

CULTURAL DYNAMICS
AND PRODUCTION
ACTIVITIES IN ANCIENT
WESTERN MEXICO

PAPERS FROM A SYMPOSIUM HELD IN
THE CENTER FOR ARCHAEOLOGICAL
RESEARCH, EL COLEGIO DE MICHOACÁN
18-19 SEPTEMBER 2014

Edited by

Eduardo Williams

Blanca Maldonado

ARCHAEOPRESS ARCHAEOLOGY

ARCHAEOPRESS PUBLISHING LTD

Gordon House
276 Banbury Road
Oxford OX2 7ED

www.archaeopress.com

ISBN 978 1 78491 355 7
ISBN 978 1 78491 356 4 (e-Pdf)

© Archaeopress and the individual authors 2016

All rights reserved. No part of this book may be reproduced, in any form or by any means, electronic, mechanical, photocopying or otherwise, without the prior written permission of the copyright owners.

Printed in England by Holywell Press, Oxford
This book is available direct from Archaeopress or from our website www.archaeopress.com

Contents

INTRODUCTION	1
Eduardo Williams	
Background	1
Household Production in Ancient Mesoamerica	2
Trade, Tribute and Transportation	4
The Market	4
Long-Distance Trade	5
The Tribute System	7
Contents and Organization of this Volume	9
1. Cultural Dynamics in Western Mexico	9
2. Production of Strategic Resources	9
3. Trade and Exchange	11
Final Remarks	12
References Cited	12
THE CHALLENGES OF ARCHAEOLOGY IN FLOOD-PRONE AREAS: UNDERSTANDING OCCUPATION DYNAMICS ON THE LERMA RIVER	15
Véronique Darras, Vincent Bichet, Christophe Petit, Laure Deodat	
Introduction	15
General Context of the Research	15
A First Approach to Local Geodynamics	18
Prospection in Flood-Prone Areas with Irrigated Agriculture: A Methodological Challenge	20
Tracing Satellite Images	22
Verifying Anomalies in the Field	22
Locating Sites with the Help of Informants	22
Locating Sites by other Means	25
Description of Sites	25
Distribution and Characteristics of Sites	25
Conclusions	26
References Cited	26
THE CERRO BARAJAS SITES DURING THE EPICLASSIC PERIOD: LOCAL RESOURCES AND IMPORTED PRODUCTS....	29
Gérald Migeon	
Productive Activities at Cerro Barajas during the Barajas Phase (A.D. 700-950)	29
Mineral Resources	29
Renewable Resources	32
Imported or Traded Products	33
The Decline of an Epiclassic Occupation in the Micro-Regional Context	35
Conclusions	37
References Cited	38
NEGOTIATING SPACE AND LANDSCAPE IN PRE-HISPANIC LAKE PÁTZCUARO: SETTLEMENT SYSTEMS OF THE TARASCAN STATE	45
Christopher Stawski	
Community Reconstruction	45
Landscape Reconstruction	47
Interaction and a Guiding Analytical Framework	48
Cost-Distance and Allocation Catchment Analysis	49
Discussion	50
Conclusions	53
References Cited	53

SPATIAL DIFFERENCES IN THE DISTRIBUTION OF DISTINCT TYPES OF SCRAPERS IN THE TEQUILA REGION AS INDICATORS OF TASK SPECIALIZATION	55
Verenice Heredia, Camilo Mireles	
Introduction	55
Specialization, Multicrafting, Intermittent Crafting, and Diversification	56
The Tequila Region: A Brief Description	57
Background Literature on Scrapers and their Function	58
Field Methods: Walking through Agave Fields, Canyons and Lake Basins	59
Laboratory Methods: Analyses of the Scrapers	60
Spatial Analysis: Scrapers and their Distribution North of the Tequila Volcano	61
Spatial Distribution of Scrapers	61
Spatial distribution by type form.	62
Spatial distribution of scrapers by blank type.	62
Spatial distribution by size (length).	63
Discussion	64
Conclusions	66
Acknowledgements	66
References Cited	66
THE OBSIDIAN JEWELRY OF THE TEUCHITLÁN TRADITION: STUDY AND ANALYSIS OF AN UNKNOWN LITHIC TECHNOLOGY....	69
Rodrigo Esparza	
Introduction	69
Background Information	69
The Jewelry and its Context	71
Typology of Obsidian Jewelry	73
Provenance	74
a) The San Juan de los Arcos Deposit	76
b) The Navajas Deposit	76
Technology for Producing Jewelry	77
Conclusions	79
Acknowledgments	81
References Cited	81
CHANGING PLACES, CHANGING LIFESTYLES: DIFFERING OBSIDIAN ECONOMIES IN TEUCHITLÁN CULTURE	85
John P. Wagner	
Introduction	85
Theoretical Approach	86
Wealth and Staple Economies in the Tequila Valleys	87
Economic Reflections in Obsidian	88
The Sites under Study: Llano Grande and Navajas	89
Excavated Contexts: The Llano Grande and Navajas Guachimontones	93
Research Methods	93
Recovery and Storage	93
Sampling	93
The Database	96
Morphological Type	96
Cortex Coverage	96
Metrics	96
Products	96
Analysis Procedure	96
Results of the Investigation	98
Overall Quantities and Site Coverage Differences	98
Lithic Industry Tests	98
Quartile Distribution Differences	99
Discussion and Conclusions	100
Acknowledgements	101
References Cited	101

WHAT IS A ‘SOURCE AREA’? SYSTEMATIC ANALYSIS OF OBSIDIAN EXPLOITATION IN UCAREO AND ZINAPÉCUARO, MICHOACÁN.....	105
Dan M. Healan	
Introduction.....	105
The Ucareo-Zinapécuaro Source Area	105
Conclusions.....	111
References Cited	111
RECONSTRUCTING THE POTS: ADVANCES IN THE STUDY OF THE HISTORY OF POTTERY PRODUCTION IN CAPULA, MICHOACÁN	113
José Abraham García Madrigal	
Introduction.....	113
Pre-Hispanic Capula: A Little-Known Territory.....	114
Capula in Ethnohistorical Sources.....	118
Pottery Production: Transformations in the 20 th Century.....	122
Pottery Production after 1936: The Master Potter Juan Panduro.....	122
High-Temperature Pottery and the Catrina	123
Acknowledgments	125
References Cited	126
DOMESTIC PRODUCTION AND DECORATION STYLES IN POTTERY FROM HUÁNCITO, MICHOACÁN: AN ETHNOARCHAEOLOGICAL STUDY	129
Eduardo Williams	
Introduction.....	129
Geographic and Cultural Background of the Study Area	129
Organization of Pottery Production	130
Households and Pottery Production in Huáncito.....	131
Household 1. Isaac, Amalia, Pablo, and Socorro	131
Household 2. Elena Felipe Félix and Gilberto Espicio Ambrosio	139
Household 3. Bernaldina Rivera Baltasar and Alfredo Felipe Félix.....	144
Household 4. Fidel Lorenzo and Lafira Bartolo	149
Discussion	151
Conclusions.....	158
Acknowledgments	160
References Cited	160
CERAMICS, SOCIAL STATUS, AND THE TARASCAN STATE ECONOMY	163
Helen Perlstein Pollard	
Introduction.....	163
Spouted and Spout-Handled Vessels	164
Ceramic Pipes	165
Cotton Spindle Whorls.....	169
Comparisons.....	169
Acknowledgements	171
Data Availability	171
Appendix 1: Pátzcuaro Basin Spouts.....	171
Appendix 2. Pátzcuaro Basin Pipes	173
Appendix 3: Cotton Spindle Whorls.....	175
References Cited	176
COPPER AS A STRATEGIC RESOURCE IN PRE-HISPANIC WESTERN MEXICO	179
Blanca Maldonado	
Introduction.....	179
Copper as a Strategic Resource.....	179
Organization of Copper Production in the Tarascan Empire.....	180
The Manufacture of Metal Objects among the Tarascans	183

Final Remarks.....	184
References Cited.....	185
CIRCULATION OF GOODS AND COMMUNICATION ROUTES BETWEEN THE ACÁMBARO VALLEY AND CENTRAL MEXICO: FROM CHUPÍCUARO TO TEOTIHUACAN	187
Brigitte Faugère , Karine Lefèbvre, Jean-François Cuenot	
The Acámbaro Valley in Central Mexico: Geographical Conditions and Contact.....	187
What Kinds of Relations? Various Hypotheses and their Implications for Transportation	188
Transportation and Road Conditions: From Pre-Hispanic Times to the Colonial Era.....	189
Colonial Roads.....	191
GIS and the Most Economical Routes	194
Which Routes to Use, and for What Purpose?	196
References Cited	197
EVALUATING CONTRASTING MODELS OF CERAMIC PRODUCTION IN THE TARASCAN STATE: NEGOTIATIONS IN CLAY ...	201
Amy J. Hirshman, David L. Haskell	
Introduction.....	201
Archaeological Context of the Study.....	203
Ceramic Paste Research in the Pátzcuaro Basin: Its Origins, Limitations, and Capabilities.....	205
Survey Data and Ceramic Consumption from Erongarícuaro	206
Comparative Paste Data from Urichu	208
Discussion and Conclusions: Moving Toward Negotiated Managerial Ceramic Production	210
Acknowledgements	211
References Cited.....	212
CERAMIC EVIDENCE OF TEOTIHUACAN CONTACT LINKING THE BASIN OF MEXICO, THE BAJÍO, AND SOUTHERN HIDALGO	215
Christine Hernández	
Geographic Background.....	215
Archaeological Background	215
The Ucareo-Zinapécuaro Obsidian Source Area	217
The Ucareo-Zinapécuaro Project	217
The UZ Source Area Ceramic Sequence	219
The Choromuco Phase and Teotihuacan.....	220
The Ramon Ceramic Complex	221
The Perales Phase and Teotihuacan.....	226
Late Classic Perales and Tula Chico	230
Discussion and Conclusions	233
References Cited	235

List of Figures and Tables

THE CHALLENGES OF ARCHAEOLOGY IN FLOOD-PRONE AREAS: UNDERSTANDING OCCUPATION DYNAMICS ON THE LERMA RIVER

Figure 1. Map of the study area, showing the state capitals (hollow dots); the major Preclassic sites (solid dots), the sites mentioned in the text (stars), the areas studied by previous CEMCA projects (in grey), and the area of the present study (in red).	16
Figure 2. Map of the study area, El Valle de los Tres Mezquites, on the lower course of the Lerma River at the foot of Cerro Barajas, 35 km north of the Zacapu Basin. (Map includes the location of the three sites previously recorded by INAH.)	17
Figure 3. Excavation showing the pedological profile of the banks of the Lerma River in the study area.	18
Figure 4. Profile of a stratigraphic survey showing the accumulation of black soil over a floor with anthropic features.	19
Figure 5. Aerial photo showing the area of geophysical prospection.	20
Figure 6. Results of the geophysical prospection: the areas of conductivities with weak intensity (see scale at upper left) appear to be associated with the more elevated areas, and likely reflect the presence of thick sandy deposits associated with recent floods.	21
Figure 7. One of the most interesting results was the detection of a circular anomaly in an adjoining depression in sector B.	21
Figure 8. Aerial view showing pedological anomalies in cornfields. These clear areas are sometimes identifiable against the black soil, and could represent the remains of archaeological structures.	23
Figure 9. This aerial view shows dark areas in harvested cornfields that could indicate the presence of buried structures.	23
Figure 10. Concentrations of scrub vegetation in the cornfields, as shown here, could suggest the presence of buried architectural structures.	24
Figure 11. These geometric lines and shapes are clearly identifiable on the landscape; they can only be explained by human intervention. In general, these sites have masonry-based architecture.	24
Figure 12. Distribution of sites on the plains: the three sites known before prospection are shown in yellow, the sites registered in 2014 appear in red (after Google Earth).	26

