

UNIVERSITY OF CALIFORNIA, SAN DIEGO

Domestic Ritual and Identity in the Teotihuacan State:
Exploring Regional Processes of Social Integration Through Ceramic Figurines

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TABLE OF CONTENTS

Signature Page.....	iii
Table of Contents.....	iv
List of Abbreviations.....	x
List of Figures.....	xi
List of Tables.....	xvii
List of Graphs.....	xxi
Acknowledgments.....	xxiii
Vita.....	xxvi
Abstract of the Dissertation.....	xxvii
Chapter 1. Introduction.....	1
Research Problem.....	8
Research Strategy.....	11
Summary of Results.....	14
Chapter Outlines.....	16
Research Questions.....	22
Hypotheses.....	24
Sociospatial Variation in the City of Teotihuacan.....	25
Temporal Shifts in Style and Subject Matter.....	26
Transition to Statehood.....	28
The Extent of a Shared Culture During the Classic.....	30
Chapter 1 Notes.....	33
Chapter 2. The Theoretical Framework: Ideology, Identity, and Ritual Practice.....	34
The Politics of Ideology.....	36
Political Ideology and Imperial Polities in the Americas.....	41
Ideology Materialized.....	49
Identity Formation in Society.....	56

Ritual and the Performance of Identity.....	60
The Ritual Economy Approach.....	67
Conclusion.....	71
Chapter 3. Core-Hinterland Dynamics During the Expansion of Teotihuacan.....	75
Teotihuacan: The Rise of the Core.....	77
Ethnicity, Religion, and Politics in the Urban Center.....	83
Research in the Place of the Gods: Survey and Excavation Projects at the City of Teotihuacan.....	86
Settlement Patterns and Their Implications.....	89
The Basin of Mexico.....	89
The Teotihuacan Valley.....	92
The Zumpango Region.....	94
The Cuautitlan Region.....	96
The Temascalapa Region.....	97
The Texcoco Region.....	99
The Chalco-Xochimilco Region.....	100
Models of the Teotihuacan Polity.....	102
The Extent and Nature of the Hinterlands.....	103
The Case for Imperialism.....	107
Excavations in the Basin of Mexico.....	112
Axotlan.....	114
Cerro Portezuelo.....	119
Huixtoco.....	124
The Relationships Between the Sites Under Investigation.....	129
Discussion and Conclusion.....	134
Chapter 3 Notes.....	140
Chapter 4. Theoretical Approaches to Figurines and Design of the Current Study.....	142
Theoretical History of Figurine Studies.....	143
Current Trends in Figurine Studies.....	145
Art After Aesthetics: Figurines as Social Agents.....	146
The Process of Analysis and Interpretation.....	149
Case Studies of Mesoamerican Figurines.....	154
Research on Figurines from the Basin of Mexico.....	159
Previous Studies on Teotihuacan Figurines.....	162
Eduardo Noguera.....	163
Laurette Sejourne.....	165

Warren Barbour.....	165
Kim Goldsmith.....	166
Sue Scott.....	168
Kristen Sullivan.....	169
Teotihuacan Figurines: Production, Use, Significance, and Style.....	171
The Evolution of the Teotihuacan Style.....	178
Methodology: Data Collection and Analysis.....	184
Sampling Strategy.....	185
Data Collection.....	185
Data Analysis.....	189
Chapter 4 Notes.....	191
Chapter 5. Sociospatial Variation in Figurine Production and Consumption in Urban Teotihuacan.....	195
The Neighborhood as a Locus of Archaeological Investigations.....	198
Characterization of the Teotihuacan Data Set and Figurine Assemblage.....	202
Descriptives.....	205
Sociospatial Variation at Teotihuacan.....	210
Proximity Zones.....	211
Analysis of Relationships.....	218
Analysis of Articulated, Half-Conical, and Warrior Figurines—Torsos Only.....	225
Testing Figurine Distributions by Neighborhood Status.....	231
Diversity Within Types: Quantitative and Qualitative Variation Within Articulated, Half-Conical, and Warrior Figurines.....	235
Spatial Variation in Figurine Size.....	236
Articulated Figurines.....	236
Warrior Figurines.....	241
Half-Conical Figurines.....	243
Summary.....	245
Variation in Figurine Decoration and Surface Treatment.....	246
Articulated Figurines.....	246
Warrior Figurines.....	250
Half-Conical Figurines.....	256
Discussion and Conclusion.....	261
Variation in the Distribution and Production of Common Figurine Types.....	263
Implications for Ritual Variation Among Segments of Teotihuacan Society...	266

Chapter 5 Notes.....	270
Chapter 6. Diachronic Trends in Figurine Style, Iconography, and Subject Matter in the Basin of Mexico.....	274
Assemblages Under Investigation.....	276
Axotlan.....	276
Cerro Portezuelo.....	277
Huixtoco.....	277
Teotihuacan.....	278
Characterization of the Data.....	278
Analysis of the Figurine Assemblages by Period.....	281
Middle Formative.....	282
Sexual Attributes.....	283
Body Position.....	286
Personal Adornment.....	287
Clothing.....	290
Headdresses.....	291
Summary.....	292
Late Formative.....	293
Body Position.....	294
Sexual Attributes.....	295
Clothing.....	298
Personal Adornment.....	298
Headdresses.....	302
Summary.....	303
Terminal Formative.....	304
Head Shape and Prognathism.....	304
Body Position.....	306
Personal Adornment.....	307
Clothing.....	311
Headdresses.....	315
Summary.....	316
Early Classic.....	316
Head Shape and Style.....	317
Figurine Types and Body Position.....	320
Personal Adornment.....	326
Clothing.....	328
Headdresses.....	332

Summary.....	334
Classic.....	335
Head Shape and Style.....	336
Body Position.....	336
Distribution and Stylistic Variation Within Classic Figurine Types....	338
Articulated.....	338
Bound.....	340
Fat Gods.....	342
Enthroned.....	343
Half-Conicals.....	345
Warriors.....	346
Personal Adornment.....	347
Headdresses.....	349
Tassel Headdress.....	357
Summary.....	360
Regional Diachronic Patterns and Differences in Site Assemblages During the Teotihuacan Period.....	362
Terminal Formative.....	362
Early Classic.....	364
Classic.....	366
Discussion.....	370
Conclusion.....	376
Chapter 6 Notes.....	379
 Chapter 7. Diachronic and Spatial Variation in Paste Characteristics.....	382
Analysis of Paste Properties.....	384
Paste Color.....	384
Paste Temper.....	393
Paste Texture.....	398
Discussion.....	404
Conclusion.....	410
 Chapter 8. Gender Ideology During the Rise of Teotihuacan.....	413
Gender in Archaeology.....	415
Feminists and 'Finding' Women in the Past.....	416
Gendered Bodies and Representations: Studying Sex and Gender Through Archaeological Images.....	419
Reconstructing Gender Systems at Teotihuacan.....	424

Female and Male Sexual Attributes.....	426
Style and Ornamentation in Representations of Women and Men.....	436
Changing Ratios of Women and Men Over Time.....	440
Representations of Women and Femininity Over Time.....	446
Representations of Men and Masculinity Over Time.....	453
Discussion.....	457
Conclusion.....	461
Chapter 8 Notes.....	463
Conclusion: Diachronic Variation in Regional Figurine Assemblages and the Implications for Our Understanding of the Teotihuacan Polity.....	468
The Variable Relationships Between Rural Sites and Teotihuacan.....	471
Axotlan.....	473
Cerro Portezuelo.....	476
Huixtoco.....	478
Understanding the Nature of Teotihuacan's Influence.....	481
Teotihuacan as a Hegemonic and Imperial Polity.....	485
Conclusion: The Path to Imperial Formation and Expansion.....	490
Future Directions.....	492
Appendices.....	494
References.....	541

LIST OF ABBREVIATIONS

AXT: Axotlan

CDD: Ciudadela Workshop in Teotihuacan

CPZ: Cerro Portezuelo

HXT: Huixtoco

TEO: Teotihuacan

TMP: Teotihuacan Mapping Project

LIST OF FIGURES

Figure 1.1: Basin of Mexico map.....	4
Figure 1.2: Basin of Mexico chronology used in this dissertation.....	5
Figure 3.1: Basin of Mexico chronology.....	78
Figure 3.2: Satellite image of the Basin of Mexico with sites under investigation highlighted (Google Earth, accessed 03/10/17).....	80
Figure 3.3: Teotihuacan Mapping Project (TMP) site map (Millon 1970).....	81
Figure 3.4: Satellite image of Teotihuacan site core taken in 2017 (Google Earth, accessed 03/10/17).....	82
Figure 3.5: Basin of Mexico map with important sites and regions.....	90
Figure 3.6: Map of the central Mexican highlands.....	103
Figure 3.7: Axotlan site map (after García Chávez et al. 2004).....	117
Figure 3.8: Map of Cerro Portezuelo's location in the Texcoco region (after Hicks 2013).....	121
Figure 3.9: Location of Huixtoco excavations (after Valadez et al. 2004).....	125
Figure 4.1: Analytical decision map of interpretive possibilities for figurine studies (adapted from Lesure 2011: 51, Fig. 17).....	150
Figure 4.2: Possible birthing scene from the Teotihuacan Site Museum (photos by author).....	175
Figure 4.3: Heart-shaped heads in chronological order from Tzacualli (left) to Miccaotli (middle two) and Classic (two on right).....	179
Figure 4.4: Possible evolution of rounded heads from Tzacualli (left), Miccaotli (second from left), Tlamimilolpa (middle) and culminating in warrior heads (two right).....	180
Figure 4.5: Elongated heads from Tzacualli (left two), Miccaotli (middle), Tlamimilolpa (second from right), and Classic (right).....	180
Figure 4.6: Wide-band headdresses on Tzacualli (left), Late Tzacualli, Miccaotli (two), and Classic molded (right) figurines.....	180

Figure 4.7: Tzacualli, Late Tzacualli/Early Miccaotli, Miccaotli, and Classic period heads with a patterned turban.....	181
Figure 4.8: Rectangular caps with circular ornamentation from Miccaotli and the Classic period.....	181
Figure 4.9: Wrapped turbans from Tzacualli, Miccaotli, and Classic.....	181
Figure 4.10: Cap (with chin strap) and mask. Late Tzacualli with chin strap but no mask (left), Miccaotli with both chin strap and mask (middle), and Classic with cap and mask, but no chin strap (right).....	182
Figure 4.11: Torsos with Quechquemitls (and some with huipils) from Tzacualli (left), Miccaotli (middle two), and Classic (right two).....	182
Figure 4.12: Torsos with simple loincloths from Tzacualli/Miccaotli (left, middle), and the Classic (right).....	183
Figure 4.13: Two torsos with sashes from Tzacualli or Miccaotli. The sash does not appear to be common in later periods.....	183
Figure 4.14: Simple collars from Tzacualli (left), Miccaotli (middle), and the Classic period (right).....	183
Figure 4.15: Beaded collars from Tzacualli (likely, left), Miccaotli (middle), and Classic (right).....	183
Figure 5.1: TMP map showing analyzed grid squares.....	202
Figure 5.2: TMP map showing the density of all figurine fragments by grid square.....	203
Figure 5.3: TMP map showing the density of all datable figurine fragments by grid square.....	203
Figure 5.4: Notable Features of Grid Squares Under Investigation.....	205
Figure 5.5: TMP map showing the radius of the three proximity groups to the civic-ceremonial core and included grid squares.....	213
Figure 5.6: Grid Squares with Differing Frequencies of Articulated and Warrior Figurines.....	230
Figure 5.7: Oversized articulated figurine in the Museo Nacional de Antropología (left) and from the TMP (middle) compared to an average sized torso from the TMP (right).....	241

Figure 5.8: Articulated figurine torsos from the TMP.....	247
Figure 5.9: Articulated figurines in the Museo Nacional de Antropología (left) and the Teotihuacan site museum (center, right).....	249
Figure 5.10: Warrior figurine torsos from the TMP.....	250
Figure 5.11: Complete warrior figurines in the Museo Nacional de Antropología (left two) and Teotihuacan site museum (right two).....	251
Figure 5.12: Warrior figurine in an unusual seated position from the Teotihuacan site museum.....	252
Figure 5.13: Examples of Round, Elongated, and Triangular Warrior heads from the TMP.....	253
Figure 5.14: Half-conical figurines from the TMP displaying the belt and cape style (left three) and the feathered garment (right two).....	256
Figure 5.15: Pendant Design Motifs on Half-Conical Figurines.....	259
Figure 5.16: Drawing of Pendant Design Motifs on Half-Conical Figurines.....	259
Figure 5.17: Three half-conical figurines from Teotihuacan. Left and center figurines from N2W2.....	260
Figure 6.1: Basin of Mexico map.....	275
Figure 6.2: Examples of Middle Formative Clothing from Huixtoco (left) and Axotlan (right).....	291
Figure 6.3: Middle Formative headdress examples from Axotlan (2 left) and Huixtoco (2 right).....	292
Figure 6.4: Headdresses on Late Formative figurines from Axotlan (3 left) and Huixtoco (right).....	303
Figure 6.5: Two Type H figurines from Huixtoco with matching headdress/hairstyles.....	303
Figure 6.6: Patlachique heads from Teotihuacan.....	305
Figure 6.7: Tzacualli heads from Teotihuacan.....	305
Figure 6.8: Terminal Formative figurines from Cerro Portezuelo (Patlachique left, Tzacualli center) and Axotlan (Tzacualli, right).....	306

