status, and land and labor in the empire for them and their descendants.

When the capital of Michoacán was moved in 1540 from Tzintzuntzan to Pátzcuaro by the Spaniards, the native nobility objected (Warren and Monzón García 2004), especially these *Nahua* nobles, who feared losing their special status in the move. What is not clear from this document is whether all or most long-distance traders in the Tarascan Empire were *Nahua* merchants, in this case elevated to noble status. It does, however, indicate two important issues not revealed in previously known documents. First, that there was significant or occasional factional competition among the noble lineages well into the 15th century, and second, of note in the current analysis, that Nahua merchant families were actively engaged in long-distance exchange in the territory of Michoacán before the Late Postclassic period.

In sum, the recent decades of archaeological and ethnohistoric research have accelerated the pace at which we can comprehend the nuances of economies embedded in a state and a world at multiple scales. Each class of these artifacts and each one of the commodities associated with these artifacts were produced, distributed, and consumed very differently. Both the varied consumption patterns of the materials presented here, and the weak indications of dominant production in the capital refutes the conclusion that the Tarascan political economy was solely based on staple (vs. wealth) finance.

As more empirical evidence of both production and consumption becomes available, Michoacán will be able to join the rest of Mesoamerica in developing and testing models of premodern political economies. Indeed, as has been stated recently, “We consider it empirical work, not in contrast to theoretical work, but in pursuit of theoretical

<table>
<thead>
<tr>
<th>Site</th>
<th>Ucareo/Zinapécuaro (%)</th>
<th>Zináparo/Varal (%)</th>
<th>Other (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tzintzuntzan</td>
<td>85% (326)</td>
<td>5% (20)</td>
<td>10% (39)</td>
</tr>
<tr>
<td>Erongaricuaro</td>
<td>48% (61)</td>
<td>33% (42)</td>
<td>19% (24)</td>
</tr>
<tr>
<td>Urichu</td>
<td>38% (22)</td>
<td>45% (26)</td>
<td>17% (10)</td>
</tr>
</tbody>
</table>

**Table 4.** Late Postclassic (Tariacuri phase) obsidian sources chemically sourced (NAA and XRF).

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<table>
<thead>
<tr>
<th>market</th>
<th>mayapeto</th>
</tr>
</thead>
<tbody>
<tr>
<td>merchant, one who sells</td>
<td>mayapeto</td>
</tr>
<tr>
<td>merchandise</td>
<td>mayapetiequa, ampiuaqua</td>
</tr>
<tr>
<td>to buy something</td>
<td>piuani, euahpeni</td>
</tr>
<tr>
<td>to bring something to the market, go and put on the market</td>
<td>mayapeto quehpayarani</td>
</tr>
<tr>
<td>to sell often</td>
<td>ynspengquarehpeni</td>
</tr>
<tr>
<td>to exchange</td>
<td>mayohtacutseni</td>
</tr>
</tbody>
</table>

**Table 5.** 16th century *P’urépecha* terms for markets and market activity.

Terms from *Diccionario Grande* (Warren [ed.] 1991), and Gilberti 1989 [1559].
objectives” (Drennan, Peterson and Fox 2010). In the meantime the data presented here reflect the great complexity of the Tarascan State political economy and the varying, yet intertwined, roles of long-distance merchants, markets, and the power of the State.

Acknowledgments. Earlier versions of this paper were presented in The Aztecs and their World: the Interdisciplinary Contributions of Frances Berdan; Michael Smith and Deborah Nichols, organizers, at the Annual Meeting of the Society for American Archaeology, April 17, 2015, San Francisco, and at the Simposio Sobre Dinámicas Culturales y Actividades de Producción en el Occidente de México, El Colegio de Michoacán, Eduardo Williams y Blanca Maldonado, organizers, September 19, 2014, Zamora. I am grateful to Rubén Cabrera Castro for making available his field notes from the 1977-1978 seasons at Tzintzuntzan and to the Consejo de Arqueología, Instituto Nacional de Antropología e Historia, for permits over many years for survey and excavation. Finally, my sincere appreciation to the Antropología e Historia, for permits over many years for and to the Consejo de Arqueología, Instituto Nacional de Antropología e Historia (Colección Científica, 323), México, 37-58.

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