THE CERRO BARAJAS SITES DURING THE EPICLASSIC PERIOD: LOCAL RESOURCES AND IMPORTED PRODUCTS

Figure 1. Map showing the archaeological sites around Cerro Barajas.	30
Figure 2. Quarry of basalt slabs in Group B of the Nogales site.	30
Figure 3. Wall built with slabs in Group D of the Nogales site.	30
Figure 4. Obsidian deposit on the eastern end of the Sierra de Pénjamo.	31
Figure 5. One of the water wells in Nogales.	32
Figure 6. Storage structure in the Ecuaro del Moro site.	33
Figure 7. Pedestal-base vessel with red and negative paint from Yácata El ángel.	35
Figure 8. Structure "H2" at Yácata El ángel, with an atrium and four L-shaped columns.	36

NEGOTIATING SPACE AND LANDSCAPE IN PRE-HISPANIC LAKE PÁTZCUARO: SETTLEMENT SYSTEMS OF THE TARASCAN STATE

Table 1. Mesoamerican chronological phases and Pátzcuaro Lake Basin phases.	45
Figure 1. The present-day state of Michoacán, Mexico, and the Lake Pátzcuaro Basin.	46
Figure 2. Artifact clusters and subsequent community delineation (Tariacuri phase displayed).	46
Table 2. The historic/modern lake level correlates to pre-Hispanic lake levels.	47
Figure 3. The resource zones of the Lake Pátzcuaro Basin.	48
Figure 4. The cost surface layer for the Lake Pátzcuaro Basin, with the Late Postclassic communities and transportation network (after Gorenstein and Pollard 1983).	49
Figure 5. The least-cost path analysis between pre-Hispanic communities (Tariacuri phase communities displayed).	50
Figure 6. The cost-allocation catchments for the pre-Hispanic communities (Tariacuri phase analysis displayed).	50
Figure 7. The primary and secondary interactions between communities (Tariacuri phase displayed).	51

SPATIAL DIFFERENCES IN THE DISTRIBUTION OF DISTINCT TYPES OF SCRAPERS IN THE TEQUILA REGION AS INDICATORS OF TASK SPECIALIZATION

Figure 1. The Tequila region of Jalisco, Mexico.	55
Figure 2. Photograph of the Tequila region showing two of the three main sub-regions: the valley and the canyon.	57
Figure 3. A modern tlaquichero scraping a maguey core (adapted from Salazar 2004).	58
Figure 4 a. Reproduction of a section of the <i>Florentine Codex</i> (adapted from Sahagún 1963) showing an obsidian scraper; b. Drawing of a steel scraper from the Mezquital valley (adapted from Fournier 2007: Figure 36)	59
Figure 5. The three main scraper type forms in our study collection (left-to-right) ovoid, triangular, and keyhole (drawing by C. Mireles). .	60
Figure 6. Spatial distribution of (a, upper left) all scrapers; (b, upper right) triangular pieces; (c, lower left) ovoid forms; and (d, lower right), keyhole specimens.	61
Table 1. Ratio of type form scrapers per number of potsherds and per kilometer square.	62
Table 2. Ratio of blanks per number of potsherds and per kilometer square.	62
Figure 7. Spatial distribution of blanks: on flakes (a, upper left); on macroblades (b, upper right); and on inverse flakes (c, upper left). .	63
Figure 8. Hotspot analysis of scraper length.	63
Table 3. Length of scrapers by sub-region.	64
Table 4. Percentages of scrapers by type form, blank, and length.	65
Table 5. Possible function of scrapers in the Tequila region.	65
Figure 9. Handled coahuilos found at the Cueva de la Candelaria site (from Rodríguez-Loubet 1987: Figure 61).	65

THE OBSIDIAN JEWELRY OF THE TEUCHITLÁN TRADITION: STUDY AND ANALYSIS OF AN UNKNOWN LITHIC TECHNOLOGY

Figure 1. Map showing the obsidian deposits of the Tequila Volcano region and the location of the Guachimontones archaeological site (Prepared by Armando Trujillo).	70
Figure 2. Overview of the Guachimontones archaeological site.	71
Figure 3. Plan of Burial 3 in Guachimontones Circle 6. Drawing by Eric Cach.	72
Figure 4. Fragments and complete pieces of jewelry found during the explorations of the Guachimontones site.	72
Table 1. Dates of the jewelry in archaeological contexts.	73
Figure 5. Typology of Obsidian Jewelry 1. Drawings by Glenna Nielson and adapted by Oliver Flores.	73
Figure 6. Typology of Obsidian Jewelry 2. Drawings by Glenna Nielson and adapted by Oliver Flores.	74
Figure 7. Sample of a piece of jewelry, so thin that one can see through it.	74
Figure 8. Bivariate plot of the results of analysis of jewelry by neutron activation.	75
Figure 9. Flake-core from the deposit at San Juan de los Arcos (After Clark and Weigand 2009).	76
Figure 10. Panoramic view of the Navajas deposit.	77
Figure 11. Process for extracting <i>Kombewa</i> flakes or splinters (operational chain). 1. - A large flake (B) is removed from a core (A). 2. - Preparation of the percussion plane (rectification of the angle between the percussion plane and lower phase B). 3. - Extraction of the <i>Kombewa</i> flake (C) from the flake-core (B). 4. - <i>Kombewa</i> splinter or flake (C). A section view is shown in the upper sketches and a ventral view in the lower. (This diagram is a modification of http://commons.wikimedia.org/wiki/File:Kombewa.JPG).	78
Figure 12. Study of the orifice of a piece of jewelry using a stereoscopic microscope at 12X. The surface of the piece shows scraping to assist the drilling process.	79
Figure 13. Photograph of the orifice at 120X taken by a scanning electron microscope. The symmetry of the lines can be observed.	80
Figure 14. Photograph of the orifice at 1000X, taken by a scanning electron microscope. One can observe some elements of what could have been an abrasive, possibly consisting of flint.	80
Figures 15 and 16. Photograph of the orifice at 30X, taken by a scanning electron microscope. Both the ventral and dorsal sides are shown.	81
Figure 17. Pectoral from the collection at the Museum of Ameca, Jalisco. The assembled jewelry can be seen as well as a shell pendant.	81

CHANGING PLACES, CHANGING LIFESTYLES: DIFFERING OBSIDIAN ECONOMIES IN TEUCHITLÁN CULTURE

Figure 1. Map of West Mexico. The two main basins within the Tequila Valleys (circled) are Magdalena to the northwest, and La Vega near the center. (Modified after Beekman 2010:42).	85
Figure 2. Map of the Tequila Valleys showing sites of different size categories within the core and semi-periphery. Circled sites are within the core, and all sites outside the core population zone are considered semi-peripheral. Labeled sites are those under study. The location of Navajas in a small exterior basin associates this site more closely with the core zone. (Adapted from Beekman in press: Fig. 3.2.).....	86
Figure 3. Circle 2 guachimontón, from the site of Los Guachimontones.	87
Figure 4. Pike collection, photo courtesy of José Guadalupe Romero, director, Casa de Cultura Museum, Tala, Jalisco.	88
Figure 5. A laminar anthropomorphic pendant; (a) frontal view, (b) side view.	89
Figure 6. Formal tools from Navajas: (a) a small “dart” point; (b) the tip of an elongated point or “lance-head”; (c) the base of an elongated point; (d) a very small biface.	90
Figure 7. Informal tools: (a, b) scraper from Navajas; (c, d) expedient cutting/stripping tool from Llano Grande.	91
Figure 8. A view of the pass ascending to Llano Grande from the valley.	92
Figure 9. The view to the south from the Navajas ceremonial district, with Presa Hurtado in the distance. Photo by Christopher Beekman.	92
Figure 10. Llano Grande central group, showing the excavation units, patios, and structures.	94
Figure 11. Navajas central group with areas of excavation circled (adapted from Beekman 2008: Figure 2).	94
Figure 12. Navajas plan, with excavation units (adapted from Beekman 2008: Figure 6).	95
Figure 13. Plan of the Llano Grande guachimontón, with excavation units (adapted from Beekman 2008: Figure 4).	95
Table 1. Percentages of formal product counts relative to total analyzed sample (products and debitage).	99
Table 2. Debitage and sherd total comparison.	99
Table 3. Site percentages of flakes and blades which possess full or no cortex.	99
Table 4. Means and standard deviations for flakes and blades with partial cortex.	99
Figure 14. Flake and blade comparisons of cortex coverage distributions per site.	100

WHAT IS A ‘SOURCE AREA’? SYSTEMATIC ANALYSIS OF OBSIDIAN EXPLOITATION IN UCAREO AND ZINAPÉCUARO, MICHOACÁN

Figure 1. Topographic map of the Ucareo-Zinapécuaro obsidian source area.	106
Figure 2. Map of Mesoamerica showing the location of the Ucareo-Zinapécuaro source area (triangle) and the Xochicalco (A), Tula (B), and Chichén Itzá sites (C).	106
Figure 3. Obsidian outcrop showing “nodules” derived from the in-situ weathering of well-fractured obsidian bands.	108
Figure 4. Outcrop with massive obsidian flow bands within a gully.	108
Figure 5. Cross-section of a doughnut-shaped quarry with very straight sides.	109
Figure 6. Truncated obsidian platforms with very large (a) and huge (b) multiple facets.	110
Figure 7. Quadrangular nodule with very straight corners that allowed the extraction of a very straight primary blade.	111

RECONSTRUCTING THE POTS: ADVANCES IN THE STUDY OF THE HISTORY OF POTTERY PRODUCTION IN CAPULA, MICHOACÁN

Figure 1. Satellite image showing the location of the town of Capula.	113
Figure 2. Fragments of figurines from the La Rosa de San Juan site. Private collection.	115

Figure 3. Obsidian artifacts from the La Rosa de San Juan site: upper left, the prismatic knife made of green obsidian mentioned in the text; private collection.	115
Figure 4. Vessel containing ashes from the la Rosa de San Juan site.....	116
Figure 5. Remains of a structure at the Las Coronillas site, possibly a habitation platform.	116
Figure 6. Basalt sculpture found at the El Corral Falso site.	117
Figure 7. Pre-Hispanic farming terraces at the El Colorín site; the pits made by looters and fragments of pre-Hispanic artifacts indicate ancient origin.	117
Figure 8. Boulder with petroglyph at the La Joya site.	118
Figure 9. Potsherd found near the boulder in the previous figure.	119
Figure 10. Basalt axe from the El Varal site.	119
Figure 11. Obsidian artifact found on the road between Buenavista and Sanambo.	119
Figure 12. Pre-Hispanic habitation structure at the San Vicente site.	120
Figure 13. Pre-Hispanic structure at the La Tejocotera site.	120
Figure 14. Pedro Carrillo and his wife Antonia Aguilar. Pedro is the last surviving student of Juan Panduro.....	123
Figure 15. Plate showing the characteristic <i>capulineado</i> decoration, made by the potter Reynaldo Pérez.	124
Figure 16. Lorenzo Espinoza immortalized in this reproduction of a painting. The original work is in the offices of the <i>Casa de las Artesanías de Michoacán</i> in Morelia.	124
Figure 17. Plate made by Lorenzo Espinoza. Several of the motifs were inspired by pre-Hispanic iconography.	125
Figure 18. High-temperature ceramic plate. The paste and colors are very different from traditional pottery.	126
Figure 19. Potter Alvaro de la Cruz in his workshop with several <i>Catrina</i> figurines.	126
Figure 20. The monumental <i>Catrina</i> figure placed at the main entrance to Capula in October 2014.	127