Figure 6.9: Wide Band headdress on Tzacualli phase figurines from Teotihuacan (left and center), and a possible example from Axotlan (right).....	315
Figure 6.10: Miccaotli heads from Axotlan, Cerro Portezuelo, Huixtoco, and Teotihuacan.....	318
Figure 6.11: Miccaotli irregular head shapes from Teotihuacan.....	318
Figure 6.12: Miccaotli (left, center) and Tlamimilolpa (right) figurines from the Teotihuacan site museum.....	319
Figure 6.13: Tlamimilolpa heads from Teotihuacan.....	320
Figure 6.14: Tlamimilolpa irregular head shape.....	320
Figure 6.15: Miccaotli style figurines from Axotlan.....	323
Figure 6.16: Miccaotli style figurines from Cerro Portezuelo.....	324
Figure 6.17: Miccaotli figurines from Teotihuacan.....	324
Figure 6.18: Potential early half-conicals from Axotlan (left) and Teotihuacan (three right).....	325
Figure 6.19: Bound figurines from Teotihuacan.....	325
Figure 6.20: Ball player and back-bending figurines from Teotihuacan.....	325
Figure 6.21: Potential Early Classic Warrior prototypes.....	326
Figure 6.22: Simple, Moderate, and Extravagant headdresses from Axotlan (left and right) and Teotihuacan (two center).....	333
Figure 6.23: Classic period heads from the TMP.....	336
Figure 6.24: Articulated figurine torsos from Axotlan.....	340
Figure 6.25: Articulated torsos from Cerro Portezuelo (left) and Teotihuacan (center, right).....	340
Figure 6.26: Bound torsos from Axotlan (left), Cerro Portezuelo (middle), Teotihuacan (right).....	341
Figure 6.27: 'Fat God' torsos from Axotlan (left), Cerro Portezuelo (middle), and Teotihuacan (two right).....	342

Figure 6.28: Enthroned figurines from Axotlan.....	344
Figure 6.29: Enthroned figurines from Teotihuacan (current study left) and the TMP Type Collection (three right).....	344
Figure 6.30: Enthroned figurine (left) and mold (right) from the National Museum of Anthropology in Mexico City.....	344
Figure 6.31: Half-conicals from Axotlan (left), Cerro Portezuelo (center), and Teotihuacan (right).....	346
Figure 6.32: Warrior figurine fragments from Axotlan (left, center) and Cerro Portezuelo (right).....	346
Figure 6.33: TMP figurines with pendants.....	348
Figure 6.34: TMP headdresses with geometric decoration: bars, vertical appliques, segmentation, and wavy lines.....	353
Figure 6.35: TMP headdresses with feathers in horizontal, asymmetrical, and vertical orientations.....	353
Figure 6.36: TMP headdresses with animal elements.....	354
Figure 6.37: TMP headdress with tassels.....	354
Figure 6.38: TMP headdresses with punctilation.....	354
Figure 6.39: Axotlan Classic period headdresses (note the presence of tassels on the middle headdress).....	355
Figure 6.40: Cerro Portezuelo Classic period headdresses—the two on the right are quite similar but from different molds.....	355
Figure 6.41: Huixtoco Classic period headdresses.....	355
Figure 6.42: Unusual heads from Huixtoco combining molded and handmade elements.....	356
Figure 6.43: Drawing of Tassel Headdress from Techinantitla mural (drawing by author).....	357
Figure 6.44: Stela 11 at Yaxhá, Guatemala (drawing by author, after photos and drawings by Linda Schele).....	359

Figure 6.45: Tassel Headdresses from Teotihuacan (left), Axotlan (center), and a possible example from Huixtoco (right).....	360
Figure 8.1: Middle and Late Formative gynomorphic sexual attributes from Huixtoco (breasts, pregnant torso, pubic triangle, and vulvae).....	428
Figure 8.2: Middle and Late Formative gynomorphic sexual attributes from Axotlan.....	429
Figure 8.3: Gynomorphic sexual attributes from Cerro Portezuelo.....	429
Figure 8.4: Gynomorphic sexual attributes from Teotihuacan.....	429
Figure 8.5: Middle and Late Formative andromorphic sexual attributes from Axotlan (left) and Huixtoco (middle and right).....	430
Figure 8.6: Two Late Formative figurines from Huixtoco of a woman holding a child. Middle and right images show the infant nursing.....	449
Figure 8.7: Early Classic TMP figurine, possibly of a seated woman holding a child to the side.....	450
Figure 8.8: Classic period flat figurines of a woman in a quechquemitl and huipil, holding a child (two from Teotihuacan on left, Axotlan on right).....	450
Figure 8.9: Classic female figurine from Axotlan (left), Cerro Portezuelo (center), and Huixtoco (right).....	451
Figure 8.10: Classic kneeling torsos of women from Teotihuacan (left and center), and Axotlan (right).....	451
Figure 8.11: Late Formative figurines from Huixtoco (left) and Axotlan (right), women and potential men in seated position.....	453
Figure 8.12: Terminal Formative Axotlan, Teotihuacan (two right).....	454
Figure 8.13: Early Classic Teotihuacan torsos with clothing.....	455
Figure 8.14: Classic Teotihuacan torsos with clothing.....	455

LIST OF TABLES

Table 4.1: Synoptic table from Panofsky (1955: 40-41).....	192
Table 5.1: Counts of Figurines in Teotihuacan Grid Squares Under Investigation.....	204
Table 5.2: Teotihuacan Grid Squares by Quadrant.....	204
Table 5.3: Counts of Forms (dated fragments only).....	205
Table 5.4: Counts of Teotihuacan Figurine Fragments by Period and Body Part.....	206
Table 5.5: Totals of Figurine Types by Period (all fragments).....	207
Table 5.6: Grid Squares by Zone at TEO.....	213
Table 5.7: Counts of Figurine Types by Proximity to the Civic-Ceremonial Core at Teotihuacan.....	214
Table 5.8: Relative Rates of Figurine Types by Zone.....	215
Table 5.9: Totals of Figurine Types by Zone at Teotihuacan.....	216
Table 5.10: Counts and Frequencies of Articulated, Half-Conical, and Warrior Figurine Fragments by Proximity to the Core at Teotihuacan.....	222
Table 5.11: Counts and Frequencies of Common Figurine Types by Neighborhood Status at Teotihuacan (Torsos Only--Early Classic and Classic).....	232
Table 5.12: Counts of Individual Jewelry Elements on Half-Conical Figurines.....	257
Table 5.13: Counts of Jewelry Styles on Half-Conical Figurines.....	258
Table 6.1: Counts of Forms by Site (including undated fragments).....	279
Table 6.2: Counts of Forms by Site (dated fragments only).....	279
Table 6.3: Percentage of Forms by Site (dated fragments only).....	279
Table 6.4: Totals of Anthropomorphic Figurine Fragments by Site and Period.....	279
Table 6.5: Counts of Figurine Body Parts by Site and Period.....	281
Table 6.6: Breakdown of Middle Formative Assemblages Using the Hay-Vaillant Typology.....	283

Table 6.7: Counts of Sexual Characteristics from Middle Formative Torsos.....	284
Table 6.8: Bodily Positions of Middle Formative Figurines by Hay-Vaillant Type...	286
Table 6.9: Number of Collars on Middle Formative Figurines by Site.....	287
Table 6.10: Counts and Types of Jewelry on Middle Formative Figurines by Site....	288
Table 6.11: Counts of Clothing Types on Middle Formative Torsos by Site.....	290
Table 6.12: Counts of Middle Formative Figurine Heads with Headdresses.....	291
Table 6.13: Counts and Types of Headdresses on Middle Formative Figurines by Site.....	291
Table 6.14: Counts of Late Formative Figurines by Hay-Vaillant Type and Site.....	294
Table 6.15: Bodily Positions of Late Formative Torsos by Hay-Vaillant Type.....	295
Table 6.16: Sexual Attributes on Late Formative Torsos.....	296
Table 6.17: Counts of Clothing on Late Formative Torsos by Site.....	298
Table 6.18: Counts and Types of Jewelry on Late Formative Figurines by Site.....	300
Table 6.19: Counts of Late Formative Figurine Heads with Headdresses.....	302
Table 6.20: Counts and Types of Headdresses on Late Formative Figurines by Site...	302
Table 6.21: Prognathism on Terminal Formative Heads (all sites).....	305
Table 6.22: Bodily Positions of Terminal Formative Torsos by Site.....	307
Table 6.23: Number of Collars on Terminal Formative Figurines by Site.....	308
Table 6.24: Counts and Types of Jewelry on Terminal Formative Figurines by Site.....	309
Table 6.25: Proportion of Clothed Terminal Formative Figurines by Site.....	312
Table 6.26: Count of Clothing Types and Combinations on Terminal Formative Figurines by Site.....	313
Table 6.27: Counts and Types of Headdresses on Terminal Formative Figurines by Site.....	315
Table 6.28: Bodily Positions of Early Classic Torsos by Site.....	321

Table 6.29: Position of Early Classic Figurines Wearing Huipils and Quechqemitsl.....	322
Table 6.30: Position of Early Classic Figurines Wearing Masculine Clothing (Loincloths, Belts, App. Balls).....	323
Table 6.31: Totals of Early Classic Figurines by Site.....	325
Table 6.32: Number of Collars on Early Classic Figurines by Site.....	327
Table 6.33: Counts and Types of Jewelry on Early Classic Figurines by Site.....	328
Table 6.34: Count of Clothing Types and Combinations on Early Classic Figurines by Site.....	330
Table 6.35: Proportion of Clothed Early Classic Figurines by Site (no heads included)	332
Table 6.36: Counts and Types of Headdresses on Early Classic Figurines by Site.....	333
Table 6.37: Extravagance of Early Classic Period Headdresses by Site.....	334
Table 6.38: Bodily Positions for Classic Period Torsos by Site.....	337
Table 6.39: Totals of Classic Figurine Types by Site (all fragments).....	338
Table 6.40: Number of Collars on Classic Figurines by Site.....	347
Table 6.41: Counts and Types of Jewelry on Classic Figurines by Site.....	348
Table 6.42: Counts and Types of Headdresses on Classic Figurines by Site.....	349
Table 6.43: Extravagance of Classic Period Headdresses by Site.....	350
Table 6.44: Counts of Classic Period Headdress Elements by Site.....	351
Table 7.1: Paste Color Names and Munsell Values.....	384
Table 7.2: Counts of Paste Colors by Site and Period.....	386
Table 7.3: Counts of Paste Temper Types by Site and Period.....	394
Table 7.4: Counts of Paste Textures by Site and Period.....	400
Table 8.1: Rates of Sexual Attributes on Figurine Torsos by Period.....	431
Table 8.2: Counts and Rates of Different Sexual Attributes by Site and Period.....	433

Table 8.3: Counts and Rates of the Co-Occurrence of Sexual Attributes on Figurine Torsos by Site and Period.....	435
Table 8.4: Rates of Sexual Attributes, Jewelry, and Combinations on Figurine Torsos by Period (All Sites)	437
Table 8.5: Counts and Rates of Sexual Attributes and Clothing on Figurines by Site and Period.....	439
Table 8.6: Counts and Rates of Sexual Attributes and Gendered Clothing on Figurine Torsos by Site and Period.....	441
Table 8.7: Counts and Rates of Gendered Figurine Torsos by Site and Period.....	442

LIST OF GRAPHS

Graph 5.1: Proportion of Different Body Parts in the TMP assemblage (all periods).....	206
Graph 5.2: Rates of Figurine Types in Classic Period Teotihuacan (torsos and whole only)	210
Graph 5.3: Mean Counts of Figurine Types per Grid Square by Zone.....	220
Graph 5.4: Relative Rates of Classic Figurine Types by Zone.....	220
Graph 5.5: Frequencies of Three Figurine Types by Grid Square and Zone (Torsos Only)	227
Graph 5.6: Frequencies of Three Figurine Types by Grid Square and Zone (Torsos only, Total>50)	229
Graph 5.7: Frequencies of Figurine Types by Status Group at Teotihuacan (Torsos and Limbs)	234
Graph 5.8: Frequencies of Figurine Types by Neighborhood Status at Teotihuacan (Torsos and Limbs).....	235
Graph 5.9: Distribution of Complete Articulated Figurine Torso Sizes (cm) at Teotihuacan.....	237
Graph 5.10: Mean Articulated Torso Width by Zone.....	238
Graph 5.11: Mean Articulated Torso Width by Grid Square.....	239
Graph 5.12: Variation in the Cross-Sectional Area of Articulated Limbs (cm ²).....	240
Graph 5.13: Distribution of Sizes of Complete Warrior Figurine Torsos.....	241
Graph 5.14: Mean Torso Length (cm) of Complete Warrior Figurines by Grid Square.....	242
Graph 5.15: Distribution of Complete Half-Conical Figurine Torso Sizes (cm) at Teotihuacan.....	244
Graph 5.16: Mean Half-Conical Torso Thickness (cm) by Grid Square.....	244
Graph 6.1: Rates of Occurrence of Figurine Body Parts Across the Assemblages (all periods)	280

Graph 7.1: Relative Distribution of Paste Colors by Site (all periods).....	388
Graph 7.2: Relative Distribution of Paste Colors Over Time at Teotihuacan.....	389
Graph 7.3: Relative Distribution of Paste Colors Over Time at Axotlan.....	390
Graph 7.4: Relative Distribution of Paste Colors Over Time at Cerro Portezuelo.....	390
Graph 7.5: Relative Distribution of Paste Colors Over Time at Huixtoco.....	391
Graph 7.6: Relative Distribution of Paste Temper Types at All Sites (All Periods)...	395
Graph 7.7: Relative Distribution of Paste Temper by Period at Axotlan.....	396
Graph 7.8: Relative Distribution of Paste Temper by Period at Cerro Portezuelo.....	397
Graph 7.9: Relative Distribution of Paste Temper by Period at Huixtoco.....	397
Graph 7.10: Relative Distribution of Paste Temper by Period at Teotihuacan.....	398
Graph 7.11: Relative Frequencies of Paste Texture by Site (All Periods).....	401
Graph 7.12: Relative Frequencies of Paste Texture by Period at Axotlan.....	402
Graph 7.13: Relative Frequencies of Paste Texture by Period at Cerro Portezuelo....	402
Graph 7.14: Relative Frequencies of Paste Texture by Period at Huixtoco.....	403
Graph 7.15: Relative Frequencies of Paste Texture by Period at Teotihuacan.....	403
Graph 8.1: Ratios of Sexual Attributes by Period (all sites).....	433
Graph 8.2: Ratios of Sexual Attributes by Site (all periods).....	435
Graph 8.3: Rates of Sexual Attributes and Clothing on Figurines Over Time (all sites)	440
Graph 8.4: Rates of Gendered and Unknown Figurines by Period (all sites).....	444

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ABSTRACT OF THE DISSERTATION

Domestic Ritual and Identity in the Teotihuacan State: Exploring Regional Processes of Social Integration Through Ceramic Figurines

by

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Teotihuacan was a sprawling urban center that came to rule an eponymous expansive polity in the central Mexican highlands from approximately 200 to 600 CE. The conditions that facilitated its initial expansion, however, are not fully understood. This dissertation examines ceramic figurines from Teotihuacan and the three rural sites of Axotlan, Cerro Portezuelo, and Huixtoco in the Basin of Mexico to investigate ancient social relationships, cultural changes, and political transformations during the emergence of the first state-level society in the region.

Ritual activity structures social and religious life, and can be a conduit for expressing ideological views, creating individual and community identity, and

maintaining social boundaries. The form, style, and subject matter of figurines were observed to vary both over time and across the Basin of Mexico, indicating transformations in domestic ritual practice and cultural identity in the rural hinterland of the emerging state.

In addition to the widespread adoption of Teotihuacan-style figurines in the three rural sites, one of the most noticeable changes was in the subject matter of the figurines themselves. Emphasis was placed on the physical features of bodies—particularly sexual characteristics—in Formative period figurines, whereas increasing emphasis was placed on clothing, elaborate costumes, and personal ornamentation during the Classic period. Furthermore, feminine bodies were common in the Formative period, but became a small minority in Classic period assemblages, which were dominated by diverse functional types, many of which appear to depict masculine figures.

The appearance of Teotihuacan-style figurines in the three rural assemblages predates the arrival of other forms of Teotihuacan material culture and architecture, indicating that a push of Teotihuacan ideology into the rural hinterland may have been an intentional strategy in the initial phase of hegemonic expansion, which became less important over time as Teotihuacan switched to more coercive forms of expansion. Exploring the ideological system of the Basin of Mexico contributes to a better understanding of how communities related to each other throughout the region, and the ways in which social and political bonds were formed, strengthened, maintained, and ultimately abandoned.

CHAPTER 1. INTRODUCTION

Teotihuacan is a sprawling archaeological site in the northeastern Basin of Mexico located approximately 45km from modern Mexico City. This multiethnic metropolis was occupied from approximately 100 BCE to 650 CE and came to rule an eponymous regional polity between approximately 200 and 600 CE. The city was characterized by massive civic-ceremonial monuments and centralized planning in the site core, and a large urban population that lived in over 2,000 apartment compounds. Archaeological investigations over the last century have explored the religious and civic monuments of the city as well as multiple apartment compounds, increasing our understanding of the political, social, religious, and economic facets of Teotihuacan society.

Much work remains to be done, however, in both the urban core as well as the rural hinterland that would eventually fall within Teotihuacan's territory. It is not well understood how Teotihuacan administered its sustaining hinterland, and the relationship between the state and the rural communities that populated the region. Furthermore, the extent to which daily life in rural communities mirrored, or sought to reproduce, that of the city of Teotihuacan, and the degree of commonalities in terms of economic, social, and ritual practices between the core and rural sites remains unclear. As the first expansive state in the Basin of Mexico, Teotihuacan provides an important case study for investigations of early state-level societies and complex cultures across the world. Increasing our understanding of the religious, political, and economic facets of

Teotihuacan society is relevant not only to Teotihuacan studies and Mesoamerican archaeology, but to anthropology in general.

This dissertation aims to increase our knowledge about the larger issue of Teotihuacan's emergence and expansion through the lens of ritual practice. More specifically, I investigate the ceramic figurines that were popular items in the Formative and Classic period assemblages of ritual paraphernalia in the Basin of Mexico. Mesoamerica has a long history of ritualistic figurine use that varied across space and time, and the Basin of Mexico was no exception. Similarities and changes in figurine forms, styles, and subject matter before, during, and after the emergence of Teotihuacan can illuminate the presence and nature of social relationships and political transformations. Figurines are used as a tool in this project to explore the social and cultural environment of the Basin of Mexico leading up to the emergence of Teotihuacan, investigating to what degree Teotihuacan culture borrowed, shared, or replaced preexisting figurine traditions, and what these changes reveal about the nature of Teotihuacan political organization and the relationships between the city and smaller rural sites in the Basin of Mexico.

This project is concerned with the figurine traditions of the Basin of Mexico, leading up to and including the Teotihuacan civilization. It situates Teotihuacan culture as both an escalation of cultural complexity of an unprecedented degree in the central Mexican highlands, but also as a continuation of regional Formative period cultures and as the recipient of long-standing cultural traditions, which either were modified and incorporated into the machine of Teotihuacan ideology, or discarded.

My exploration of Basin figurines incorporates two different, yet intertwined, perspectives. The first goal of this dissertation is to examine Teotihuacan figurines in their immediate context, which I mean the urban center of Teotihuacan itself. It seeks to understand the ways that figurines were produced and used within the urban environment, which is known to have contained a high degree of socioeconomic and cultural variation. How did figurines reinforce shared identities, or enforce social boundaries, and to what degree was there variation in the ways that they were produced or consumed, and used and discarded within that space? Empirically testing variations within the Teotihuacan figurine assemblage across neighborhoods and sectors of the city leads to a new understanding of how these ritual objects were integrated into the daily life of the population. The second goal is to discuss the diachronic connections—in form, subject matter, style, production, consumption, and use—between figurine assemblages from four sites in the Basin of Mexico (i.e. Axotlan, Cerro Portezuelo, Huixtoco, and Teotihuacan) to better delineate the components that persisted, changed, and faded away in regional figurine traditions. Classes of artifacts with long histories of use, such as figurines, are particularly useful in the exploration of these social processes which may unfold over the course of centuries or even millennia, and the results from the regional comparison shed light on how Teotihuacan initially projected its influence in the Basin of Mexico. Perhaps no other element of the Teotihuacan material assemblage is as well suited to a diachronic and spatial analysis, with the potential of revealing information on so many aspects of ancient culture.

Early studies saw Teotihuacan culture as a complete departure from earlier Formative culture and society. Mounting research both within and outside of the Basin of Mexico, however, has demonstrated the multivariate ways in which Teotihuacan culture borrowed from and was influenced by preceding cultures in the central Mexican highlands (Plunket and Uruñuela 2005, 1998; Uruñuela and Plunket 2007; Carballo 2007a). The implications of this research are that studies of Teotihuacan should now be situated in the understanding of Teotihuacan's inextricable connection to earlier peoples and cultures in the Basin of Mexico. Although Teotihuacan may be a departure in many ways, it was not a *de novo* phenomenon.



Figure 1.1: Basin of Mexico map

	Basin of Mexico Chronology	Major Ceramic Phases	Teotihuacan Chronology
1000	Early Postclassic	Atlatongo	Post-Teotihuacan
		Mazapan	
800	Epiclassic	Coyotlatelco	
600	Classic	Metepec	Late
400		Xolalpan	
200	Early Classic	Tlamimilolpa	Teotihuacan
		Miccaotli	
CE 0 BCE	Terminal Formative	Tzacualli	
		Patlachique	
		Tezoyuca	
200	Late Formative	Ticomán	Pre-Teotihuacan
600	Middle Formative		
1000		Zacatenco	

Figure 1.2: Basin of Mexico chronology used in this dissertation (Note 1)

Figurines provide a flexible lens for archaeologists that can be focused on a variety of issues. These charismatic objects speak to large scale social processes while simultaneously illuminating the smaller scale world of interactions and daily practice. As objects that both reflect human intention and invite human interaction, figurines are excellent indicators of how the large-scale processes that we study as archaeologists articulated with the people on the ground and how these people related to each other and

their greater historical and cultural contexts. Figurines frequently mimic or index the human form, and in so doing reveal popular conceptions of personhood, identities, and ideologies. The unique properties of figurines give them the potential to reveal aspects of cultural change that other categories of material culture cannot.

One of the most important and frequently investigated questions in archaeology is how ancient political systems developed and were subsequently maintained. What gave rise to the first states and empires in an area? What factors contributed to their rise to power? These questions are large ones and the answers are multivalent—rarely can it be said that such a politically and socially complex entity as a state or empire resulted from one simple cause. Figurines are uniquely positioned to illuminate such sociopolitical developments given that in many areas of the world, they both predate and survive the transition to increasingly complex political formations. Discussions of political and cultural change are often facilitated by referencing the general, forgetting that these processes are amalgamations of the particular. But complex hierarchical systems never arise in a vacuum, and the formation of a state can only be understood by taking into account both the top-down and bottom-up mechanisms that resulted in an increasingly hierarchical society.

As states and empires expand, people are oftentimes brought into submission through coercive measures. Expansion can also take place more gently through indirect, hegemonic paths that include cultural assimilation and economic integration and manipulation, although this does not preclude the use or threat of force, and these paths are not mutually exclusive (Smith and Schreiber 2006; Sinopoli 2001). This dissertation

explores the path to Teotihuacan's political integration of peripheral areas by ideological and cultural assimilation, using figurines as a tool to study the impact of state expansion on people at all levels of society. This approach seeks to measure the impact of an expanding political system on the ritual practices of regional communities and their expressions of cultural identity and ideology. A regional and longitudinal study of the emergence of the Teotihuacan polity through ritually important artifacts facilitates an understanding of how multiple populations within the Basin of Mexico were variously affected by this political transformation, and how these communities related to the new sociopolitical system, and vice versa.

In this project, I use figurines to probe the ideological system present in the Basin of Mexico during the Teotihuacan period, investigating specifically whether it differed from preceding ideologies, and if so, how. I investigate the spread of imperial ideology using mass-produced ceramic figurines, which were an effective way of promoting common domestic ritual practices within the urban population as well as to rural communities in the hinterland. Similarly, I consider the ways that rural populations varied in their consumption of key figurine types, and the implications of this variation on our reconstruction of the ideological environment in the Basin of Mexico. This in turn informs us about the mechanisms that facilitated the expansion and consolidation of the Teotihuacan imperial polity, and the nature of Teotihuacan's relationship with rural sites in its hinterland.

Research Problem

The main goal of this dissertation is to better understand the ways in which figurine production and use changed over time in the Basin of Mexico, and how the figurines themselves changes across space and time leading up to and during the apogee of the first state-level society in the area. Figurines are used as a proxy for looking at changes in private ritual practice, which in turn informs us about issues such as identity and ideology. Exploring the ideological system of the Basin of Mexico contributes to a better understanding of how communities related to each other throughout the region, and the ways in which social and political bonds were formed, strengthened, maintained, and ultimately abandoned. Given their ubiquity as a class of material objects, figurines provide a convenient—albeit complicated—avenue for investigating these ancient social relationships.

I am primarily interested in the degree of sociospatial variation in figurine use and ritual activity in the Basin of Mexico as Teotihuacan expanded and consolidated territory, and the implications for our understanding of the social and political structuring of the Basin during this time. Specifically, I look at the degree of variation in figurine consumption within the urban limits, and explore whether there was a sharp divide between figurine use in the city and in rural communities, which would imply some sort of cultural divide between the core and periphery of the polity. Ritual activity serves an important role in structuring social and religious life, and is a conduit for expressing ideological views and creating and maintaining elements of individual and community identity. It has the added benefit for archaeologists of frequently employing material

objects that leave behind traces of ritual activity. Similarities in ritual activity between people or groups, and the artifacts associated with these practices, point to shared beliefs about the world and shared cultural practices. On the other hand, differences in ritual artifacts may point to differences in cultural identity and ideology, which can provide important information for archaeologists interested in cultural contact, political expansion, and pluralistic societies. Although ritual serves the purpose of effecting social cohesion, it can signal social barriers as well.