DOMESTIC PRODUCTION AND DECORATION STYLES IN POTTERY FROM HUÁNCITO, MICHOACÁN: AN ETHNOARCHAEOLOGICAL STUDY

Figure 1. Map of La Cañada de los Once Pueblos, in northern Michoacán (adapted from West 1948).....	130
Figure 2 a. Isaac Cayetano (first from right) with his family: his wife Amalia (to his right), his grandson Pablo, his wife Socorro and their son José Ricardo.	132
Figure 2 b-c. Among the designs found in the pottery of Isaac and Amalia's household there are many abstract and geometric designs (b) and zoomorphic designs (c) (height: 42 cm; width: 40 cm).	132
Figure 2 d. Detail of the previous figure: Flower design painted with charanda, a reddish-brown earth found in and around Huáncito.	133
Figure 2 e. Zoomorphic motifs include birds from the local environment, like this one painted by Amalia.	134
Figure 2 f. Water jug (called <i>jarra</i> in Spanish) painted by Pablo, showing a design including naturalistic motifs, such as flowers and birds (height: 41 cm; width: 30 cm).	134
Figure 2 g. This rabbit and the surrounding floral and abstract designs were painted by Pablo.	135
Figure 2 h. This water jug (called <i>cántaro</i> in Spanish) with handles, base and lid was painted by Amalia with naturalistic designs (flora and fauna) (height: 54.5 cm; width: 30 cm).	135
Figure 2 i. Detail of the previous figure: Flowers and birds whose shape is inspired by the local flora and fauna.	136
Figure 2 j-k. On the lid of the previous pot there are representations of flowers, birds and butterflies.	136
Figure 2 l. Detail of butterfly and abstract designs on a pot painted by Pablo.....	137
Figure 2 m-n. Flower vase (called <i>florero</i> in Spanish) painted by Socorro, Pablo's wife, showing her personal style (height: 19 cm; width: 8 cm).	138
Figure 3 a. Elvia Felipe Lorenzo, Pablo's sister, who lives in her own household (next to Isaac and Amalia's home).	139
Figure 3 b. Vessel painted by Elvia, showing a deer painted in Elvia's personal style (height: 36 cm; width: 33 cm).	139
Figure 3 c-d. Details of the previous figure, showing a flower (b) and an abstract design created by Elvia (c).....	140
Figure 3 e. Pot with base and lid made by Elvia. This item shows a deer and floral designs similar to the previous figure (height: 52 cm; width: 33.5 cm).	140
Figure 3 f. Detail of the previous figure, showing elements of the local flora and fauna (deer, rabbit, butterfly).	140
Figure 3 g. Lid of the previous vessel, decorated with geometric designs.	141
Figure 3 h-i. Pot painted by Elvia, with a different style from the previous figures (height: 28 cm; width: 24 cm).	141
Figure 4 a. Elena Felipe Felix (second from right) with husband Gilberto Espicio Ambrosio and several members of their nuclear family (their daughter Agripina is standing to Gilberto's right).....	142
Figure 4 b. Vessel with base, decorated by Elena with naturalistic motifs (flora and fauna) (height: 59 cm; width: 49 cm).	142
Figure 4 c. Vessel in the shape of a stylized bird with handle, painted by Elena with birds and flowers. The hummingbird is a ubiquitous motif in Elena's repertoire (and that of many other potters in Huáncito) (height: 33.5 cm; width: 28 cm).	143
Figure 4 d-e. Details of decorations in the previous figure: flower (d) and hummingbird (e).	143
Figure 4 f. Water jug painted by Agripina. Note the similarity between the designs in this item and the previous figure (height: 35 cm; width: 33 cm).	143
Figure 4 g. Detail of the decoration in the previous figure: handle with abstract designs.	143
Figure 4 h. Vessel called <i>florero</i> (flower vase) painted by Agripina with naturalistic motifs (birds and flowers), following her own personal style (height: 41 cm; width: 32 cm).	144
Figure 4 i. Detail of the previous figure: hummingbird and flower.....	144
Figure 4 j. Large-size vessel painted by Agripina with naturalistic designs: flowers, roosters and hummingbirds (height: 67 cm; width: 55 cm).	144
Figure 4 k-l. Details of decoration in previous figure: flowers and birds.	145
Figure 5 a. Bernaldina Rivera Baltasar (far left) with her husband Alfredo Felipe Felix (third from left), one of their daughters, and two sons.....	145
Figure 5 b. This is a sample of the pottery produced in Bernaldina's and Alfredo's household. It is unusual for a family to have such a collection of their work at home, since they sell everything right after manufacture.	146

Figure 5 c. <i>Florero</i> (flower pot) painted by David Felipe, Bernaldina's son (height: 37 cm; width: 30 cm).	146
Figure 5 d-e. Vessel painted by Juan Felipe, Bernaldina's son (height: 24 cm; width: 20 cm).	147
Figure 5 f. Vessel painted by Roselia, Bernaldina's daughter (height: 21 cm; width: 20 cm).	147
Figure 5 g. Vessel painted by Alfredo, Bernaldina's husband (height: 21 cm; width: 25 cm).	147
Figure 5 h. Vessel painted by Alfredo, Bernaldina's son. This is a very intricate design based on the local flora (height: 37 cm; width: 27 cm).	148
Figure 5 i. Detail of the previous figure, showing a butterfly.	148
Figure 5 j. Vessel painted by David, Bernaldina's son (height: 32 cm; width: 24 cm).	148
Figure 5 k. Detail of previous figure, showing decorative motif at bottom of vessel.	148
Figure 5 l. Pot painted by Esperanza Cipriano, wife of Juan, Bernaldina's son (height: 24 cm; width: 22 cm).	149
Figure 6 a. Fidel Lorenzo Santiago (left) and his wife Lafira Bartolo Santos, with their two daughters and grandson Magdaleno. María de Jesús (also known as "La Chaparrita") is at front; Marina (Magdaleno's mother) is at far right.	149
Figure 6 b. Fidel is polishing a water jug (<i>botellón</i>) that has been covered by a slip of <i>charanda</i> .	150
Figure 6 c. Lafira painting a <i>botellón</i> . This type of vessel is always sold with a cup for drinking water and for covering the pot's mouth (see the cups near Lafira's feet).	150
Figure 6 d. <i>Botellón</i> decorated with a <i>Poinsettia</i> motif (called <i>Flor de Nochebuena</i>), painted by Fidel (height: 29 cm; width: 25 cm).	150
Figure 6 e. <i>Botellón</i> decorated with a variant of the <i>Poinsettia</i> motif, painted by Lafira (height: 29 cm; width: 25 cm).	151
Figure 6 f-g. Details of fruit designs: mango (f), watermelon and banana (g) painted on the <i>botellón</i> in previous figure.	151
Figure 6 h. <i>Botellón</i> decorated with fruits (mango) and flowers, painted by María de Jesús (height: 22 cm; width: 20 cm).	151
Figure 6 i. <i>Botellón</i> with bird and white flower painted by Marina (height: 29 cm; width: 25 cm).	152
Figure 6 j. Miniature vessel painted by Magdaleno (height: 13.5 cm; width: 16 cm).	152
Figure 7. Interaction among potters and members of their household, primarily children, is important for the transmission of a certain decorative style, like the example illustrated here (Elena with one of her daughters).	155
Figure 8. Agripina (Elena's daughter) is working and interacting with two girls from her household. In this way the children learn to paint according to a style belonging to their family.	155
Figure 9. Agripina is working with one of her sisters. This is how an activity is socialized and the shared elements of a decorative style are reinforced at the same time.	156
Figure 10. Marina working with her son Magdaleno. Both are painting pots according to a shared style, belonging to their household.	156

CERAMICS, SOCIAL STATUS, AND THE TARASCAN STATE ECONOMY

Figure 1. Lake Pátzcuaro Basin survey and excavation locations used in the analysis.	164
Figure 2. Spouted vessel with polychrome and resist decoration from an elite burial at Urichu (author's photograph).	165
Table 1. Sixteenth century Purépecha terms for cacao.	165
Figure 3. Spouted vessel distribution at Tzintzuntzan.	166
Figure 4. Spouted vessel distribution in Southwest and Southeast zones.	166
Figure 5. Ceramic pipe fragments excavated in Urichu (1990-1995).	167
Figure 6. Ceramic pipe distribution at Tzintzuntzan.	168
Figure 7. Ceramic pipe distribution in Southwest and Southeast zones.	168
Figure 8. Spindle whorls from Urichu: one item for maguey fiber (from U-5 excavation unit) at upper left of figure, and the remainder for spinning cotton thread (from U-1 burials).	169
Figure 9. Cotton spindle whorls at Tzintzuntzan.	170
Figure 10. Cotton spindle whorls in Southwest and Southeast zones.	170

COPPER AS A STRATEGIC RESOURCE IN PRE-HISPANIC WESTERN MEXICO

Figure 1. Map showing deposits of porphyry copper (dots) and deposits of sediment-hosted copper (triangles) in the New World (adapted from USGS: http://geology.com/usgs/uses-of-coper/).	180
Figure 2. Map showing the Mexican precious metals and base metals province (adapted from Ostroumov and Corona-Chávez 2000, drawn by César Hernández).	181
Figure 3. The <i>Relación de Michoacán</i> shows the funeral procession of a Tarascan king. Metal objects were usually included in the offerings during these public displays (adapted from Alcalá 2008: Figure on p. 220).	181
Figure 4. Map showing the area covered by the Tarascan Empire during the Protohistoric period (adapted from Pollard 1993, p. 5. Drawn by César Hernández).	182
Figure 5. This scene from the <i>Relación de Michoacán</i> shows the <i>petámuti</i> or high priest (at right) wearing metal tweezers as symbol of power (adapted from Alcalá 2008: Figure on p. 13).	182
Figure 6. Among the pre-Hispanic Tarascans, copper was alloyed with tin and/or arsenic to produce bronze, or was mixed with different concentrations of both silver and gold in order to make bells, ornamental tweezers, rings, and other items of bodily adornment.	183

CIRCULATION OF GOODS AND COMMUNICATION ROUTES BETWEEN THE ACÁMBARO VALLEY AND CENTRAL MEXICO: FROM CHUPÍCUARO TO TEOTIHUACAN

Figure 1. Map of the central-western regions of Mesoamerica discussed in the text.	188
Figure 2 (a-b). Materials that were probably imported, found in the JR 74 site at Cuizillo del Mezquital-Los Azules.	190
Figure 3. The Mexica porters known as <i>tlamemes</i> carried heavy loads on their backs for long distances (<i>Florentine Codex</i> , adapted from Sahagún 1938).	190
Figure 4. Colonial map showing major roads and secondary roads linking several settlements in the Acámbaro, Guanajuato, region.	192
Figure 5. Colonial map showing a <i>camino real</i> and the secondary roads linking it to several settlements.	192
Figure 6. Roadways in the Acámbaro region (courtesy of K. Lefèbvre).	193
Figure 7. The Solís Dam area (Guanajuato) with ancient roadways that follow, in some stretches, the <i>caminos reales</i> .	193

Figure 8. Lowest-cost routes between the Acámbaro Valley and the Basin of Mexico.	196
Figure 9. Sites with Chupícuaro materials at the macro-regional scale, with possible routes between them.	197

**EVALUATING CONTRASTING MODELS OF CERAMIC PRODUCTION IN THE TARASCAN STATE:
NEGOTIATIONS IN CLAY**

Figure 1. Pre-Hispanic Tarascan ceramic vessels; a. Pot decorated with geometric designs; b. Tripod bowl; c. Spouted vessels (all from the Morelia, Michoacán, Museum; after Boehm 1994).	202
Figure 2. Map of the Lake Pátzcuaro Basin with sites mentioned in the text.	203
Figure 3. The site of Erongarícuaro, with the elite area of the site in greater detail.	204
Figure 4. Map of Urichu showing areas mentioned in the text. (after Pollard and Cahue 1999.)	204
Table 1. Alphabetical listing of paste categories identified by Pollard.	205
Table 2. Percentages of sherds by paste from survey and excavations in elite and non-elite contexts at Erongarícuaro.	207
Table 3. Percentage of sherds by decoration/surface treatment from survey and excavations in elite and non-elite contexts at Erongarícuaro.	207
Figure 5. Survey units in which Querenda White (squares), Tarerio Cream (circles), and Ichupio Coarse (stars) sherds were found. ...	208
Figure 6. Survey units in which Tariacuri Brown (circles), Tariacuri Coarse (squares), Tecolote Orange (stars), and Urichu Fine (crosses) sherds were found.	208
Figure 7. Survey units in which Negative on Cream (squares), Paint and Negative on Cream (circles), Negative on Red (stars), and Paint and Negative on Cream (crosses) sherds were found.	209
Table 4. Urichu paste comparisons.	209
Figure 8. Survey units in which sherds of miniature bowls (squares), miniature jars (circles), and sherds of spouts (stars) were found.	209
Table 5. Urichu decorated sherd comparisons.	210