The extent to which Teotihuacan society represented a homogeneous population in terms of cultural and ritual practices is still not entirely clear. Immigration from areas both within the Basin and farther afield provided the city with a constant stream of new residents; in many cases these immigrants were absorbed into existing apartment compounds, suggesting cultural assimilation of new arrivals (White et al. 2004). Yet several ethnic enclaves from the Zapotec, Maya, and Gulf Coast regions have also been explored in the city, indicating that urban Teotihuacan society was multi-ethnic. But for most of the city, which gives no evidence of maintaining non-Teotihuacan cultural identities, the degree to which there was a standard and consistent expression of Teotihuacan cultural identity is still a subject that merits further exploration.

The degree to which rural communities were culturally aligned with the city and its dominant urban practices is even less well understood due to the historical underrepresentation of extensive rural excavations. Although the relationships between the four sites included in this study can be explored in many ways, I examine them using figurines, which informs us about important elements of domestic ritual practice. In this

project, I use ceramic figurines as a proxy for exploring variability in ritual behavior both within the urban limits of the city of Teotihuacan, and between the city and three rural sites in the Basin of Mexico. Anthropomorphic ceramic figurines were common artifacts in the Basin of Mexico (and much of Mesoamerica) for the approximately 3,000 years encompassed by the Formative through Postclassic periods (approx. 1500 BCE to 1500 CE), and therefore provide an excellent opportunity to explore long-term changes in domestic ritual behavior, and certain types of cultural transformations that are not expressed in other forms of material culture. Although figurines are not the sole artifacts associated with domestic ritual in any of these periods, they are a consistent feature of it, and their involvement in ritual practice in the Basin of Mexico is well established.

I submit that if figurine assemblages are consistent between locales (neighborhoods, communities, sites, etc.), then it points to similarity in ritual practices and certain elements of cultural identity as well. If, on the other hand, there is extreme variation between figurine assemblages from different locales, this implies a high degree of ritualistic variation, and perhaps even different cultural identities. This in turn reveals the nature of Teotihuacan's relationships with the rural sites in its orbit, and the various strategies that were employed by Teotihuacan during its emergence as an important political and cultural center, and as it consolidated its hold on its sustaining hinterland. The following section discusses the research strategy employed in this dissertation in more detail.

Research Strategy

The arguments I present in this study are supported by my regional comparative analysis of four figurine assemblages from the Basin of Mexico that span the Middle Formative to Classic periods (approx. 900 BCE-600 CE). These assemblages were derived from four separate archaeological projects at four different sites in the Basin of Mexico, and sample both urban and rural communities.

The first and largest assemblage is from Teotihuacan and was collected via survey by the Teotihuacan Mapping Project (TMP) in the 1960s and 1970s (Millon 1973). The collections taken from Teotihuacan represent the urban sample used in this study. Over 20,000 figurine fragments were collected by the survey from 147 different 500m by 500m grid squares (plus two 250m x 500m squares). I sampled 40 squares in total, or approximately 27% of the total survey area, to measure general figurine consumption patterns in the urban environment, and also to determine what counted as a common Teotihuacan-style figurine.

The data collected from the sample of Teotihuacan figurines was then compared to assemblages from three rural sites in the Basin of Mexico that had both pre-Teotihuacan and Teotihuacan period occupations: Axotlan, Cerro Portezuelo, and Huixtoco. The site of Axotlan is in the Cuautitlan region in the northwestern Basin, approximately 35km west of Teotihuacan. Cerro Portezuelo is located in the Texcoco region of the Basin, about 40km to the south of Teotihuacan. Huixtoco is situated a little farther south in the Chalco region, about 44km from Teotihuacan.

Axotlan and Huixtoco were both excavated by salvage projects (García Chávez et al. 2005, 2015; Valadez et al. 2004), and of the two Axotlan is better published, largely due to projects that have made use of the recovered materials (e.g. Clayton 2009, 2011, 2013). Neither site was excavated in its entirety, although the excavations at Axotlan were extensive, and at both sites excavations exclusively targeted domestic structures. Cerro Portezuelo, on the other hand, was excavated by an academic team (Nicholson and Hicks 1961; Nichols et. al 2013), but excavations were not extensive, nor did they expose domestic structures; a series of test pits and trenches were carried out in the ceremonial center of the site.

There are many difficulties in comparing such disparate assemblages. First and foremost, they were collected by different projects using different collection methods. The Teotihuacan sample was generated by surface collection, whereas the other three assemblages were collected through excavations. Of the three rural sites considered here, one was excavated by an academic project, while the two others were salvage projects. At Cerro Portezuelo, only civic-ceremonial architecture was explored, and no domestic structures were encountered. Conversely, only domestic areas were uncovered at Axotlan and Huixtoco. The excavations at Cerro Portezuelo were limited to test pits and trenches, while at Axotlan and Huixtoco, excavations uncovered more extensive areas of the site. Records of the volume of soil excavated from each pit, trench, and operation from these three sites are not available, which limits the possibilities of comparing absolute frequencies between sites. The figurines themselves also lack context for the most part—the TMP figurines are organized according to the location where they were found in

Teotihuacan, however provenance information for most of the figurines from the rural assemblages is unclear or has been altogether lost.

The issues listed above are many, and the limitations of a study that compares such different artifact assemblages are glaring, yet the importance of attempting to do so remains and potentially outweighs the drawbacks. The conclusions that I draw in this dissertation are accompanied by these many caveats, though some concessions must be made in order to advance our understanding of Teotihuacan in its regional context. The excavation of Teotihuacan has historically taken primacy over the excavation of rural sites, and the resulting lacuna from this asymmetry is compounded by the extent of modern urban settlement in the Basin, which has covered or obliterated many Prehispanic settlements. There is a necessity, therefore, to study the material remains from the limited excavations of rural sites in this region and particularly in a comparative manner which makes discovering similarities and variations between these collections an explicit objective. Despite the inherent difficulties in making such a comparison, a number of scholars have done just that (e.g. Clayton 2011, 2013; García Chávez et al. 2015), which has contributed vital new perspectives to our understanding of how political, economic, social, and religious ties were forged between communities in the Basin of Mexico, and the effect that the Teotihuacan state had on these regional relationships.

In this dissertation, I use the figurine assemblage from Teotihuacan to explore the ritual diversity within the urban limits of the ancient city (Chapter 5), and then compare figurines from the four site assemblages to gain a better understanding of the degree of ritual diversity in the Basin of Mexico leading up to and during the Teotihuacan period

(Chapters 6-8). The rural sites in this study were selected because they are some of the few excavated sites with sufficient counts of figurines for a comparison, and I was able to access the materials. Below, I summarize the results of my analysis and briefly discuss the implications for our understanding of Formative and Classic period Basin of Mexico society.

Summary of Results

The results from this analysis strongly suggest that Teotihuacan initially behaved as a hegemonic polity that extended its influence through indirect means prior to a more direct consolidation of its hinterland in the Basin of Mexico. This is supported primarily by the appearance of Teotihuacan-style figurines in at least two of the rural sites during the Terminal Formative in advance of other elements of Teotihuacan material culture. The spread of these figurines out to the rural sites temporally coincided with Teotihuacan's early urban expansion, but predated the appearance of Teotihuacan-style domestic architecture and other elements of Teotihuacan material culture in rural sites in the wider Basin of Mexico.

Within the figurine practices of urban Teotihuacan itself, evidence was found both for a degree of homogeneity and sociospatial variation across areas of the city, which may relate to differences in social status and position. Residents in all areas of the city seemed to have had access to all the different figurine types tracked in this study, however there were stronger associations between certain figurine types and specific areas of the city, as well as neighborhoods that have been characterized as being of higher

and lower status by other scholars (e.g. Robertson 2001, 2015). Furthermore, there was a high level of variability in figurine distribution patterns between neighborhoods even in the same areas of the city or within status groups, indicating that in some cases, intra-group variation in figurine use was just as high if not higher than inter-group use.

Starting in the Terminal Formative period, Teotihuacan innovations in figurine form, style, and subject matter filtered out to Axotlan, Cerro Portezuelo, and Huixtoco. This process continued over time, and Teotihuacan-style figurines from the subsequent Early Classic and Classic periods also were found in the three rural figurine assemblages, attesting to continued contact between the urban center and rural sites. Many trends in clothing and personal ornamentation on figurines originated at Teotihuacan and were adopted in the rural communities, although there is also evidence of local stylistic variations in figurines at the rural sites that are not observed in the urban counterparts.

Although all three rural site assemblages have figurines from all Teotihuacan periods, differences between these assemblages likely reflect different types and intensities of interaction between the rural communities and Teotihuacan over the periods in question. Axotlan's figurine assemblage attests to a strong cultural and ritual affinity between this site and the urban core, which is supported by other archaeological data. The assemblages from Cerro Portezuelo and Huixtoco, on the other hand, reflect a less intense cultural relationship between them and Teotihuacan, which is also supported by other archaeological data. Furthermore, the cultural and political relationships between the three rural sites and Teotihuacan were likely dynamic, and appear to have changed over time.

Finally, the emergence of the Teotihuacan polity appears to have had a measurable effect on gender ideology in Basin of Mexico society, which is attested to by key transformations in the style and subject matter of figurines over time. Over the course of the Teotihuacan period (i.e. Terminal Formative to Classic periods), figurines became increasingly clothed, personal ornamentation became increasingly extravagant, and representations of women became scarce. In the Classic period, the majority of figurine types appear to be varied representations of men that index the power of state political and religious institutions. Furthermore, this transformation appears to slightly post-date the building program of Teotihuacan-style architecture and apartment compounds in several rural sites, indicating that transformations in figurines in the Classic period may reflect changes in the legitimating ideology of the Teotihuacan state when it intensified its hold on parts of the Basin of Mexico, behaving more like a territorial empire.

Chapter Outlines

Chapter 2 lays out the theoretical framework that supports the investigation and interpretation of results. The primary focus of this dissertation is the way in which common domestic ritual paraphernalia such as figurines can inform us on larger political and social transformations over time and across distances. Thus, it is necessary to discuss the ways that our beliefs about the world are codified in the material world around us, and the ways that intangible ideologies materialize in tangible artifacts and are used by different segments of society to different ends. The chapter focuses on ideology and the ways in which it has been used as a tool of imperial expansion and consolidation in

archaeological societies, and how archaeologists have gone about investigating it. Pertinent to that topic is a discussion of identity, ritual, and ritual economy, all of which are bound together both in theory and practice: ideology is materialized into material objects that mediate our experiences, direct our behavior, and are integral to the practice of ritual, which both reflects and informs identity. A study of one would be incomplete without considering the others, and without exception they all have strong connections to the broad topic of ideology. Throughout the discussion I explore issues that are dealt with in this dissertation, including how Teotihuacan may have implemented a common ideological system as a tool of imperial expansion, which communicated and reinforced a shared social identity through shared domestic ritual practices involving figurines.

Chapter 3 gives an overview of previous research and excavations at Teotihuacan and in the wider Basin of Mexico that is relevant to the current study, and which has contributed to our understanding of the sociopolitical history of the polity. Although none of these projects dealt explicitly with figurines—Teotihuacan figurine research is covered in Chapter 4—they are all relevant to the interpretation of my findings regarding the nature of Teotihuacan figurine practices, the political organization of the polity, and models of Teotihuacan expansion and consolidation. Included in this chapter is a detailed discussion of the four site assemblages compared in this dissertation: Teotihuacan, and the three rural sites of Axotlan, Cerro Portezuelo, and Huixtoco. These sites are all located in different regions of the Basin of Mexico and had different occupational histories, and the figurine assemblages were excavated or collected by different archaeological projects (e.g. Millon 1973; Garcia Chavez et al 2004, 2015; Nicholson and

Hicks 1961). There are significant limitations to the assemblages generated by these individual studies, however it is critical to study them in a comparative framework to advance our knowledge of regional processes.

Chapter 4 discusses the interpretive possibilities of figurines more explicitly in the context of historical figurine studies. The chapter begins with a feminist critique of the Goddess paradigm that has historically been very influential, and which has been detrimental to studies that would attempt a social analysis of figurines. I then turn to more recent attempts to analyze figurines in iconological and social frameworks, and discuss projects that have been influential in the design of the current project (e.g. Brumfiel 1996). This chapter includes a discussion of previous projects on Teotihuacan figurines (e.g. Barbour 1975; Scott 1994, 2001; Goldsmith 2000; Sullivan 2007), their respective merits, and what knowledge they have contributed to the study of Teotihuacan figurines. I also provide a brief introduction to the extant typology and chronology of Teotihuacan figurines from the Terminal Formative, Early Classic, and Classic periods. A secondary goal of this dissertation, beyond the main investigative aims, is to synthesize previous research on Teotihuacan figurines, and serve as a starting point for those who are beginning to work with figurines from the Basin of Mexico. Teotihuacan figurines are lamentably under-published, and I hope the information amassed in Chapter 4 (and throughout the dissertation) will be helpful to others that are interested in this avenue of research. The chapter concludes with a description of how data was collected and analyzed for the current project.

Chapters 5, 6, 7, and 8 present the analysis and results for the current project. Each chapter focuses on a specific problem related to the aims of this dissertation, and approaches the figurines in different ways.

Chapter 5 explores intrasite variation in the TMP figurine assemblage at Teotihuacan. This chapter investigates the extent to which there was a common pattern of figurine use within the urban limits of the ancient city, and the degree of sociospatial variation between sectors of the city. Variation is studied in three main ways. The first method measures whether distance from the civic-ceremonial core—as a proxy for socioeconomic status—is a good predictor of figurine distribution rates, and whether there are discernible differences between areas of the city near the monumental core compared to areas of intermediate or extreme distance. Second, I employ Robertson's (2001, 2015) delineation of status zones based on ceramic distributions to look again at the relationship between socioeconomic status and figurine distribution, finding his model a more precise predictor of status than simple site center proximity. Third, I explore variation within figurine types using both quantitative and qualitative criteria. I do this to ascertain the degree to which three common figurine types (articulated, half-conical, and warrior figurines) are internally consistent in terms of size and surface decoration. All three sets of analyses serve to characterize general patterns in urban figurine production and consumption, which informs us on the degree of ritualistic heterogeneity in the urban space, and is also necessary to compare regional assemblages to the urban assemblage as part of the regional analysis that takes place in the following chapters.

Chapter 6 compares the four site assemblages in a diachronic progression. Starting in the Middle Formative and moving period by period, I compare the four site assemblages along several qualitative and quantitative criteria including bodily features and positions, costume and personal ornamentation, and the distribution of common figurine types. I chose to compare the figurine assemblages period by period to better illustrate the patterns that emerge over time, which are pertinent to the main goals of this dissertation. Going period by period facilitated linking observed changes to broader sociopolitical trends and cultural transformations.

Chapter 7 looks at variations in paste composition between sites and over time. I had originally hoped to conduct INAA on a subset of the figurines from each site, but that was not possible during this project. INAA testing on figurines remains a fruitful avenue for future investigation, and I hope it will become possible soon. In lieu of chemical testing, I collected data on paste texture, color, and temper. Paste characteristics visible to the naked eye have been used successfully in identifying and phasing ceramics from the Basin of Mexico and Teotihuacan Valley (Rattray 2001), and I used these paste characteristics to examine patterns of diachronic variation in paste color distribution and common temper types in order to see whether there was a reordering effect in regional figurine production coinciding with the rise of Teotihuacan. The data is insufficient for projecting likely sources for the figurine fragments, but when considered together, variation in the common types of paste color and temper are visible between sites and over time. Results suggest that the emergence of Teotihuacan as a regional power did affect preexisting figurine production in the rural periphery, suggesting changes in

regional systems of production, exchange, and consumption. Future INAA testing would help to confirm and clarify the patterns observed here.

Chapter 8 explores changing strategies of depicting the human form over time in the Basin of Mexico, and particularly the strategies of depicting sex and gender. This chapter uses the data collected on sexual attributes and clothing styles to understand the ways that ancient figurine makers treated the subject of the physical and social body. Significant changes occurred in the Terminal Formative and Early Classic in sites across the Basin as sexual attributes disappeared and were replaced with clothing. Similar diachronic changes were observed in the rates of representations of women and men in the region. Images of women decreased in proportion to images of men between the Formative and Classic periods, and the biological reproductive potential of women was simultaneously deemphasized in favor of a social construction of femininity. Although the cause for these changes is (and may remain) unclear, the timing coincides with the rise of the Teotihuacan state and the florescence of different functional figurine types. When considered together, this evidence points to a shift in regional figurine practices during a period of increasing sociopolitical complexity, some of which appears to be tied to state interests.

The ninth chapter concludes the dissertation with a discussion of the results from my various comparative analyses. Here, I tie together the results from Chapters 5 through 8 and discuss the implications of these results for our understanding of ritual diversity and the intraregional political, economic, and social relationships that formed the context for Teotihuacan expansion and rule. This chapter presents the results and conclusions of

the dissertation, which together form a more holistic picture of regional figurine practices before and during the height of Teotihuacan influence in the region.

Research Questions

Most of the work that has been done in Teotihuacan figurine studies has been related to typology and chronology, which while helpful, only scratches the surface in terms of what we know about them and what they can reveal to us about the ancient inhabitants of the Teotihuacan state. One reason that Teotihuacan figurines have posed such a problem to scholars is the lack of theorization regarding their meaning and function. Figurine studies have not contributed sufficiently to explorations of Basin of Mexico society during the transition to increasingly complex societies.

My questions for this project revolve around the ways figurines were used in Teotihuacan society and their roles in shaping and maintaining community identity in early urban society in central Mexico. This dissertation probes whether there was a uniform figurine tradition operating in Teotihuacan society, and the ways in which this tradition spread—whether it was faithfully transmitted from the core to rural sites, or whether it was selectively consumed or elaborated upon by rural communities. This section details the project design of the dissertation including the central questions and hypotheses. My objectives were to 1) identify and compare the stylistic patterns in the urban and rural samples, 2) identify the patterns of distribution and consumption of figurines and how these processes may have differed between urban and rural contexts,

and 3) determine whether there was diachronic change in any of the previously mentioned areas.

This dissertation investigates the range of variability in figurine traditions in the Basin of Mexico from the Middle Formative through Classic period, and specifically concentrates on the Teotihuacan period, spanning the Terminal Formative, Early Classic, and Classic periods. Variability among material objects can occur in multiple ways, including simple presence or absence of certain classes or types of objects, variations in materials and techniques used in production, themes and imagery represented in the object, the style in which these themes and images are rendered, decorative attributes, contexts of production, use, and disposal, and so on. In this dissertation, I examine multiple aspects of the above spectra of variation. The questions below are ones that motivated my work and the project design, and which informed the testable hypotheses for this project.

Question 1: During the Early Classic and Classic periods, was figurine production controlled by the state, and did it occur exclusively within the city limits? Or did neighborhoods within the urban environment as well as rural sites produce their own figurines during the Early Classic and Classic periods?

Question 2: Within the urban limits of Teotihuacan, was there significant sociospatial variation in figurine production and use between sectors of the city or neighborhoods? That is, was there strict standardization of form and style across the city, or were there differences between areas in either the types of figurines consumed, or stylistic variation within those types? Or was there little to no standardization at all?

Question 3: For each period under investigation, were figurines at each site materially, thematically, and stylistically consistent with each other and between sites? Or were there significant discrepancies between sites in one or more periods, and if so, what does this tell us about the ritual and cultural environment of the Basin of Mexico during the rise and height of the first state-level society?

Question 4: Is there evidence of variation in figurine use within and between sites? And if so, does this variation increase, decrease, or remain constant through time?

Question 5: Were Teotihuacan period figurines a continuation (with modifications) of previous Formative Basin traditions, or a significant departure in terms of form, function, style, or subject matter?

Hypotheses

Hypotheses 1a-1b concentrate on the city of Teotihuacan itself and the level of sociospatial variation in figurine production and use between neighborhoods and districts of the city. Hypotheses 2a-2d concentrate on the relationship between style and subject matter over time to clarify and interpret the nature of the diachronic changes that take place in the figurine tradition in the Basin of Mexico. Hypotheses 3a-3d are four alternate hypotheses involving the transition to statehood during the Terminal Formative and Early Classic, and its effects on rural populations as witnessed in the figurine assemblages. Hypotheses 4a-4e involve the relationships between figurines in rural sites and in the core during the Early Classic and Classic. This series of hypotheses describes many of the

possible outcomes of this study, and while some hypotheses are clearly alternates to each other, some of them are complementary.

Sociospatial Variation in the City of Teotihuacan

Hypothesis 1a: The figurine assemblage from the city of Teotihuacan was relatively uniform between neighborhoods in terms of style, subject matter, or composition during the Classic period. The different types of figurines occurred in relatively similar proportions to one another across all areas of the city. This scenario would suggest an extremely uniform set of beliefs and practices across the city, as well as high standardization of figurine production, and mass distribution of and equal access to figurines in all areas of the city through a possible market system. This would be evidence for a high degree of shared ritual practice across all segments of society, regardless of position, status, and wealth.

Hypothesis 1b: The figurine assemblage from the city of Teotihuacan showed local variation in terms of style, subject matter, or composition during the Classic period. These differences may be observed in the types of figurines (or ratios to one another) present in different areas of the city, or variation in the quality, decoration, and material properties of the figurines themselves. This scenario suggests a less uniform set of practices across the city, due to differences in practice and figurine use, or unequal access to figurines of a certain quality or type. This could also support the idea that there was either no shared market system present in the city, meaning that goods were made and acquired locally, or that even in the presence of a market system, there was no

standardization of production, meaning that high quality figurines were acquired by those who could afford them, and lower quality ones were acquired by individuals of lesser means. This could point to a high degree of social inequality.

Temporal Shifts in Style and Subject Matter

Hypothesis 2a: Despite changes in style over time, there was a clear continuity in subject matter from the Middle Formative through the Classic periods in figurine assemblages across the Basin of Mexico. This suggests that although styles changed over time, their uses and meanings in society remained relatively unchanged from one period to the next. This argues for a longitudinal consistency in figurine use and meaning from the Middle Formative to Classic periods, which would mean that there were not significant changes to regional religious and ritual practices coinciding with the rise of the Teotihuacan state. Teotihuacan is therefore more of a continuation of preexisting Basin culture than a departure from it.

Hypothesis 2b: Both the style and subject matter of figurines changed over time in Basin of Mexico figurine assemblages from the Middle Formative through Classic periods. These changes may have been gradual, or there may have been a punctuated break and transition, possibly occurring during the Terminal Formative/Early Classic transition to statehood. This may have been the result of natural processes of social and cultural change, or it could also have been a result of a newly expanding political entity.

Hypothesis 2c: Despite changes in style over time, there was a clear continuity in subject matter from the Middle Formative through the Classic periods in figurine

assemblages across the Basin of Mexico. The ratio of figurines with different subject matter, however, shifted over time. Certain subjects became increasingly common compared to other subjects. This suggests that while there was a continuation of previous beliefs and practices involving figurines, certain elements underwent a transition and became newly privileged in a way that they had previously not been. Certain aspects of ritual practice changed in response to new cultural values, which was likely due to outside influences. The nature of these influences is unknown, but two possibilities are that Teotihuacan was imposing and disseminating a new imperial ideology, or that a substantially different ideology arose in Teotihuacan, which passively spread to the rural hinterland. In these scenarios, many elements of earlier belief systems persevered (hence the persistence of many themes and subjects), but may have been reevaluated and revalued in the newer ideological system.

Hypothesis 2d: This scenario combines hypotheses 2b and 2c. Styles were observed to change from one period to the next in some or all sites. Some of the Classic figurine types depicted subject matter with strong ties to Middle, Late, or Terminal Formative figurines, and others depicted subjects that were more recent innovations. Simultaneously, the earlier subjects were devalued over time in relation to the newer forms and subjects. This scenario is one of the more difficult to untangle, and may be the result of several cultural forces including cultural drift, artistic innovation, and changing ideological systems and corresponding ritual practices and behaviors. The continued use of older forms can be an indication of continued tradition and practice, although the significance can change over time even if the subject matter does not. The introduction of

new themes and subjects, however, is a clearer indication of changes in belief or practice, although the source and significance of these changes may remain obscured.

Transition to Statehood

Hypothesis 3a: During the emergence of Teotihuacan and its regional consolidation during the Terminal Formative and Early Classic periods, figurine assemblages at some or all rural sites preserved Late Formative styles and subject matter and other figurine types which are less easily placed in the Basin figurine chronology, but there was an absence of Teotihuacan-style figurines from the Tzacualli, Miccaotli, and Tlamimilolpa pottery phases. This would suggest that the rural community was isolated from either direct expansion of the Teotihuacan state, or cultural influences emanating from the city. It could also be interpreted as a possible active rejection of outside cultural influence and the deliberate maintenance of local tradition and practice.

Hypothesis 3b: During the emergence of Teotihuacan and its regional consolidation during the Terminal Formative and Early Classic periods, figurines at some or all rural sites were replaced by figurines that were stylistically, thematically, and compositionally similar to those produced in the core. This would suggest that the rural community was affected by the direct expansion of the Teotihuacan state, or cultural influences emanating from the city. It could also be interpreted as active seeking-out or acceptance of outside cultural influence and the creation and reproduction of cosmopolitan tradition and practice in local regional communities. This scenario could

result from direct trade or gifting from the city to the rural communities, or down-the-line trade through local networks.

Hypothesis 3c: During the emergence of Teotihuacan and its regional consolidation during the Terminal Formative and Early Classic periods, figurines at some or all rural sites were replaced by figurines that were stylistically and thematically similar to those produced in the core, but were distinct in their composition, material properties, or the method of production. Stylistically, proportions were slightly off, or materially, the paste color, texture, and temper may reflect local sources of procurement, and therefore indicate the figurines were local copies of core styles. This would suggest that rural communities were affected by the cultural influences emanating from Teotihuacan, and members of the community actively accepting outside cultural influence and intentionally mimicking cosmopolitan tradition and practice in local regional communities. This scenario could result from a few figurines making their way into rural communities, and local artisans reproducing them as faithfully as possible using local materials.

Hypothesis 3d: During the emergence of Teotihuacan and its regional consolidation during the Terminal Formative and Early Classic periods, figurines at some or all rural sites were replaced by figurines that were stylistically and thematically similar to those produced in the core, but the material properties of these figurines were a mosaic of types that were either similar to or distinct from figurines produced in the core in terms of their composition, material properties, or the method of production. This would suggest that the rural communities were affected by the cultural influences emanating from Teotihuacan, and members of the community actively accepted outside cultural

influence and intentionally mimicked cosmopolitan tradition and practice in regional communities. This scenario could be created by the continual flow of figurines from the core into rural communities, either through gifting or trade, and an active program of reproduction on the local level.