CERAMIC EVIDENCE OF TEOTIHUACAN CONTACT LINKING THE BASIN OF MEXICO, THE BAJÍO, AND SOUTHERN HIDALGO

Figure 1. Map of the Bajío region of north-central Mexico. The Lerma River is highlighted (adapted from Raisz 1959).	216
Figure 2. The Ucareo-Zinapécuaro Obsidian Source Area: 1, Durán; 2, El Monte; 3, Las Lomas; 4, Mendoza, Vargas, and Soto sites; 5, La Palma; 6, Araró; 7, Tierras Blancas; 8, La Bartolilla; 9, El Pedrillo; 10, Taimeo (adapted from Healan 1997:Figure 2).	217
Table 1. Archaeological synthesis of the study area.	218
Figure 3. Choromuco phase occupation in the UZ source area (Ucareo valley sites are numbered): <i>4a</i> , Rafael Mendoza; <i>4b</i> , Guadalupe Vargas and Efrén Vargas; and <i>4c</i> , Rafael Soto (adapted from Healan 1997:Figure 2).	220
Figure 4. A Tlamimilolpa Red on Natural Brown Incised tripod bowl exhibited in the Acámbaro Museum. Photograph by Christine Hernández.	221
Figure 5. Ramon Red on Brown, variety Ramon tripod bowls: <i>a</i> , tripod bowl with scroll design; and <i>b</i> , tripod bowl fragment and profile. Photographs and original drawings by Christine Hernández.	222
Figure 6. Ramon Red on Brown, variety Rizo bowls: <i>a</i> , bowl fragment and profiles; and <i>b</i> , tripod bowl from Acámbaro. Photographs and original drawings by Christine Hernández.	222
Figure 7. Ramon Red on Brown, grinding bowl variety unprovenienced vessel from Acámbaro. Photograph by Christine Hernández.	222
Figure 8. Ramon Negative Red on Brown jar and profiles. Photographs and original drawings by Christine Hernández.	223
Figure 9. Ramon Red on Brown and Ramon Negative Red on Brown correlates identified outside of the UZ source area: <i>upper left</i> , Loma Linda Red on Brown (adapted from Nalda 1991:Figura 9); <i>lower left</i> , Cajete al negativo from the El Rosario site; <i>upper right</i> , Unprovenienced Ramon Red on Brown tripod bowl from Acámbaro; and <i>lower right</i> , archaeological sites in the southeastern Bajío with Ramon Red on Brown or associated Choromuco phase ceramics (adapted from Raisz 1959). Photographs and artwork by Christine Hernández.	224
Figure 10. Line drawings of murals in the interior of a temple structure atop the principal pyramid at El Rosario, Querétaro: <i>a</i> , detail from the North Wall talud; <i>b</i> , detail from the Northeast Wall talud (both redrawn by Christine Hernández from Figures 4 and 5 in Chapter 4, Saint Charles et al. 2010:120-121).	225
Figure 11. Examples of red on brown cylindrical tripod vessels from Tlamimilolpa phase Teotihuacan: <i>a</i> , red on brown variety; and <i>b</i> , negative red on brown variety (both adapted from López Pérez 2009:176, 162). Gray shading represents red-painted designs; black shading represents resist smudging. Original artwork by Christine Hernández.	226
Figure 12. Unprovenienced imported Teotihuacan negative red on brown tripod bowl found in the vicinity of Acámbaro, Guanajuato. Photograph by Christine Hernández.	226
Figure 13. Imagery of obsidian knives on ceramics: <i>a</i> , unprovenienced incised monochrome tripod bowl from Acámbaro (design highlighted in black); <i>b</i> , outline of a design from a Stucco Painted Vase from Xolalpan-phase Teotihuacan (adapted from Rattray 2001:Figure 164, 563). Original artwork and photograph by Christine Hernández.	227
Figure 14. Middle Classic period red on brown ceramics: <i>a</i> , Perales phase Cantinas Red-Orange from the UZ source area; and <i>b</i> , Xolalpan-phase red on brown vessel profile and interior design from Teotihuacan (adapted from Rattray 2001:559, Figure 159). Gray shading represents red-painted zones; white outlines represent incision. Original artwork by Christine Hernández.	228
Figure 15. Xolalpan phase incised red on brown tripod vessels from Teotihuacan: <i>a</i> , version with incision over painted body panel (adapted from López Méndez 2009:140); and <i>b</i> , version with incision over painted basal panel (adapted from Rattray 2001:561, Figure 161). Gray shading represents red-painted zones; white outlines represent incision. Original artwork by Christine Hernández.	228
Figure 16. Bajío versions of Xolalpan-phase red on brown incised cylindrical vases at Teotihuacan: <i>a</i> , Rosalinda Red on Brown Incised varieties from the UZ source area (edge of painted zone highlighted); <i>b</i> , San Miguel Red on Brown bowl with annular support (Braniff 1999:144, No. 8), and <i>c</i> , San Miguel Red on Brown tripod bowl (after Braniff 1999, No. 115). Gray shading represents red-painted zones; white designs represent incision. Original artwork and photograph by Christine Hernández.	229
Figure 17. Examples of Coyotlatelco Red on Brown ceramics from the Tula basin. Photographs by Christine Hernández.	230

Figure 18. Settlement patterns in the Tula basin: <i>a</i> , Chingú phase; and <i>b</i> , Prado and Corral phases (adapted from Mastache et al. 2002:53, 63, Figures 4.1 and 4.6).	231
Figure 19. Examples of La Mesa Coyotlatelco Red on Brown ceramics. Photographs by Christine Hernández.	232
Figure 20. Examples of Prado complex ceramic types: <i>a</i> , Guadalupe Red on Brown Incised; <i>b</i> , Clara Luz Incised, and <i>c</i> , Ana María Red on Brown. Photographs by Christine Hernández.	232
Figure 21. Comparison of the execution of painted designs between versions of Ana María Red on Brown from the sites of: <i>a</i> , Cerro de la Cruz, Querétaro, and <i>b</i> , Tula Chico, Hidalgo. Photographs by Christine Hernández.	233
Figure 22. Guadalupe Red on Brown Incised from Tula Chico. Photograph by Christine Hernández.	234

INTRODUCTION

Eduardo Williams
El Colegio de Michoacán

This book is based on the *Symposium on Cultural Dynamics and Production Activities in Ancient Western Mexico*, organized at the Center for Archaeological Research of the Colegio de Michoacán on 18-19 September 2014. The papers in the symposium were grouped into three general topics: cultural dynamics; the production of strategic resources; and trade and exchange. What follows is a brief introduction to these themes, based on recent archaeological and ethnohistorical literature on Mesoamerica.

Background

The first archaeologists to write about Western Mexico pointed out that this region was in some way, or ways, connected to Mesoamerica. Later scholars thought that the region's archaeology belonged to the area of Mesoamerican studies, while more recent writers believe it should be incorporated into a newly-defined Mesoamerica (Gorenstein 1996:89). Over the last few decades, the pace of archaeological work in Western Mexico has accelerated and archaeologists have made discoveries of new sites and offered new interpretations that reveal a high level of cultural complexity in this area in pre-Hispanic times. At first, they expected to see their work cited in the publications of Mesoamerican scholars but, to their surprise, this has not been the case, at least not with the frequency and regularity they anticipated. Mesoamerican scholars, many of whom still work from the perspective of central Mexico towards points further south, have largely failed to appreciate the relevance of such studies to what they consider the "Mesoamerican nuclear area". In a certain sense, archaeologists of Western and Northwestern Mexico operated as if they were looking through a one-way mirror; that is, while they could certainly see out, they were, apparently, quite invisible to their colleagues on the other side. It is astonishing to scholars working in Western Mexico to see that their increasingly radical arguments have not been recognized or taken up by other Mesoamericanists, and that the archaeology of this region has had so little influence in defining Mesoamerica and Mesoamerican high culture (Gorenstein 1996:89).

The main goal of this book, then, is to foster dialogues between scholars working in Western Mexico and those in central and southern Mesoamerica that will encompass debates and perspectives currently in

existence throughout the greater Mesoamerican cultural area and beyond.

The area we now know as Western Mexico covers a vast geographical region, currently occupied by the states of Michoacán, Jalisco, Colima, Nayarit, Sinaloa and part of Guanajuato. In the pre-Hispanic past, this area was characterized by great ecological diversity and a wide variety of cultural manifestations. Western Mexico also had a large number and variety of ecological niches that propitiated different forms of behavior; that is, a multiplicity of cultures. As evidence of this great cultural diversity we can mention the large number of native languages spoken in the western regions of Mexico at the time of the conquest, as well as the diversity seen in the area's archaeological record. Western Mexico's peculiar cultural configuration, together with its geographical location, led to this area taking on an important role as a corridor through which ideas were exported, even to such distant areas as the southwestern United States. Goods including turquoise and metals flowed through this area, and many human groups traversed it during their migrations, transforming earlier ways of life along the way (Schöndube 1994:19).

It is clear that Western Mexican peoples interacted with their Mesoamerican neighbors and contributed in important ways to enriching the Mesoamerican world system. According to Clement Meighan (1974), several authors have pointed out that this area lay outside the basic Mesoamerican cultural tradition, but this idea is more accurate in relation to some periods than others, and applies fully only to the shaft-tomb tradition of Jalisco, Colima and Nayarit during the Late Formative-Early Classic periods (*ca.* 300 B.C.-A.D. 300). In the millennium preceding the arrival of the Spanish, Western Mexico was a regional variant of the Mesoamerican tradition (Meighan 1974:1260). These ideas have been expanded upon by Weigand and Foster (1985:2), who affirm that Mesoamerican civilization had several nuclear areas or "cultural hearths", each one flowering in a distinctive regional style. Western Mexico was one such nuclear area.

In order to contextualize the papers in this volume in a Mesoamerican setting, what follows is a brief discussion of craft production, trade, tribute, and transportation in the Mesoamerican cultural area in ancient times.

Household Production in Ancient Mesoamerica

Most of the production activities discussed in this book took place in households. In order to fully understand the cultural, social and economic contexts in which these activities took place, this section focuses on domestic production in ancient Mesoamerica. According to Kenneth Hirth, households are the most important social entities of humankind, since all human beings are born in them, and are raised, fed, and frequently receive their education there as well. Indeed, in pre-modern societies, most goods were manufactured, stored, and consumed inside households. Hirth holds that the term “domestic economy” refers to both what households do, and to the manner in which they are organized in order to satisfy their physical and social needs. Because the household economy has always been the backbone of society, households have always been important, as they perform a wide range of subsistence activities that benefit their members (Hirth 2009:13).

Some recent approaches to the study of domestic production in Mesoamerica have adopted a holistic perspective that attempts to reach a definition and explanation of the organization and technology of the entire craft-producing process, from the acquisition of the necessary inputs to the uses given to the finished products. Another aim has been to attain an understanding of the social conventions and institutions, value systems, distribution mechanisms, and functions of products, all of which influence the design, distribution, use and meaning of products. In short, the ultimate aim of this holistic approach is to achieve a comprehensive understanding of the material, technological, social and ideological components of craft-producing systems, while also elucidating their historical, natural and social context on a regional level (Shimada and Wagner 2007:166-167).

We know that craft specialization existed in Mesoamerica from pre-Hispanic times. Among the Aztecs, for example, domestic production used family members as the work force (Feinman 2001:191). There is clear archaeological evidence for craft specialization from early times; for example, in the production of objects made of stone, marine shells and pottery, among others. At some ancient sites in Oaxaca, for instance, archaeologists have discovered the specialized production of objects such as shell ornaments and magnetite mirrors, which were elaborated in quantities that far exceeded probable local requirements. There can be no doubt that those goods were produced by skilled artisans, so these non-agricultural activities are examples of work carried out by specialists (Feinman 2001:192). In present-day Mexico, we still see potters and many other full-time artisans working inside their house lots, following a custom that has its roots in the pre-Hispanic era (Feinman 2001:193).

According to Hirth, the study of craft production is an important field within archaeological research, because it is easily identifiable in the archaeological record through the tools used and the refuse materials that are diagnostic of several manufacture activities (Hirth 2011:13). Studying craft production, therefore, offers an approach to understanding the scale and organization of work groups in a given society, for it was a key component of all ancient Mesoamerican societies, and the vast majority of the goods elaborated were made in domestic contexts by independent artisans (Hirth 2011:13).

Hirth also argues that the dichotomy between full-time and part-time specialists does not explain how, or why, craft production emerged primarily as a household activity. The reason for this is obvious if we consider the question from the perspective of the individual craftsman or woman, since part-time production is more compatible with the goals of production and the needs of the craftspeople who work in household settings. This has to do with economic risk, the changing nature of demand, and the way in which craft production was structured in fluctuating cycles (Hirth 2011:18).

Cathy Costin (2005), meanwhile, believes that archaeologists have used the term “craft production” in an uncritical way to refer to the manufacture of a wide range of objects including pottery, stone tools, ornaments, baskets, textiles, and metal artifacts. In this she is quite correct, for the word “craft” has many meanings, which up to now have not been defined in an unambiguous way (Costin 2005:1032). Costin (2004) further maintains that craft goods were of outstanding importance in the production and maintenance of ancient chiefdoms and states, since aside from their basic domestic functions, they were used in virtually all social, political and ritual activities. Therefore, an understanding of the context and organization of craft production is indispensable if we are to fully understand daily life, political economy and the role of material objects in social and political relationships (Costin 2004:189).

As these observations make clear, studies of craft production are indispensable to archaeological research, and are basic to reconstructing ancient lifeways and explaining sociocultural evolution (Costin 2004:190). Research on craft production is also an integral part of inquiries into the role of material culture in domestic, social and ritual life. Most objects in pre-industrial societies are simultaneously utilitarian (in the broadest sense of the word) and means of social communication; therefore, material culture is inseparable from expressions of identity, power and social relations. Here, the concept of *materialization* acquires importance, as it refers to the process of transforming intangible ideas and beliefs into concrete, visible symbols and signs. Craft production is materialization, for craftspeople take ideas related to daily sustenance, social identity and power relations, and

shape them into physical objects that can be experienced by others (Costin 2004:190).

All economic systems are composed of three elements: production, distribution and consumption. The goods found in an archaeological excavation give us an idea as to consumption patterns, but exchange events are invisible in the archaeological record. Production activities, in contrast, leave clear traces, such as refuse, debris, tools and other articles that are often more accessible to interpretation (Costin 1991:1).

Craft production is usually embedded within political, social and economic systems, and is limited—or favored—by the conditions of the natural environment. According to Costin, certain aspects of production processes are indispensable to any understanding of the organization of production, such as (1) the distribution of raw materials; (2) the nature of technology; and, though to a lesser extent, (3) the training and skill of artisans (Costin 1991:2).

Craft production on a household level is of great interest to archaeologists because its presence indicates a certain level of economic interdependence among different sectors of society. Specialized production on a small scale was an important component of most pre-modern domestic economies throughout the world, and most of the craft production took place in household contexts (Hirth 2009:13).

Perspectives on craft production in the current archaeological literature are affected by two situations: first, our incomplete understanding of the way in which households operated and, second, our inability to generate economic concepts that would allow us to place craft production within the household economy. According to Hirth, part of the problem is the limited attention given to households in the ethnographic literature, which has resulted in an incomplete vision of domestic economies and of the strategies used by households to fully exploit their environment (Hirth 2009:14).

Hirth sees a paradox in archaeology in that although there is ample evidence for activities related to craft production on a household level in Mesoamerica and many other societies in antiquity, we lack a model to explain how or why this specialization came to be. Of course, the main objective of households is to assure survival and successful reproduction, so the key is to develop survival strategies that maximize productivity while minimizing risks and this leads households to choose a mixture of subsistence activities to satisfy their needs (Hirth 2009:23).

David Carballo suggests that households can be defined as groups of individuals linked by some notion of kinship and a shared identity who cooperate in the production

and reproduction needed for survival. Households are thus social units that structure human behavior, but they can also adapt and reconstitute themselves in order to meet their members' goals. Finally, they function as coordinated political actors that strategically negotiate their group's position within a social hierarchy (Carballo 2011:134).

During much of the pre-Hispanic sequence after the inception of sedentary societies in Mesoamerica, intensive household production was stimulated by economic symbiosis and market demand. Wealth in urban state capitals may have been more land-based, such that landless peasants turned to craft production for supplementary income. When urban elites and political institutions became involved in craft production, they were more likely to manipulate existing labor and tributary relations to their advantage rather than radically implementing new ones (Carballo 2011:144).

In Mesoamerica, much more attention has been focused on political economies at the expense of domestic ones, thus relegating the more common activities of household production to a secondary status in the archaeological literature (Carballo 2011:144). But there are examples of archaeological research on household production, such as Michael Smith's excavations in several Late Postclassic (*ca.* A.D. 1300-1550) sites in the present-day state of Morelos in central Mexico. His excavations have uncovered the remains of several households that were devoted to craft production, including cotton textiles, quartz tools, obsidian blades and jewelry, ceramic figurines, *amate* paper (and the stone bark-beaters used in its preparation), and decorated ceramic artifacts (Smith 2004:Table 2). According to Smith, these finds indicate that market systems were important institutions in the regional economy of Morelos in the Late Postclassic. In support of this, written sources from the early Colonial period mention markets of several sizes located in towns and even the smallest villages (Smith 2004:98). During the Postclassic period, trade and exchange systems extended throughout Central Mexico, incorporating the inhabitants of the sites studied by Smith into the Mesoamerican world system. There, even the poorest peasants had access to a plethora of exotic imported objects (Smith 2004:168).

In another area of Mesoamerica during the Classic period, households in Oaxaca were the focal point of the manufacture of goods destined for exchange. Households there were the foundation of the economic systems in all settlements. Feinman and Nicholas (2011) write that craft production and exchange took place in several households, so exercising direct control over these economic activities was virtually impossible. But those pre-Hispanic households in Oaxaca were not self-sufficient, so they manufactured a broad range of products for exchange with other domestic units. This exchange

took place both inside communities and through wider contexts, ultimately covering extensive areas such as the Oaxaca Valley (Feinman and Nicholas 2011:46).

Moving now to Central Mexico we see that, according to Linda Manzanilla, in Classic-period Teotihuacan there were four scales of craft production: (1) the apartment compound, where everyday needs were met; (2) extensive sectors on the city's periphery where craftspeople manufactured articles that urban-dwellers required; (3) barrio sectors supervised by noble "houses" or kin groups; and, (4) specific crafts controlled by the rulers and produced in workshops embedded in elite dwellings (Manzanilla 2009:31).

In her study of the Aztec state pertaining to the Late Postclassic period, Frances Berdan (2014) uses ethnohistorical and archaeological information to discuss several aspects of the organization and sociopolitical context of craft production. According to Berdan, both "attached" and "independent" artisans existed among the Aztecs. The former were situated in, or near, palaces, so they may have had economic, social and political relationships with the elite. This applied primarily to certain luxury artisans who enjoyed the patronage of local rulers. Though these artisans may have been resettled in, or near, a palace, they maintained the household structure of production (Berdan 2014:108).

In contrast, some independent artisans who produced both luxury and utilitarian goods were concentrated in specific neighborhoods. They enjoyed a certain economic exclusiveness and social cohesion, much like the craft guilds of Medieval Europe (Berdan 2014:109).

Artifacts made of jade played an important role in the Mesoamerican economy, and also functioned as status symbols and ritual paraphernalia. Recent research in the Maya area has shown that the production of jade objects (among many others) often took place in a variety of domestic and non-domestic, as well as elite (Aoyama 2007) and commoner contexts (Rochette 2014). Some workshops probably exported jade preforms to production sites, which then worked them according to their own lapidary traditions. Those products likely circulated in different contexts of exchange, and each type of object may have had a different value. Exchanging a finished jade object, a block of unworked material, or a preform, did not imply the same obligation between the actors in the exchange as the gifting of a pendant or other finished product. Such differences illustrate the complexities of wealth and commodity exchange systems (Andrieu *et al.* 2014), as discussed in the following section.

Trade, Tribute and Transportation

Most studies of Mesoamerica have traditionally paid a great deal of attention to matters related to the

production of strategic resources, and to the exchange of those products through trade, tribute or gifts. This is due in part to the wealth of information on these subjects in documents from the early Colonial period. Thus, it is only natural that scholars interested in Mesoamerica, from the 19th to the 21st centuries, have placed special emphasis on these topics in their attempts to document the ancient world system or *ecumene* (Williams and Weigand 2004).

Because of Mesoamerica's great ecological and geographical diversity, trade and exchange between regions were indispensable activities from earliest times. This was necessary because few areas produced all the elements required for subsistence. In this regard, the most striking ecological differences were between the cold, dry highlands and the hot, humid lowlands and coasts (Sanders and Price 1968; Blanton *et al.* 1981; Smith and Berdan 2003).

In Mesoamerica, both trade and the extraction of tribute through conquest served from ancient times as mechanisms for exchanging people, information and goods among regions in a setting marked by dynamic, ill-defined borders between different social systems (Blanton *et al.* 1981). This section deals with three of the most important mechanisms for exchanging rare and strategic resources; namely, markets, long-distance trade patterns, and the tribute system. Western Mexico was an integral part of Mesoamerica, so the study of the production and exchange of rare goods and strategic products in this area must take into account the cultural and historical context of the area as a whole (Williams 2004; see also Williams 2003, 2015: Chapter V).

In a recent ethnographic study of the Purépecha, or Tarascan, region of Michoacán, Aída Castilleja reached conclusions relevant to the subject of exchange in epochs both recent and ancient. She argues that "exchange is practiced between different levels of organization in the social fabric [and] is supported by kinship relations, residence patterns, the principles governing visits between communities, the relationships [that] enable the flow of goods and services, and the processes involved in defining different political-administrative orders" (Castilleja 2011:266). Among the Tarascans, the marketplace has always been the most important venue for trade and exchange, and this goes back to pre-Hispanic times, as discussed below.

The Market

According to Ross Hassig, regional markets played a crucial role in the Mesoamerican economy, since one could find there both exotic trade goods and more mundane products. Regional markets held a position of greater relevance in the hierarchy than the ordinary, local markets found in the *cabeceras* or "head towns".

Some of those markets reached such prominence that they became famous for selling one particular product (Hassig 1985:110). The *Relación de Michoacán* mentions the existence of local markets in several Tarascan settlements in the 16th century. Although there are no detailed descriptions like those we have for Central Mexico, it is clear that the political control that the ruler –*cazonci*– exercised over the economy did not preclude the existence of markets; rather, he used them for his own ends. The *Relación* does tell us that among the officials who served the *cazonci* there was a “deputy in charge of all his markets” (Carrasco 1986:92-93).

The existence of specific market-days and regulations on trade in Tarascan settlements can be inferred from certain 16th-century sources, despite the fact that the markets themselves are rarely mentioned. It is likely that one market system integrated the communities around Lake Pátzcuaro, including the city of Tzintzuntzan, the state capital. According to the *Relación*, the aforementioned palace official entrusted with running all markets had the additional obligation of obtaining sumptuary goods, such as fine feathers and gold, for the king (Beltrán 1982).