The Extent of a Shared Culture During the Classic

Hypothesis 4a: Classic period figurines from all sites across the Basin were stylistically, thematically, and compositionally similar to each other. This pattern would indicate a strong ideological tie between the core and periphery and perhaps even the imposition of state ideology into the hinterland as a means of cultural integration and social control. Similarly, it would indicate that Basin figurines were a highly standardized product, the production and distribution of which was controlled by state institutions in the core. Figurines therefore would have the strongest ties to state religion and ideology, and their meaning and value dictated by the state.

Hypothesis 4b: Classic period figurines from some or all sites across the Basin were not stylistically, thematically, or materially alike. Figurines were likely produced at a local level, or at least regional production was not centered at Teotihuacan. This would indicate an ideological opposition to Teotihuacan cultural influence and a rejection of state ideology and the maintenance of local independent community identities and practices. Similarly, this would suggest that the imposition of core ideology was either not an important agenda for the state in terms of social integration and expansion, or that there were pockets of resistance in the rural hinterland of the state. This could also

provide support for the argument that Teotihuacan operated as an empire, including populations that were culturally distinct from Teotihuacan.

Hypothesis 4c: Classic figurines across the Basin were stylistically and thematically similar, however there were notable differences in composition and material properties including differences in paste color, texture, temper, or the method of production. This would indicate that figurines were produced locally in rural settlements in direct imitation of common core styles. This pattern suggests the acceptance and integration of state ideology on the local community level, but not necessarily the active imposition of core ideology by the state. It does not preclude the possibility either. By the Classic period, Teotihuacan may have been in control of or in communication with communities across the Basin for several hundred years. Local production of Teotihuacan-style figurines may indicate Basin-wide shared culture, ideology, or ritual practice.

Hypothesis 4d: Classic figurine assemblages across the Basin were composed of a mix of figurines that were similar to and distinct from figurines produced in the core. While some figurines were stylistically and materially similar to those produced at the core, others were distinct stylistically, thematically, and/or materially. This would indicate that separate systems of figurine production were at work in shaping rural figurine assemblages. Some figurines in rural assemblages were imported or traded from Teotihuacan, while others were produced locally in rural settlements and maintained local stylistic or thematic traditions in contrast to common core styles. That is, both core- and locally-produced figurines were being consumed within the same site. If the urban and

rural figurines were stylistically dissimilar, it indicates coexisting and perhaps competing ritual traditions in rural settlements. This scenario could suggest that the state had an active agenda of ideological imposition in the rural hinterland, yet only partial acceptance of or active resistance to this agenda on the part of rural populations. The rural community was affected by the cultural influences emanating from Teotihuacan, and while some members of the community actively accepted and assimilated to outside cultural influence by intentionally mimicking cosmopolitan tradition and practice in local regional communities, others did not subscribe to the new practices and actively maintained separate local identities and practices.

Hypothesis 4e: Figurines assemblages across the Basin shared a common stylistic language in the Classic, however, the subject matter of the figurines changed from site to site. That is, figurine assemblages in the Basin of Mexico were stylistically similar yet thematically distinct. Figurines that were stylistically similar yet thematically distinct from figurines at other sites were likely locally produced and therefore materially distinct from figurines at other sites. The rural communities were affected by the cultural influences emanating from Teotihuacan, and while the core style was desirable and reproduced, local practices and beliefs were also maintained, leading to figurines that display a mosaic effect of imperial style with local themes and subjects. This would support the theory that Teotihuacan operated as an empire, in that some aspects of imperial culture were actively spread, while simultaneously rural populations were left to continue in certain local practices and customs that were not seen as actively thwarting imperial interests.

Chapter 1 Notes

(1) General Mesoamerican chronology and horizon names tend to map on to the chronology of the Maya Lowlands. For the purposes of this dissertation, however, I find that the general Mesoamerican/Maya chronology is somewhat misleading and does not do justice to the sequence or scale of events in the Basin of Mexico during this time. To illustrate the point, the apex of Teotihuacan power and culture from Late Tlamimilolpa through Late Xolalpan would be labeled as Early Classic in the general Mesoamerican chronology, and the decline and near-abandonment of the city occurs during the Classic period in the Maya Lowlands. I opt instead for a Basin-centered chronology that more closely reflects Teotihuacan society and development, and better serves the purposes of this study. Whenever possible I will refer to exact ceramic phases, but especially in my discussion of the figurines I often resort to referencing larger periods, which I believe must be given names meaningful to what they represent. Following Cowgill's (2015: 11) estimation of dates for Teotihuacan ceramic phases and Nichol's (2016) general chronology for the Basin of Mexico, I use a chronology in this dissertation that modifies the Early Classic and Classic periods so that both contain two ceramic phases.

CHAPTER 2. THE THEORETICAL FRAMEWORK: IDEOLOGY, IDENTITY, AND RITUAL PRACTICE

This chapter presents the theoretical framework for this dissertation, which draws on literature from the interconnected topics of ideology, identity, and ritual practice, and in the context of early complex societies. Ideologies, or our beliefs about the social and physical world around us, structure our understanding of our role and responsibilities in the greater world and can be powerful tools for political bodies (Claessen and Oosten 1996; Blanton et al. 1996; Miller and Tilley 1984; Demarest and Conrad 1992; Conrad and Demarest 1984; Brumfiel 1998; Althusser 1971; Godelier 1978; Joyce and Winter 1996). Ideology has the power to introduce new beliefs, and to legitimate new or existing power structures and systems of social inequality through invoking the divine, or by linking these concepts to shared cosmology and common purposes. Ideology can create and reinforce group identity, individual behaviors, and ethnic and cultural boundaries. For these reasons, the manipulation of ideological systems is a powerful tool for the creation and maintenance of social beliefs and political entities.

To understand how a political formation such as a state or empire may have employed ideology to further its goals of expansion or consolidation, we must consider how ideology is constructed in the first place, and how this affects other aspects of society, such as the formation of identity and cultural boundaries. Identity exists at a crossroads of practice and structure, and in a discursive relationship between internal and external factors (Bourdieu 1977, 1990). Similar to ideology, identity is constructed and performed, and can be imposed on and accepted at various times by various people

(Insoll 2007; Meskell 2007). One cannot be discussed without reference to the other, just as they are inextricably connected in practice and daily life.

One key area where identity and ideology intersect is ritual practice (Rappaport 1979; Bell 1992; Brück 2007). Through an analysis of ritual activity it is possible to explore the penetration of certain ideologies into different segments of an urban or regional population (Brumfiel 1998), and draw tentative conclusions as to how these populations related to each other and to state institutions (Brumfiel 1996; Gonlin and Lohse 2007). This in turn informs us on the nature of these political formations, and the ways in which states and empires expanded and controlled populations that fell within their territories.

It could be said that ideology is but one tool of the state, and one component of social life, yet it colors virtually every aspect of these social realms, and interacts with, draws upon, and supports a range of structuring institutions. The following is a discussion of the formation of ancient states and empires, and how ideology, identity, and ritual intersected with these larger sociopolitical processes. Many ancient states came to control a diverse and geographically dispersed population during the course of formation and expansion, and the manipulation of ideologies, which influenced social identities, was a useful tool for many of these states and empires (see Kolata 1992; Demarest 1992; Sinopoli 1994; DeMarrais et al. 1996; Sugiyama 1992, 1993, 2005). In light of this, I discuss the orbiting issues of religion, ritual, and gender, all of which are integral components to the forging of individual and group identities in society.

The Politics of Ideology

Definitions of ideology vary exceedingly in scope, focus, and particulars even within the discipline of archaeology, but the general concept is relatively coherent, even across disciplinary lines. A working definition of ideology for this dissertation is that an ideology is a set of beliefs, values, and ideas through which a system justifies itself and an individual rationalizes their place in the system, and which may be used to create and preserve social inequalities or systems of power (Yoffee 2004; Miller and Tilley 1984; Demarest and Conrad 1992; Kolata 1992; Conrad and Demarest 1984; Brumfiel 1998; Althusser 1971; Godelier 1978). These beliefs help us to make sense of the world around us, to explain our own position in it to ourselves, and defend our place in it to others.

Archaeological definitions and discussions of ideology typically tend towards the more explicitly religious end of the spectrum, but many of these make such frequent references to political and economic concerns that it is surprising that these elements are not more explicit in the original definitions of what ideology is and what it does (e.g. Demarest 1992, Conrad and Demarest 1984). Although ideology may be more readily 'visible' in the religious and ritual realms of materials and visual culture, we should not resign ourselves to looking for it only in these places.

Some emphasize the exploitive nature of ideology (e.g. Brumfiel 1998), while in contrast others focus on its power to unify (e.g. Lohse 2007; Yoffee 2004). Others take an even more actively hierarchical tone: "Ideology may be regarded as practice which operates to secure the reproduction of relations of dominance and to conceal contradictions between the structural principles orienting the actions of individuals and

groups within the social formation" (Shanks and Tilley 1982: 130). Inequality, or the privileging of certain people or groups over other groups is fundamental to hierarchical and complex societies, and this inequality is typically rationalized and naturalized through an ideological system which disproportionately benefits some groups over others (Brumfiel 1998). Some argue that a relative degree of conservatism is a necessary component in an ideological system (e.g. Knight 2006), especially when it is used to legitimate structural power relations in society. It is through the stability that social positions are rationalized, justified, and explained. That is not to say, however, that ideologies cannot or do not change rather frequently, and in many cases ideology can have an important impact on historical transformations (Friedman 1975). In fact, ideology has been used for quite some time as a lens for exploring cultural transformations (Demarest and Conrad 1992; Conrad and Demarest 1984). Ideology here is used to mean a specific and discrete set of beliefs, in contrast to an ideological system, which is composed of all of the dominant and secondary ideologies within a cultural system.

In Marxist terms, ideological systems are one of the legitimizing forces in society that maintain the current social order, and are one half of the superstructure that reproduces the means of production (Althusser 1971; Godelier 1978). Although orthodox Marxism relegates ideology into an epiphenomenal superstructure, others see it as an integral part of social cohesion. In modern states, Althusser (1971) distinguishes between *repressive* State Apparatuses (i.e. the government, army, police, etc.) and Ideological State Apparatuses (ISA). In his view, the ISAs involve large (and public) institutions

such as churches and schools, but also private ones such as the family and less tangible cultural elements. Althusser (1971: 97) argues that "...it is clear that while there is *one* (Repressive) State Apparatus, there is a *plurality* of Ideological State Apparatuses," and the problem of a potentially boundless number of separate ideologies in society is solved by the dominance of one ideology over the others. According to Althusser (1971: 98),

...what unifies their diversity is precisely this functioning, insofar as the ideology by which they function is always in fact unified, despite its diversity and its contradictions, *beneath the ruling ideology*, which is the ideology of 'the ruling class.' Given the fact that the 'ruling class' in principle holds State power (openly or more often by means of alliances between classes or class fractions), and therefore has at its disposal the (Repressive) State Apparatus, we can accept the fact that this same ruling class is active in the Ideological State Apparatuses insofar as it is ultimately the ruling ideology which is realized in the Ideological State Apparatuses, precisely in its contradictions.

An ideological system serves to reproduce structures of power and bolster the position of elites in the state (Claessen and Oosten 1996: 5). Although the system cannot be said to be monolithic in the sense that multiple—including a certain amount of dissenting or competing—ideologies are to be expected, it is certainly hegemonic in that these secondary ideologies are dominated by a "ruling ideology."

In addition to the ruling and myriad subordinate ideologies that comprise an ideological system, Althusser (1971) has proposed that counter-hegemonic viewpoints are in fact a natural part of a hegemonic system as well, and are absorbed by the system. Gramsci (1987) concurs that counter-hegemonic dissent is a natural part of a stable ideological system and opposing ideologies, rather than surprising or unusual, are to be expected. All complex societies have multiple ideologies that are bound up together in a hegemonic ideological system, which serves to preserve the institutions and practices of

society, often for the benefit of a ruling or elite class (Althusser 1971). And so, while it may be in the interests of those in power to promote a relatively stable set of ideologies, counter-hegemonic ideologies are a common feature of complex society, and may in fact work to promote societal change.

A rationalizing ideology is an integral part of all complex societies where social inequalities and power structures must be justified (Sinopoli 2001). In many archaeological studies, ideology has been interpreted as a force for both social stabilization and legitimation (Shanks and Tilley 1982; Sugiyama 1992; Brumfiel 1998; Ando 2000; Sinopoli 2001), and also as a driving force of change (Demarest 1992; Demarest and Conrad 1992; Conrad 1992; Kolata 1992). A large body of research has grown around the role ideology played in cultural transformations, particularly the formation and maintenance of complex societies such as chiefdoms (e.g. Earle 1991a, 1991b; Grove and Gillespie 1992; DeMarrais et al. 1996) and state-level and imperial societies (e.g. Conrad and Demarest 1984; Miller and Tilley 1984; Demarest and Conrad 1992; Pollard 1991; Sugiyama 2003; Yoffee 2004; DeMarrais et al. 1996; Sinopoli 1994; Ando 2000; Brumfiel 1998).