The economic network in the Lake Pátzcuaro Basin was defined by the presence of markets, two of which are mentioned in the *Relación de Michoacán*: Tzintzuntzan and Pareo. Beyond the limits of that basin, other markets were found in Uruapan, Naranjan and Asajo. Uruapan and Naranjan were quite far from the basin, so they affected the lakeside commercial networks only peripherally, but Asajo was located right on the basin’s northwest periphery and incorporated several lakeside settlements within its orbit (Gorenstein and Pollard 1983).

The most important source of information on Tarascan economic networks during the Protohistoric period (ca. A.D. 1450-1530) is the aforementioned *Relación de Michoacán* (Alcalá 2008). Although this book has relatively little to say about markets, together with the *Relaciones Geográficas* from 1579-1581 (Acuña 1987) it provides sufficient information to identify and locate the ones discussed above. In fact, there is one image of the Asajo market, which brings to mind many aspects of modern markets with regional areas of influence (Pollard 1993).

The mention of places or activities linked to buying, selling or exchanging commodities cited in the *Relación* (Alcalá 2008:63, 94, 220, 225) sheds light on the subject of native trade during the Protohistoric period. Unfortunately, information on the size of Tarascan markets or the role of the government in their functioning and control is scarce. We may assume, however, that the market in Tzintzuntzan had manufactured products and elite goods associated with the large number of artisans who lived in that capital city (Gorenstein and Pollard 1983).

Although some argue that the lack of clear references to markets in the ethnohistorical literature and of archaeological evidence from the field suggest they were not as important for the economic structure of Tzintzuntzan as for contemporaneous urban centers in the central highlands (Pollard 1980), it is highly likely that many goods and services did indeed flow through markets in the Lake Pátzcuaro Basin. A list of products compiled from extant written sources would include: maize, beans, chili peppers, amaranth, local fruits, ducks, bird feathers, fish, cotton cloth, clothing, slaves, prepared foods and domestic services. Also, many everyday goods used by the common people, but which were not available locally, were imported through regional market networks. In this regard, we could mention red and black obsidian, chert, jasper, agate, opal, lime and salt, all of which have been identified as important market items since they do not appear on tribute lists. Finally, some products appear not to have been controlled by any state agency, but flowed through market networks; for example, objects made of reeds (*tule* and *carrizo*), including mats, baskets and fishnets (Gorenstein and Pollard 1983).

Settlements in the Lake Pátzcuaro Basin that had direct access to strategic resources, such as high-quality agricultural lands or fishing zones, could exchange their surplus products for foreign goods in the markets around the lake area, so it should not surprise us to learn that most communities were located near these resources (Gorenstein and Pollard 1983).

A recent study of Mesoamerican markets by Feinman and Garraty (2010) may provide perspectives that will allow us to better understand trade and exchange among the Tarascan people. In the case of the Aztecs, for instance, the Tlatelolco market was always full of people who frequented it because of the wide range of products, both local and exotic in origin, available there. Indeed, Tlatelolco was at the apex of a hierarchical market network in which several currencies circulated, including copper axes, fine textiles and cacao beans.

In Mesoamerica, as elsewhere in the world, mercantile transactions entailed social relationships among the parties involved; that is, they were immersed in a broader social context. In all economies, both ancient and modern, market exchange may include several specific kinds of interaction, including barter, defined as an impersonal form of interaction with no formal medium of exchange (Feinman and Garraty 2010).

Long-Distance Trade

The long-distance exchange of goods was one of the most important economic activities for Mesoamerican states. Hirth (1992) tells us that from quite early times both prestige and utilitarian goods were exchanged

across wide regions throughout Mesoamerica. From around 1000 B.C. to the time of the Spanish conquest, long-distance trade provided elites with exotic objects and prestige goods. This commerce, together with the support of local subsistence activities and the tribute levied on conquered provinces, were the economic basis for all states in the Late Postclassic period (ca. A.D. 1200-1520). Transportation costs limited the kinds and quantities of commodities that could circulate through those regional exchange networks throughout Mesoamerican prehistory. Mostly high-value goods such as jade, turquoise, fine cotton textiles, obsidian, marble, marine shells, cacao and copper, were transported over long distances between regions. Except for obsidian, most of these products fall into the category that archaeologists call prestige or sumptuary goods. In contrast, everyday commodities, such as maize and beans, were rarely carried far from their place of production, even when they were tribute goods (Hirth 1992).

Ethnohistorical sources on the Aztecs allow us to understand how exchange contributed to the prosperity of Tenochtitlan, the Aztec capital, in the Late Postclassic period. The market there offered exotic goods from throughout Mesoamerica because long-distance merchants (called *pochteca*) traded both within and beyond the imperial borders, conducting an activity closely linked to Aztec imperialism in a society in which sumptuary goods played a central sociopolitical role. The exchange of luxury products among elites in the Late Postclassic had an integrative function, as it contributed to inter-regional communication, social stratification and political relations (Smith 1990).

The archaeological data on Aztec trade with several regions in Mesoamerica discussed by Smith (1990) suggest the existence of traders and market systems that functioned as dispersion mechanisms for luxury Aztec pottery products and other commodities. Such merchandise reached many areas, including territories under enemy control or that were never conquered by the Triple Alliance. These findings indicate a form of commerce that was independent of state control (Smith 1990).

The *pochteca* transported a wide range of status items and scarce or strategic resources from all corners of the Aztec Empire, among which we should mention: richly-decorated skirts and capes, tropical bird feathers, gold objects, necklaces, ear spools, obsidian blades and knives, shells, coral, needles, animal skins, herbs and dyes, slaves and, finally, fine jade, jadeite and turquoise jewelry (Smith 1998). The 16th-century manuscript entitled the *Codex Mendoza* shows items received as tribute in the Aztec capital, including turquoise masks from several provinces in the empire (Smith 1998: Table 7.2).

The Tarascans also had an institutional mechanism through which many goods flowed toward the imperial capital; *i.e.*, state-sponsored, long-distance merchants. These traders were entrusted by the royal palace with the task of procuring scarce resources that could only be found in the most remote stretches of the empire, or even beyond its territorial boundaries (Pollard 1993). Among these sumptuary goods we find cacao, animal skins, marine shells, tropical feathers, turquoise, peyote, rock crystal, serpentine, amber, pyrite, jadeite, gold, silver, copal, green and red obsidian, and slaves. The products obtained from far-off sources flowed through fewer distribution channels and their use was less common. These sumptuary imports functioned to signal status differences between the members of the elite and the rest of society (Pollard 2003).

Long-distance traders would often travel to the very limits of Tarascan territory, including Zacatula on the Pacific coast and Taximaroa on the frontier with the Aztecs, their arch-enemies, but there is no evidence that they crossed those state borders to conduct their commercial activities (Pollard 2000). We know that during the Postclassic period trade routes were very extensive, crisscrossing the whole of Mesoamerica. For instance, the *pochteca* regularly travelled from the Basin of Mexico to Guatemala in the south and Chaco Canyon¹ (New Mexico) in the north (Hassig 1985). Therefore, it is hardly surprising to learn that Tarascan traders also covered long distances, as discussed elsewhere (Williams 2003, 2004, 2014a, 2014b, 2015).

In order to achieve cohesion in the territory it controlled, the Tarascan state maintained an extensive network of roads (Espejel 1992; Gorenstein and Pollard 1991), which were travelled not only by traders but also by the *ocambecha* –tribute collectors– and troops sent to subdue any province that proved reluctant to pay tribute. Gorenstein and Pollard (1991) studied these means of communication using ethnohistorical and archaeological information related to roads, paths and canoe routes. According to them, a road around Lake Pátzcuaro connected most lakeside towns, though these also kept in touch with each other by water. Canoes were a frequent means of transportation, especially when it came to conveying information during times of war. Other roads came down from the hills to join those around the lake such that the transportation routes around the Lake Pátzcuaro Basin facilitated the movement of people, goods and information among scattered settlements. The roads in the intermediate area were also used for commerce, which meant that hundreds of frontier communities functioned as ports of trade. This study of Tarascan roads revealed a “solar model” in which

¹There is no ethnohistorical evidence for the presence of Aztec traders in the southwestern United States, though it has been postulated tentatively based on archaeological remains (Reyman 1978).

the primary functions were administrative as well as economic; a pattern that differs from those seen in other parts of Mesoamerica (Gorenstein and Pollard 1991).

Turning to transportation costs, we find that they were relatively high in Mesoamerica and made it difficult to develop a macro-regional food economy, like the ones that existed in Europe and China (Blanton *et al.* 1981). Transportation of products in Mesoamerica was performed exclusively by human porters, because no beasts of burden existed there. In central Mexico, these porters were called *tlamemes*, and they carried all sorts of merchandise from one place to another. We do not know the exact weight of the loads they usually carried, but in the 16th century Bernal Díaz del Castillo wrote that a *tlameme* hefted perhaps two *arrobas* (ca. 23 kg) over a distance of five leagues (21-28 km) before being relieved of his burden (see Hassig 1985:28-32). But these figures must be evaluated with caution, since there is a great deal of variation in both the size of the loads and the distances traversed as recorded in documents from that period, especially according to the type of terrain (mountains, gullies, jungle, forest, desert, etcetera), climatic conditions, and other factors that could hinder the porters' progress.

The *tlamemes* of the pre-Hispanic period formed a low-status occupational stratum that worked as professional, organized bearers with established norms for the types and weights of loads, periodic rests, and burdens appropriate to the distance and conditions of the roads. They carried elite goods, such as cacao and gold, everyday items like maize and cotton (Hassig 1985), and aquatic products, including fish, waterfowl and plants.

The distance travelled and load weights were inversely proportional. Though very heavy burdens may have been transported in pre-Hispanic times, this did not necessarily mean greater efficiency, since more porters would have been required to cover the same distance (Hassig 1985). Robert Drennan (1984a) calculated that a load of 20 kg brought maximum efficiency, though burdens of up to 50 kg are mentioned for some areas of Mesoamerica. The loads carried by the *tlamemes* of the Aztec *pochteca* were not very heavy. Drennan (1984a) suggests an average weight of 30 kg taken over a distance of 36 km. According to this author, transport costs in the middle Formative and Classic periods (ca. 500 B.C.-A.D. 1000) meant that moving food could not have been the primary reason for using *tlameme* labor; rather, the goods that covered long distances on the backs of those porters were elite products, luxury items, or objects of ritual importance, as well as strategic resources like obsidian. Indeed, Drennan (1984b) argues that if maize were carried over such long distances, the porter would have had to consume more energy than that contained in the food he carried!

Drennan's view, however, clashes with Hassig's approach discussed above. Likewise, ethnographic information published by Carl Lumholtz over one hundred years ago contradicts many aspects of the theoretical reconstructions of carrying capacity and maximum distances covered by the ancient *tlamemes* proposed by Drennan (see also Sluyter 1993). During his travels through Michoacán, Lumholtz once encountered a *huacalero* –a kind of long-distance porter and trader– who was carrying his wares through the mountains of the Sierra Madre. Lumholtz wrote that the *huacaleros* usually travelled on foot along routes between the Sierra Tarasca and Mexico City, Guadalajara, Acapulco, Colima and Tepic, though in earlier times, those Tarascan traders would surely have travelled as far north as New Mexico and south to Guatemala and Yucatán. We learn that the round trip to-and-from Paracho, Michoacán, to Mexico City (a distance of roughly 400 km as the crow flies) took about a month. The average distance travelled per day was thus 48-to-64 km, carrying a 63-kg load² (Lumholtz 1986). J. Charles Kelley considered all this information on carrying capacity and the distances likely covered by pre-Hispanic *tlamemes* to be extremely valuable, though in both cases the figures are much higher than those suggested by archaeologists. It is important to point out that the *huacaleros* did not consume the goods they carried on their backs, but subsisted during their treks by eating varieties of wild foods and enjoying the hospitality of people in the localities they passed along the way (Kelley 2000).

The Tribute System

The Tarascan state's tribute network was the most important institution for obtaining wealth. Through it tribute flowed from all corners of the empire to the royal coffers in Tzintzuntzan. According to Pollard (1993), this network was centralized, hierarchically-organized, and primarily a political institution. The goods that circulated in the form of tribute traversed several levels on their way to the capital.

Tribute went from producers dispersed throughout the kingdom to medium-sized collection centers (called *cabeceras* or head towns in 16th-century documents), before eventually arriving in Tzintzuntzan. Some of those goods, especially obsidian artifacts, fine ceramics and metal objects (copper, bronze, silver and gold), were later commercialized through markets, or redistributed in distinct directions, but most of the tribute was consumed by the ruling class. Likely exceptions were textiles and food, which were redistributed during important ritual occasions (Beltrán 1982). The *Relación de Michoacán* is one of the best

²However, one *huacalero* told Lumholtz that he once carried a load of 86 kg from Colima to Morelia in 6 days (Lumholtz 1986:360).

sources of information for understanding the Tarascan tribute network as it existed on the eve of the Spanish conquest. This system was embedded in the layers of a rigidly-stratified society in which farmers and fishers made up most of the population. In Agustín García Alcaráz's evaluation, the *Relación* is relatively explicit on the role of the *cazonci* and chiefs (*achaecha*), but less so when it comes to community life, where data are rather sporadic. This source tells us that town-dwellers were active in agriculture and fishing, as most towns in the Tarascan region were devoted to growing maize, beans, squash and chili peppers, as well as to fishing. In the first quarter of the 16th century, these groups of farmers and fishers still inhabited the small settlements that constituted the food production units in this region of Mesoamerica. Each locality, usually considered a "town", had a *cabecera* and several subject wards or quarters (*barrios*) (García Alcaráz 1982:238).

The tribute system proved to be an excellent mechanism for integrating geographic regions and different ecological niches, especially the hot lowlands with the temperate highlands. Because the system was designed to permit the circulation of elite goods, it led to the accumulation of wealth by the ruling stratum of society. However, the ceremonial obligations and political control exercised by the authorities over the distribution of this wealth considerably limited the possibility that a minority might become rich at the expense of the common people solely through the tribute system (Beltrán 1982).

According to Pollard (2003), apart from the tribute networks there were other institutional channels through which goods and services flowed: long-distance merchants, the state's own agricultural lands and mines, and gift exchange. However, taxes, paid both in kind and services, were the most important source of revenue for the political economy, and provided the principal support for the state apparatus. It is clear that the tribute system was totally controlled by the ruling dynasty, which utilized an extensive bureaucracy to manage tax collection and assure timely compliance of all obligations. The goods most frequently found in 16th-century tribute rolls include maize, cotton cloth and clothes, slaves, victims for sacrifice, domestic services, metal objects, weapons, tropical fruits, cacao, raw cotton, gourds, animal skins, tropical bird feathers, gold, silver, copper, salt, beans, chili peppers, rabbits, turkeys, honey, wine from the maguey plant (*Agave* sp.), feathers from local bird species, and clay vessels (Pollard 2003).

The fact is that the ultimate objective of Tarascan military expansion was to widen the field for gathering tribute. The system was organized as a pyramid, with Tzintzuntzan at the top and various *cabeceras* directly beneath it. *Caciques* (local chiefs) were forced to collect

tribute from their respective subject towns and send it to the capital in a timely fashion, under the supervision of the *ocambecha*, or tax collector. Artisans and merchants paid tribute in kind from their respective crafts or products, but were exempt from providing services, except in times of extreme need (Beltrán 1982).

During the late Postclassic in central Mexico, as in other areas of Mesoamerica, including Michoacán, tribute was influenced by several factors: (1) the antiquity of conquest and distance from the capital, with the nearer provinces paying in food and clothing; (2) the availability of the required goods, since tribute was usually paid in goods readily obtainable within each province; and, (3) resistance to conquest or rebellion, for if a town resisted or attempted to escape from this yoke, its taxes would be increased as punishment. Usually, the tribute districts closer to the capital paid with large amounts of bulky but low-value goods, while more distant regions provided elite products that were of great value, but in low volumes (Hassig 1985).

In order to comprehend the nature of the Mesoamerican tribute system, we must first understand the logic of warfare in this cultural area, since war was the primary mechanism that sustained the flow of goods toward the capitals of different empires. As noted above, military conquest was not designed to gain absolute control over extensive territories, but only a sufficiently firm control of political centers, since once a head town was subdued all its dependent territories immediately became subject lands as well. Thus, tribute could be gathered from a broad area simply by conquering the regional ruling center, often with no need to modify local power structures (Hassig 1985).

In his most recent study of Aztec political economy, Michael Smith (2015: 71, 72) tells us that "the Aztec political system consisted of several hundred city states integrated through... a 'city-state culture'... City states were ruled by a king (*tlatoani*) aided by a governing council of important nobles... Aztec society consisted of two social classes: a hereditary noble class... that ran city-state government and controlled all the farmland; and commoners. Both classes had internal gradations in wealth, power, and social attributes". Regarding the flow of revenue to the ruling elites, Smith says that "the Aztecs had a true system of taxation... In contrast to tributes, taxes are normally recurrent, predictable, routinized, and based on statutory obligations".

This discussion of pre-Hispanic domestic economy and several aspects of the political economy, primarily the activities of trade, tribute and transportation within the Mesoamerican *ecumene*, provides a general background for the following brief description of the chapters included in this book that highlights the research goals and results of each one of the works selected.

Contents and Organization of this Volume

1. Cultural Dynamics in Western Mexico

The first section of the book deals with cultural dynamics in ancient Western Mexico, analyzed from an archaeological perspective. In their discussion of the methodological approaches used to understand pre-Hispanic settlement strategies in the alluvial plain of the Lerma River Basin (Michoacán and Guanajuato), Véronique Darras *et al.* point out that flood plains have always been favorable settings for human settlement, and that geological processes such as sedimentation along rivers may contribute to the preservation of archaeological sites and materials. However, few alluvial plains have been studied by archaeologists in Mexico. Their research in the Lerma River Basin showed that the river's course changed over time, marked by periods of stability and fluctuation during the last two thousand years. The authors point out that understanding these long-term processes is vital to the reconstruction of ancient cultural dynamics in the study area.

That paper is followed by Gérald Migeon's contribution, which explores archaeological sites around the major pre-Hispanic settlement of Cerro Barajas (southwestern Guanajuato) during the Epiclassic period (*ca.* A.D. 700-950). The author discusses the local resources and imported products found in the study area, beginning with an overview of different productive activities, then focusing on the nature, origin, function and symbolism of the items found in his excavations, many of which came from areas outside the Cerro Barajas region. This allows him to discuss the relationships between the Cerro Barajas people and other areas of Mesoamerica.

The study of pre-Hispanic settlement systems pertaining to the Protohistoric (*ca.* A.D. 1450-1530) Tarascan state is still in its infancy. Christopher Stawski deals with the negotiations of space and landscape in the Lake Pátzcuaro Basin through research that focuses on providing a spatially- and temporally-dynamic study of the Tarascan settlement system from the Late Preclassic period (*ca.* 100 B.C.) to the Spanish conquest (A.D. 1525). The data derive from full-coverage, intensive surveys carried out in the southwestern and southeastern portions of the lake basin, and the immediate area around the capital city of Tzintzuntzan. Through its landscape reconstruction of the pre-Hispanic Pátzcuaro Lake Basin, and reconstruction and demographic analysis of past communities, this research elucidates the overall trajectory of human settlement in the basin up to the Spanish Conquest. Stawski's paper includes a discussion of the major variables that influenced settlement location in the basin, including economic, political and social factors.

The last paper in this section is by Verence Heredia and Camilo Mireles, whose research attempts to determine whether spatial differences on a regional scale in the lithic assemblage of the Tequila area of Jalisco are good

indicators of economic specialization. Archaeological surveys in the area examined have identified lithic scatters which suggest that people were manufacturing lithic implements on a small scale, while evidence of large workshops is nil. According to the authors, existing evidence is too weak to argue for elite control in the extraction, production or consumption of obsidian goods; a recurrent argument in studies focused on this region. Specialization may or may not have been 'the engine' –or one engine– behind the "rise" of social complexity in this region, but the paper deals with this phenomenon from a different perspective and on a broader scale. The main focus is on a type of specialization that operated on a regional level and involved household decisions, rather than on a "top-down" system, as has been suggested in the past. This chapter presents a first attempt to discern whether visible patterns in the distribution of distinct stone tools (such as scrapers) may indicate economic specialization.

2. Production of Strategic Resources

In this section discussion shifts from general cultural processes to the production of strategic resources, such as obsidian, ceramics and metal goods. The first paper is by Rodrigo Esparza, who studies the obsidian jewelry of the Teuchitlán Tradition of central Jalisco. The author holds that this technology may be a new addition to the known lithic inventory of obsidian production in ancient Mesoamerica. According to Esparza, characterizing obsidian jewelry from the Teuchitlán tradition is an ongoing task, and understanding this aspect of the ancient culture is one of the challenges we must face to move forward in our interpretation of this pre-Hispanic cultural tradition. The author points out that in order to gain a clearer comprehension of obsidian tool fabrication, experimental archaeology in the form of a jewelry-production workshop would aid in identifying the *chaîne opératoire*, while further fieldwork is required to isolate the ancient workshops associated with the obsidian outcrops at San Juan de los Arcos and Navajas, in central Jalisco.

The next paper is by John Wagner. Like the previous author, Wagner is interested in the obsidian industry of central Jalisco. He attempts to define the existence of different obsidian economies between the Teuchitlán core area and the surrounding "transition zones". During the Early Classic period the Teuchitlán tradition spread from the fertile wetlands of the Tequila Valleys into the surrounding arid environments. Fortified sites were strategically-placed to manage geographic border areas between the periphery and the core area within the chain of lake basins that surround the Tequila volcano. The people who settled in these transitional areas experienced a pronounced change in the availability of various resources. In the transitional site of Llano Grande, access to high-quality obsidian was much

greater than in the core area, but the rich agricultural and aquatic resources which had largely shaped the core culture were more distant. The study suggests that these environmental differences at Llano Grande would have created a relative change in the economic strategy of the elite, from one based on agricultural productivity to one that relied on alternate activities, such as the exchange of goods and defense. Economic change may have depended heavily on exports of obsidian. To test the proposed change in the economy, the author examines and compares obsidian products and *debitage* from Llano Grande and Navajas, a site more closely-related to the Teuchitlán culture core, in order to determine the probability of a corresponding change in emphasis on differing technologies.

One of the most important obsidian-producing areas of Mesoamerica is located in the Lake Cuitzeo Basin of Michoacán. Dan M. Healan has been studying the major obsidian deposits located around the modern towns of Ucareo and Zinapécuaro, on the eastern end of the lake. In this paper, he discusses the archaeological characteristics of an “obsidian source area”, paying special attention to the definition of this term. Healan asks: “What have we learned about the archaeological characteristics of the Ucareo-Zinapécuaro source area?” To answer this question, he discusses the following aspects of obsidian production in the Lake Cuitzeo Basin: (1) variation in the character of the raw material; (2) variation in the socio-cultural complexity of workshops; (3) variation in the complexity of exploitative activities; (4) labor, materials and technology; (5) producers *versus* consumers; and, (6) differences between local and non-local artisans.

Healan holds that the source area concept is valuable for scholars interested in obsidian exploitation in Mesoamerica; however, we must remember that this originated as a geo-chemical entity, and that its creators emphasized its homogenous aspects, but this does not necessarily hold true from an archaeological perspective. Healan believes that source areas exist as both cultural and geo-chemical entities because they were utilized and modified by human beings. As a result, archaeological research cannot be limited to obsidian extraction and knapping sites, but should also include the sites where the obsidian miners and knappers lived. In the case of Ucareo-Zinapécuaro, this variety of contexts revealed basic differences between the export industry and the tools that inhabitants of the source area used in their daily lives.