One of the possible functions of an ideological system in a chiefdom is to attract groups through a sort of "smoke and mirrors" (Earle 1991a: 8) cosmological justification, and in addition serve as a means to control labor and production before the development of a true class system (which has been argued for the rise of Teotihuacan as well). That does not discount other important factors in the rise of chiefdoms and states—political, military, and economic concerns receive similar amounts of discussion in the literature—

but ideology is nevertheless an integral part in the shaping of chiefdoms (Earle 1991a, 1991b), and may even become the dominant explanatory paradigm when evidence of coercion and military expansion are not obvious (e.g. Joyce and Winter 1996). The same explanation is common in studies working with state-level societies as well.

Many such studies have explored the nature of imperial ideological systems in archaeological societies, and in general, these studies emphasize the role of ideology in imperial structures in two key ways: 1) how ideologies are mobilized during the process of imperial expansion, and 2) the ways in which ideologies are wielded within an empire to legitimate structural inequalities, specifically between dominant and subordinate segments of society (Sinopoli 1994: 167; Conrad and Demarest 1984; Demarest and Conrad 1992). Beyond identifying particular beliefs, these studies are interested in discovering how ideological systems operated in archaeological empires, and what they did on social and political levels. Historically, these studies have frequently taken a top-down approach to investigating ideology in society. As many others have done, DeMarrais et al. (1996) posit that someone (e.g. an individual, ruling class, etc.) must be in control of certain ideologies if not the entire ideological system. They write,

Because multiple ideas and beliefs exist in a given society, a ruling segment must control the ideology—shared ideas, beliefs, and their representations—that legitimates its position and authority. Giving an ideology concrete, physical form in events, symbolic objects, monuments, and writing systems is instrumental to its institutionalization and extension. The costs of materializing ideology restrict access to this source of power, with the result that through control of key resources a ruling segment may be able to restrict the contexts of use and the transmission of ideas and symbols (DeMarrais et al 1996: 31).

Since one of the major functions of ideology is to legitimize social and systemic inequalities (Brumfiel 1998), it follows that those in power would wield resources in a manner that supports and extends their power. Jennings (2003) has argued that elite ideology is far more fragile than is often realized, and requires constant upkeep in order to function.

While the utility of ideology to those in (or who would seek to be in) power is an accepted premise, others take a more holistic view by suggesting that instead of ideology being an imposition of elite interests, it "...is the projection of group interest" (Kolata 1992: 70). And in addition to top-down approaches, complementary bottom-up approaches are increasingly common (e.g. Lohse 2007; Brumfiel 1996), and allow for competing ideologies and ideological resistance. Many have criticized the pervasive tendency to explore ideology only as far as elites and the assumption that elites invariably controlled the ideological apparatus in a given society (Lohse 2007; Inomata 2001; Abercrombie et al. 1980), a fallacy that has been referred to as the "Dominant Ideology Thesis" or DIT (Abercrombie et al. 1980). Some of this oversight is due to the historical blind spots in archaeology, and in other cases it may come down to preservation and the way that it can oftentimes be easier to find elites than commoners.

Political Ideology and Imperial Polities in the Americas

Many of the most successful attempts at reconstructing the nature and effects of ideological systems in imperial archaeological contexts have occurred in literate or colonial-period societies such as the Aztec, Inka, and Roman empires (Demarest 1992;

Ando 2000; Brumfiel 1996, 1998; Joyce 2000; Conrad and Demarest 1984). These investigations benefit from historic documents that guide the interpretation of archaeological finds and fill in the gaps in the archaeological record. The Aztec and Inka empires in particular have received a great deal of attention from scholars regarding the implementation of imperial ideological systems, and especially how these new ideologies conflicted with each other and affected regional populations during the processes of imperial expansion and consolidation (Conrad and Demarest 1984, Brumfiel 1996, 1998, Hastorf 1991, Silverblatt 1978, Patterson 1986, DeMarrais et al. 1996).

In the case of Inka, imperial elites were able to materialize ideology in different ways and to varying ends through the investment of social capital (DeMarrais et al. 1996: 31). Imperial construction projects in adjacent provinces built with corvee labor projected a sense of imperial power to hinterland populations. Indeed, a common characteristic of provincial Inka centers was a sort of symbolic imitation of the core in the form of ceremonial architecture (Morris and Thompson 1985, 1970). Sponsored events such as feasts served to unify groups and foster social cohesion (Hastorf 1991), and construction projects such as monuments or infrastructure sent the message of elite power and control (DeMarrais et al. 1996: 31). And the capture of local icons and deities, and their removal to the core where they were held as symbolic hostages of the empire further demonstrated both the ideological primacy and the political superiority of the Inka empire (Rowe 1982: 109).

The distribution of controlled symbolic objects was another way in which the Inka empire secured regional political allegiance. An example of this comes from the Wanka

area in Central Peru. Prior to Inka imperial expansion into this area, there was a marked asymmetry in the distribution of prestige items and high-value foods between the local northern Wanka elites and commoners (Costin and Earle 1989). After Inka conquest, however, there was a marked increase in the ability of commoners to access locally defined high-value food stuffs and goods that had previously been restricted to elites. The distinction between elites and commoners was still maintained through consumption practices, but only in terms of access to Inka-style pottery, which was produced in imperial workshops. By making regional elites dependent on Inka goods as markers of prestige, the Inka were able to dismantle traditional sources of political power and transfer local elite political and economic power to the state (Costin and Earle 1989: 710). This serves as an excellent example of the power of ideology in altering and sustaining political realities.

The ideological system of the Aztec empire has received similar amounts of scholarly attention as the Inka. For example, Brumfiel's (1998) study of the Aztec imperial ideological system posits the existence of several complementary ideologies targeted at different populations in the empire. References to militarism, which formed the core of their elite ideology, were prominent in imperial architecture, symbolism, and creation myths in the core of the empire. Through the construction of a number of public monuments, the most notable and central of which was the great pyramid in the capital of Tenochtitlan, the empire actively promoted an ideology that linked the importance of warfare and imperial expansion to the natural cycles of life, joining militaristic expansion to cosmology. Brumfiel suggests that this particular ideology was targeted at men in the

lower ranking nobility, which made up the core of the Aztec military. Simultaneously, imposing militaristic imagery reminded commoners of their unmistakable role in the imperial system, and who in fact wielded both cosmic and terrestrial power.

Her analysis of Postclassic figurines from rural sites in the Basin of Mexico provides another example of a separate ideology for certain segments of the empire. Figurines from several rural sites did not only lack the militaristic themes important to the above ideology, but the pre-alliance proportion of female to male figurines actually tripled during the subsequent Aztec period (1998: 7). Before Aztec imperial expansion, figurine traditions from the Basin of Mexico had relatively even proportions of male and female figurines, but during the height of the Aztec empire, female figurines in these same areas increased to a ratio of 3-1 female to male figurines (Brumfiel 1996, 1998). Brumfiel interprets this as evidence for a separate rural ideology devoid of the common militaristic, masculine-centric visual imagery of the core, suggesting a complex ideological system in the Aztec empire where different ideologies were selectively targeted at their respective audiences. Conversely, the rural figurines could also be interpreted as ideological resistance, and an active rejection of imperial imagery in domestic ritual. This research is particularly pertinent to the framework and goals of this dissertation, and I have relied on Brumfiel's insightful work to structure my own investigation of the figurines traditions that preceded the Aztecs by two millennia.

The Inka and Aztec cases effectively demonstrate the value of considering ideology in an imperial context. Although these studies have been either directly or indirectly aided by the historical record, they also serve as a framework for scholars

working in prehistoric contexts (including the current project). Although cultural similarities cannot be assumed, they inform us on the range of evidence that may be used and the interpretive possibilities of this evidence when investigating ideological systems in prehistoric cultures. The two examples below demonstrate that imperial ideologies can also be successfully investigated in prehistoric societies.

Several South American cultures provide intriguing prehistoric case studies of how different political goals directly influenced the choices made by elites regarding the materialization and dissemination of ideology. The Southern Moche, which was a regional expansionary state in Peru during the 4th and 5th centuries CE, undertook expensive monumental building programs in areas outside of their direct control, suggesting that ideological imposition and cultural assimilation were key components of the Moche strategy of expansion. DeMarrais et al. (1996: 26) argue "...that the state was interested in first occupying the minds of the inhabitants to ease the later occupation of their fields." In contrast, the Northern Moche who did not have expansionary ambitions did not invest nearly as much energy in monumental building programs and projecting their ideology abroad. Their focus instead seems to have been on ceremonies that perpetuated existing social order and maintaining the position of elites. And so, the existence of civic and religious monuments in an area prior to active state occupation is a strong signal of the ways in which expansionary states used ideology to political and economic ends. This process is not necessarily limited to large construction projects though. It could also occur with smaller objects such as prestige items and powerfacts (DeMarrais et al. 1996), or as I will argue, ceramics figurines.

Similar to the Moche example, the Tiwanaku state intentionally manipulated ideological tools on a regional scale as part of an active program of state expansion and consolidation (Kolata 1992). The Tiwanaku state was located in the Titicaca basin and ruled over parts of modern Bolivia, Peru, and Chile from 200-1100 CE. Its initial expansion into the northern areas of the basin—likely with an eye towards expanding its agrarian base—relied on the active imposition of Tiwanaku state-focused ideology in these areas by erecting stone stelae with state cult symbols related to the "Gateway God" (Kolata 1992: 76). These symbolic constructions were soon followed by the construction of regional administrative centers, and the capture of local stone monuments, which were then taken back to the core and incorporated into palace complexes (Chavez 1975; Kolata 1992: 78). Furthermore, the discovery of a Tiwanaku-style temple in the Moquegua Valley demonstrates how ideology was wielded as a tool in consolidating a more distant yet strategically important periphery (Goldstein 1993). An important agricultural colony had been established in the Moquegua Valley to the southwest of the Tiwanaku heartland, and it eventually became part of a consolidated province with direct ritual and administrative ties to the core. State interest in the area was expressed through this monument that served as a focal point for state-centric ritual practices, and local elites could amass power by controlling access to this ritually important place (Goldstein 1993: 42). All evidence from the Tiwanaku case suggests a purposeful imposition of state-sponsored ideology throughout the inner and outer hinterlands of the Tiwanaku state as a means for consolidating control over a rapidly expanding territory. In the case of the heartland, ideology may have arrived first, preceding administrative buildings, whereas in

the more outlying territories, extractive colonies were established first and then cemented by the construction of ritual-administrative complexes.

The case studies discussed above are not an exhaustive list of the complex societies that have manipulated ideologies to political ends. Indeed, the ideological legitimation of imperial or state authority is one of the hallmarks of early state development. Kurtz (1987) has argued that most states go through a process of ideological and social legitimation during the process of consolidating and maintaining power. Kurtz (1978: 170) argues states legitimize themselves through multi-pronged programs that entail the 1) creation of a legal system that is supported by divine and religious authority, 2) centralization of political power in order to limit the chances of rebellion and fragmentation, and 3) the socialization of the population into supporting the state by controlling information and acting benevolently towards the populace. Ideology is alternately used as a tool for legitimization, the consolidation of power, and the social assimilation of the regional population.

This dissertation takes the view that at least some ideologies in any given society will work to legitimize and reproduce the power of the people and institutions in charge, and these efforts will often take material form (discussed in the following section). As such, evidence of dominant ideologies should be visible in the archaeological record, and analysis of this materialized ideology will shed light on the nature and limits of power (DeMarrais et al. 1996). The Aztec, Inka, Tiwanaku, and Moche case studies discussed above all highlight the various ways in which complex societies manipulate ideology, frequently in the service of political concerns. In the case of the Aztecs, Brumfiel's

(1996) work also highlights an interesting case where the imperial ideology seems to have been felt to a lesser degree in the rural hinterland, where domestic ritual (studied through ceramic figurines) did not focus on the power of the state. Conversely, in the Inka, Tiwanaku, and Moche cases, there is ample evidence for the projection of state-sponsored ideology and ritual practice into the hinterland, in some cases to pave the road for more explicit political domination, and in others to fully consolidate a territory where the state had active interests or colonies.

A dominant state or imperial ideology is inevitable, but the real question is whether it is the only one, or whether other ideologies exist that complement or even directly oppose the dominant ideology. The work of many scholars demonstrates that both dominant and subordinate or contradictory ideologies would be present in modern (e.g. Althusser 1971; Gramsci 1987) as well as ancient states (Kolata 1992; Brumfiel 1996, 1998). It is important, therefore, to investigate ideological systems as a whole and not look only for the dominant ideology, even though it may be the most visible. Discovering the dominant ideology, where it works, and how it operates is an important part of the investigation, and in many cases it may be the most evident, but it is almost certainly not the only ideology operating within a cultural system.

A strong ideological system would have been a necessary component for the expansion and consolidation of the Teotihuacan state, both in motivating participants already involved in the project and attracting and assimilating new ones, and this has been argued by various scholars (e.g. Sugiyama 1992, 1993, 2005; Sugiyama and Castro 2007; N. Sugiyama 2014; Pasztory 1997; Berlo 1992; White et al. 2002; Cowgill 1997).

In addition to its structural role, ideology plays an important part in the formation of group and individual identity within society, and is therefore important at all levels of a society and to most avenues of archaeological inquiry and analysis. One way to increasingly consider the role of individuals in ancient society is to investigate ideology from a bottom-up perspective, instead of treating commoners like agent-less automatons, which they certainly were not (Lohse 2007; Gonlin and Lohse 2007). This speaks to the ongoing debate as to the nature of the Teotihuacan state and the intensity and types of control it exerted over its hinterlands. Its status as a complex, state-level society is not disputed—which is why I frequently default to referring to it as a state—but some scholars argue that it was an empire. The next chapter discusses this debate in detail, but for the moment it is worth noting that a rigorous investigation of the way Teotihuacan mobilized ideology to control urban and various rural populations, and the nature of the responses from various communities in its orbit, has the power to inform us on whether Teotihuacan is better understood as a state or empire.