Pottery is another particularly important and abundant archaeological material in Mesoamerica. Our understanding of ceramic production, use, exchange and discard in ancient times is hindered by a lack of research with a processual orientation. The following three papers use a combination of ethnohistorical, ethnographic

and archaeological information to achieve a holistic understanding of the potter’s trade in Western Mexico during pre-Hispanic times.

The contribution by Abraham García Madrigal attempts to gain a new appreciation of the potter’s trade in Capula, Michoacán, through historical reconstruction. Capula has gained widespread fame in recent years thanks to its distinctive pottery, in particular figures known as *catrinas*, based on a popular representation of death as a well-dressed skeletal figure. Pottery production is quite old in this town. Although many locals believe that the ceramic trade was introduced by the Spanish friar Don Vasco de Quiroga in the 16th century, archaeological research undertaken by the author and others has shown that pottery production in the area goes further back in time, into the pre-Hispanic period. The goal of García’s research is to reconstruct the long historical process in which pottery production has been a constant activity. His results suggest that ceramic production in the area has gone through three major technological and stylistic transformations from pre-Hispanic times to the present. The people of Capula have been able to survive by adapting to these changes, as is evident in the historical narrative that the author presents.

In the following paper, Eduardo Williams discusses domestic pottery production and decoration styles in the Tarascan community of Huáncito, Michoacán, from an ethnoarchaeological perspective. Williams’ work at Huáncito goes back to 1990, when he first visited the village and began working among potters there. Since then he has visited his informants in Huáncito on many occasions, and so has been able to document the processes of change and persistence in the local ceramic tradition.

In the context of activities performed inside the household, craft production has long been of interest for archaeologists for it may reflect a certain level of economic interdependence among several sectors of a society. Likewise, the specialized production of crafts at a small scale was an important component of most domestic economies of pre-modern times throughout the world (Hirth 2009). Williams’ paper analyzes social relationships and domestic production contexts in several households in the aforementioned Tarascan community. His research adopts a perspective that combines ethnographic and archaeological methods, in order to observe and record the potters’ activities in *systemic context* (Schiffer 1995). The main goal is to carry out an analysis of the ceramic corpus under study based on the form and decoration of the vessels, in order to study different shapes and patterns of decoration. This research has produced new insights into relationships among kinship structures, residence patterns and ceramic decoration styles.

The paper by Helen P. Pollard deals with pottery production and ritual in the Tarascan state of the Protohistoric period. This author's main goal is to understand the political strategies of ruling elites in the Late Postclassic Tarascan state. The late emergence of the Tarascan state after A.D. 1350 and its survival into the early sixteenth century has provided us with the opportunity to use both archaeological and documentary sources, records that present a complex, and somewhat counter-intuitive, pattern of ruling elites who claimed an immigrant *Chichimec* heritage to justify their cooption of the native Purépecha (*i.e.* Tarascan) nobility, while at the same time presenting themselves as fully-ethnic Purépecha. Moreover, they materialized the state and its institutions using a template from the Toltec world of Epiclassic and Early Postclassic north-central Mexico.

While the Pátzcuaro Basin shows great continuity in the material culture of the commoner class, especially pottery, throughout the Postclassic, there were notable changes in the material culture of elites as well as in public structures and spaces. Nevertheless, the Late Postclassic period was marked by the unification of polities in the Basin, the creation of a newly signified elite culture, and a suite of traits that distinguish the existence of the state, and a series of status markers used to assign sociopolitical rank to members of the elites; among the latter, pottery stands out, as discussed in this paper.

The next chapter is by Blanca Maldonado, who explores the role of copper as a strategic resource in Western Mesoamerica. According to Maldonado, ancient metallurgy in Western Mexico, particularly among the Tarascans and their neighbors, was based primarily on copper and its alloys (see also Maldonado 2011). Many utilitarian artifacts were made out of this metal—needles and fishhooks, for instance— but most copper objects were of a sacred nature and were used as adornments in religious ceremonies, while also functioning as social and political status symbols among the elites. Copper sources and the metal extracted from them (as well as its alloys) played the role of strategic resources among the pre-Hispanic societies of the Western Mexican culture area. Therefore, the study of pre-Hispanic metallurgy offers valuable insights into the cultural context in which this technology developed in Mesoamerica. Using several lines of inquiry, including geological data, ethnohistorical sources, and laboratory analysis, among others, Maldonado's research is adding new information to help fill the voids in our understanding of the production of metal goods and its social and material contexts. By following such a multidisciplinary approach, this paper provides a general view of the state of the art in research on mining and metallurgy in ancient West Mexico, with an emphasis on recent information from Michoacán and Jalisco.

3. Trade and Exchange.

The first paper in this section is by Brigitte Faugère and her associates, who discuss the circulation of goods between Central Mexico and the Acámbaro Valley, Guanajuato. Due to its strategic location on the eastern end of the Bajío and its proximity to the Lerma River, the Acámbaro Valley has always been considered part of a communication axis between Western and Central Mexico. Recent archaeological excavations in this area have uncovered the presence of materials from the Central Highlands pertaining to the Preclassic and Classic periods. During the heyday of the Chupícuaro culture, artifacts bearing its characteristic style have been found in the Basin of Mexico and the Puebla-Tlaxcala region, although we have not yet been able to ascertain whether these are imports or local copies. In later times, Teotihuacan's presence was felt in several sites in the Acámbaro Valley, as well as further southwest, in the Lake Cuitzeo Basin. This paper discusses the possible communication networks linking this region with Central Mexico, using geographic information systems (SIG).

In their chapter, Amy Hirshman and David L. Haskell examine the production of fine wares and cultural interaction between artisans and elites in the Lake Pátzcuaro Basin during the Late Postclassic period (*ca.* A.D. 1200-1520). They hold that traditional conceptualizations of the relationship between elites and craft producers of elite status goods emphasize either “managerial” models, in which the latter work in relative autonomy, or “political” models, where the elites exert direct control over production. Research in Mesoamerica, however, highlights the importance of household production, even in politically-centralized contexts, while recent examinations of pottery production in the Tarascan state have underscored the autonomy of potting households in the relative absence of elite meddling. This paper investigates the implications of an integrative analysis of both the production and consumption of ceramic fine wares at administrative centers in the Lake Pátzcuaro Basin core of the Late Postclassic Tarascan state (*ca.* A.D. 1350-1525). Finally, it considers the complex and intertwined negotiations between elites acting to consolidate power at various levels and local potting commoners who were presented with new opportunities within those sociopolitical developments.

The book closes with an essay by Christine Hernández, discussing her work on ceramic evidence for communication between the Basin of Mexico, southern Hidalgo and El Bajío. According to Hernández, during the Protohistoric period (*ca.* A.D. 1450-1530) the militarized frontier that separated the Tarascan (Purépecha) empire from that of the Aztecs effectively cut a communication route that existed along the Lerma River connecting the Basin of Mexico and southern Hidalgo to the northern and western regions of Mesoamerica. The results of

typological and chronometric analyses of the ceramics recovered by the Ucareo-Zinapécuaro Project (1989-1995) indicate that the cessation of friendly relations with central Mexico was a very recent change in a long history of strong cultural and economic ties between northeastern Michoacán and its neighbors to the east that dated from the Preclassic period. There are key points along the historical trajectory of the ceramics from the Ucareo-Zinapécuaro obsidian source area that reveal participation by its inhabitants in a dynamic East-West corridor as both donor and recipient in the movement of people, resources and cultural information. Ceramic data relevant to relationships with Teotihuacan and Tula Chico during the Classic period are also analyzed in this chapter.

Final Remarks

Books published in English on West Mexican archaeology are few and far between. Among the most notable we can mention: Volume 11 of the *Handbook of Middle American Indians*, edited by Robert Wauchope, Gordon Ekholm and Ignacio Bernal (1971); *The Archaeology of West Mexico*, edited by Betty Bell (1974); *The Archaeology of West and Northwest Mesoamerica*, edited by Michael S. Foster and Phil C. Weigand (1985); *Ancient West Mexico: Art and Archaeology of the Unknown Past*, edited by Richard F. Townsend (1998); and *The Archaeology of West and Northwest Mexico*, edited by Michael S. Foster and Shirley Gorenstein (2000). Upon comparing this list to the, literally, *hundreds* of books published on central and southern –i.e. “nuclear”– Mesoamerica, the reader will understand the importance of adding the present volume to the archaeological literature.

As mentioned by Shirley Gorenstein at the beginning of this Introduction, for a long time archaeologists working in Western Mexico were rarely taken into account by their colleagues doing research in Central Mexico and points south. This is due in part to the dearth of publications, but also to a “centralist” attitude that has long permeated Mesoamerican archaeology. The editors of the present volume hope that this collection of essays on Western Mexican archaeology will encourage dialogue among scholars interested in ancient Mesoamerica as a whole, including the western portion of this cultural area. The time is ripe for a new synthesis and novel discussions of archaeological research in the western reaches of Mesoamerica, and this volume will be a contribution to this much-needed task.

References Cited

- Acuña, René (editor)
1987 *Relaciones geográficas del siglo XVI: Michoacán*. UNAM, Mexico City.
- Alcalá, Fr. Jerónimo de
2008 *La relación de Michoacán*. El Colegio de Michoacán, Zamora [written in ca. 1541].

- Andrieu, Chloé, Edna Rodas and Luis Luin
2014 The Values of Classic Maya Jade: A Reanalysis of Cancuen’s Jade Workshop. *Ancient Mesoamerica* 25(1):141-164.
- Aoyama, Kazuo
2007 Elite Artists and Craft Producers in Classic Maya Society: Lithic Evidence from Aguateca, Guatemala. *Latin American Antiquity* 18(1):3-26.
- Beltrán, Ulises
1982 Tarascan State and Society in Prehispanic Times: An Ethnohistorical Inquiry. Doctoral Dissertation, University of Chicago, Chicago.
- Berdan, Frances
2014 *Aztec Archaeology and Ethnohistory*. Cambridge University Press, Cambridge.
- Blanton, Richard, S. A. Kowalewski, G. Feinman and J. Appel
1981 *Ancient Mesoamerica: A Comparison of Change in Three Regions*. Cambridge University Press, Cambridge.
- Carballo, David M.
2011 Advances in the Household Archaeology of Highland Mesoamerica. *Journal of Archaeological Research* 19:133-189.
- Carrasco, Pedro
1986 Economía política en el reino tarasco. In *La sociedad indígena en el centro y occidente de México*. El Colegio de Michoacán, Zamora.
- Castilleja, Aída
2011 La configuración del sistema de intercambio entre los purépecha como factor de cambio y persistencia. In *Patrones de asentamiento y actividades de subsistencia en el Occidente de México: Reconocimiento a la doctora Helen Perlstein Pollard*, edited by Eduardo Williams and P. C. Weigand, pp. 265-280. El Colegio de Michoacán, Zamora.
- Costin, Cathy L.
1991 Craft Specialization: Issues in Defining, Documenting, and Explaining the Organization of Production. *Journal of Archaeological Method and Theory* 3:1-56.
- 2004 Craft Economies of Ancient Andean States. In *Archaeological Perspectives on Political Economies*, edited by Gary M. Feinman, Linda M. Nicholas, and James M. Skibo, pp. 189-223. University of Utah Press, Salt Lake City.
- 2005 Craft Production. In *Handbook of Methods in Archaeology*, edited by H. Maschmner, pp. 1032-1105. Alta Mira Press, Walnut Creek.
- Drennan, Robert D.
1984a Long-Distance Transport Costs in Prehispanic Mesoamerica. *American Anthropologist* 86(1):105-111.
1984b Long-Distance Movement of Goods in the Mesoamerican Formative and Classic. *American Antiquity* 49(1):7-43.
- Espejel, Claudia
1992 *Caminos de Michoacán y pueblos que voy pasando*. INAH, Mexico City.