Ideology Materialized

That material culture has the ability to inform us about the lives and experiences of humans who are no longer able to recount these events themselves is a foundational truth to the field of archaeology. Meaning is read into the objects left behind, both intentionally and unintentionally. Similarities that are observed in material culture across space or over time are interpreted as retentions of practice, conservatism in culture, and shared beliefs, practices, and identities within or between groups of people. Differences

are ascribed to a range of causes: cultural transformations, differing practices, immigration, advancements in technology, and so on. These are tenets that are more or less accepted by archaeologists and I offer no dispute as to their general validity. But the only way in which this interpretive framework functions is through an implicit or explicit acceptance of materiality, and the premise that humans value and ascribe meaning to objects beyond their natural function. The value is ascribed through and exists in the relationship between humans and things, between subjects and objects (Appadurai 1986; Miller 2005).

In order for archaeologists to investigate ideology in pre-literate societies, there must be a mechanism through which it is recorded in the material remains available to archaeologists. Materialization, which involves both conscious and unconscious efforts to make meaningful objects and structure the world around ourselves, is the process whereby the intangible values and beliefs contained in ideologies are inscribed onto the material world. Although we cannot recreate specific thought processes, we can use the archaeological record to study how the materialization of ideology and the beliefs and values that it encompassed worked to shape social and political culture over time (DeMarrais et al. 1996: 17). If we accept the premise that beliefs can be materialized, or ideology can be contained in or read from objects, then changes in these objects over space or time can be indicative of changes in associated beliefs or values. Changes can range from stylistic to functional, but in the most basic sense a change in form will be reflective of a meaningful difference in an object's relationship with people, or in the way that the object affects human perceptions and behavior. Even if we lack the appropriate

means to decode the altered meaning inscribed on the object, detecting change or difference can be a very promising start.

Even at the most passive end of the human-object entanglement spectrum (Hodder 2011, 2012), mundane objects affect human behavior and perception. Beyond the dedicated properties of objects, material culture is infused with additional meaning through its interaction with human subjects (Miller 2005, Gell 1998), and the meaning of objects can be frequently read from their forms, uses, and the path of their circulation in society (Appadurai 1986: 4). An anthropological investigation of the social roles of objects may necessarily fetishize them, but the only way of understanding the social significance attributed to objects by their human users (which we understand on a theoretical level) is to investigate their social context through the ways in which they are used or circulated in society (Appadurai 1986: 4). The interaction between objects and humans is part of what informs the object's significance or meaning, but Miller (2005: 5) adds that,

...objects are important not because they are evident and physically constrain or enable, but often precisely because we do not "see" them. The less we are aware of them, the more powerfully they can determine our expectations by setting the scene and ensuring normative behavior, without being open to challenge. They determine what takes place to the extent that we are unconscious of their capacity to do so. Such a perspective seems properly described as "material culture," since it implies that much of what we are exists not through our consciousness or body, but as an exterior environment that habituates and prompts us.

Although there is no clear delineation as what truly could be considered a 'thing'—"Is a dream, a city, a sensation..." a thing? Miller asks (2005: 7)—if things both tangible and intangible structure our behaviors, motions, feelings, and so on, then perhaps they too

should be considered things in the material sense. These 'things' are inextricably entangled with nearly every aspect of human life, creating an interdependency between humans and 'things' (Hodder 2011, 2012). Even though declaring something to be an object is to frequently situate it in contrast or opposition to subjects (cf. Gell 1998), it is clearly wrong given the established ability of things to mediate human actions and thoughts, and ignores the historical processes of its creation and divorces it from any agency or subjecthood in its own right.

Alfred Gell (1998) complicates the subject-object relationship by proposing a universalizing anthropological theory of art that seeks to understand art beyond the simple study of aesthetics, which has been a particularly productive way of thinking about figurines in the current project. He does this by devising a framework that allows for art objects to perform the role of social actors in human-object interactions, which helps us to theorize the range of potential meanings and uses ancient figurines held for their owners. Figurines are a difficult class of material culture to work with since they often index the human form and combine a range of stylistic attributes, which privileges them above many other non-figurative classes of material culture, yet a discussion of their aesthetic properties misses much of their social meaning, which is woefully insufficient for a social archaeological analysis.

Gell (1998: 6) discards the often contested and decidedly ambiguous use of symbolism in favor of more explicit terms such as "...agency, intention, causation, result, and transformation". Building on the work of earlier scholars of materiality, he attempts to theorize and clarify the ways in which art objects serve as agents in their relationships

with people. Gell goes beyond the limits of the subject-object relationship as Appadurai and Miller would construe them, and allows for material indexes to function as social agents in relationships with humans through the "abduction of agency" (Gell 1998: 13-14). The agency of objects, or indexes, is variable depending on context, and exists or acts through the attribution of agency by humans. Objects cannot be said to have intentions of their own, yet humans frequently attribute intentions to inanimate objects, leading Gell (1998: 17-22) to term the agency of indexes or objects as secondary, relative to the primary agency of humans. Devising a framework that maps the ways in which objects have not only meaning but agentive potential inscribed on them brings us closer to understanding how humans interact with them, and the social roles that could have been occupied by material objects.

A discussion of primary and secondary agency is valuable in theorizing the social value and potential of objects, yet in practice, in many societies certain objects are understood to have the ability to function as full agents or social actors. Since their meaning, value, and agentive status are proscribed by human subjects, we may be studying objects as archaeologists that were understood to be fully agentive in their own rights by their owners. Numerous examples exist in the literature to support this, however the examples that are most salient to this dissertation are cached figurines and statuettes, a practice which has independently occurred in several civilizations including ancient China, Egypt, and Mesoamerica. Figures such as the army of terracotta warriors in China were buried to continue serving the emperor even after death (Portal 2007); entombed *shabtis* from pharaonic Egypt were small faience figurines or statuettes that were

inscribed with a verse from the Book of the Dead directing them to serve their deceased masters in the afterlife (Taylor 2000: 11; Taylor 2001); and multiple examples of terracotta and stone figurines in several Formative Mesoamerican societies were cached in ways suggesting that they would not have lost their agency when buried and cut off from relationships with living humans (Marcus 2009). These are all examples of objects being buried or stored for the express purpose of them fulfilling their social roles. Their agency was not derived through interaction with living people, but that does not limit their ability to act as social agents.

These examples, among others, serve as reminders that the concept of secondary or subordinate agency is useful in a theoretical sense in mapping the relationships between humans and things, however it is an entirely etic perspective, and not necessarily how ancient peoples would have understood their relationship to objects. Furthermore, if Miller (2005: 5) is correct that objects have power over humans, frequently in unseen or unconscious ways, and their influence directs or prompts behavior, it calls into question the ranking system of agentic potential. Gell would no doubt object to the assertion that inanimate and non-intentional objects could take the role of primary agents, however it is worth considering whether these things can become the primary social actor in a human-object relationship. To do so would infinitely expand the range of possible relationships and interactions between humans and objects, and objects with other things.

Ideology can be materialized—or inscribed—into a wide range of communicative gestures, behaviors, and artifacts. DeMarrais et al. (1996) describe a range of potential symbols and materialized ideological goods, focusing in particular on two object

categories: wealth objects, that have intrinsic value beyond their ideological connotations due to the type of material they are made of, and inherited objects, where a history of ownership adds to the social value of the artifact. DeMarrais et al. argue that these two artifact categories in particular may be used to distribute and control the dissemination of values tied to elite ideology in a society. I agree with both of these categories, but I argue that they are missing another category that is perhaps even more influential. In both of the object categories they highlight, social and economic value is added to these objects through either the innate value of the material being used to fashion these artifacts, or the social value added to an object through curation and inheritance. Yet both of these categories deal with additional value-added objects, ignoring a perhaps much larger category of objects in which ideology can be materialized: cheaply mass-produced goods.

It does not devalue the importance of powerfacts in society to suggest that a much larger impact may be made through cheaply produced goods which can communicate ideology to distant populations just as easily as prestige goods. In fact, the prestige goods or powerfacts of their discussion and the category I suggest operate in two different spheres, and would likely materialize distinct ideologies. By definition, prestige goods are not equally available to all individuals. The inequality in distribution is part of what generates their value. Prestige goods materialize a certain set of values and beliefs and communicate them to a range of people (including specifically those who do not have access to them), but they are wielded by an elite group of people.

Non-prestige or utilitarian goods that are cheaply or easily made have the same potential to communicate or embody values and beliefs, but would have circulated in a

very different level of society. A king may wear an ornate crown that communicates his power and influence, but utilitarian cooking vessels may communicate messages about ethnic or cultural identities that, while different, is just as meaningful of an ideology. This fits Brumfiel's (1998) conclusions regarding the imperial Aztec ideological complex, where different sets of values and beliefs were targeted at different social groups using different means. Symbols on a monumental scale (which are expensive to generate) materialized messages about elite privilege and the role of warfare in sustaining the cosmos. These messages were primarily targeted at elite men, although the same monument also contained a message for commoners who saw them—a somewhat less glorious one. On the other hand, commoners in the periphery of the empire used cheaply produced ceramic figurines to communicate a different set of social values.

Of the four sources of social power DeMarrais et al. (1996) mention (economic, political, military, and ideological), ideology is so effective because it is unique in how cheaply it can be exploited. Economic, political, and military intervention and control can be quite expensive to generate and maintain, and even though a lot of resources are often invested in the display of the dominant ideology in many societies, it has at least the potential to be a very cost-effective method of social control. I argue that materialization encodes value onto most objects, and the daily interactions with these objects is a powerful force in the construction, maintenance, and differentiation of social identities.

Identity Formation in Society

The subject of identity in archaeological societies is an increasingly popular topic in archaeological investigations. This is in some ways tied to the feminist critiques of the

1970s and 1980s (Meskell 2002), making room for non-Western and non-androcentric interpretations of the past. Exploring the identities of past people is a necessary pursuit if we are to generate full and correct interpretations of the past, but it is one that is fraught with multiple problems for the archaeologist. The following is a discussion of the theorization of identity and how it is of use to archaeologists.

Meskell (2007) writes that there are two levels on which identity is formed: the external level where aspects of identity are culturally transmitted and handed down, and the internal level on which other aspects are chosen or decided on, and then performed. An example of an externally imposed element of identity could be belonging to a particular class or caste from birth (Insoll 2007). Insoll (2007: 4) points out that gender, sexuality, age, and other structuring principles influencing identity were no doubt at work throughout time and space, and there could also be many other factors beyond these. It is important to note that a person's identity is not fixed throughout time (Insoll 2007, Meskell 2007). Some elements of identity (such as ascribed status, ethnicity, and sex) may be unchanging, but others change throughout a person's life, such as a person's age, life stage, and occupation. Insoll (2004, 2007) uses the term 'bricolage' to capture the essence of identity formation, which is flexible, adaptable, and prone to change. Meskell (2007: 32) details an example of juxtapositions in ancient Egyptian society that would seem incompatible to us, but which seemed to be coherent and not mutually exclusive aspects of women's identities. The coexistence of seemingly competing ideas such as sexiness, sex, mothering, reproduction, and even violence could have been integral parts of a woman's identity in pharaonic Egypt.

The basic formation of an individual's identity, therefore, can be said to be a negotiation between externally imposed factors and individually chosen ones, some of which are static, and others that change depending on a number of variables, including choice. The responsibility of the archaeologist is to find evidence for these elements of identity formation, but we need to be careful how we look for and interpret evidence for these things. Insoll (2007) cautions that in our search for past identities we may unwittingly reproduce and project modern western values onto the past. The concept of individualism, he argues, is particularly problematic in that it is a relatively modern concept. This is not to say that past peoples lacked agency or identity, but that to produce an egocentric vision of the past is to ignore scenarios where other ideals were esteemed beyond the importance of the individual, like ethnocentrism. Insoll argues that the creation of ethnic identities and boundaries may have been more important to the social organization of past societies, and our investigation of identity in the past must allow for this possibility.

Meskell (2007: 24) argues that the search for ancient identities is not merely a matter of discovering power structures, and for that reason the works of scholars such as "...Giddens, Foucault, and even Bourdieu often fall short of an archaeology of identity." But to acknowledge this is to acknowledge a lack of an acceptable methodology or strategy, and to come up against the question of just how we are supposed to discover identity in the first place. A partial remedy may be found in the process of identity formation in the first place. Meskell (2002: 281) states that identities are always being continuously constructed, "...and revolve around a set of iterative practices that are

always in process, despite their material and symbolic substrata." This inevitably leads back to Bourdieu and the idea of practice. It is true that individual and group identity formation is more complex and involves a deeper understanding of an ancient culture beyond the discovery of structural inequality and systems of power, yet it also seems that doing away with structure in this case is impossible. If identity is a negotiation of externally imposed and internally chosen elements in semi-regular flux, then it is also an ongoing performance of these elements that projects one's identity and simultaneously reinforces it. Practice cements the external to the internal, both in formation and expression.

Archaeology as a discipline is concerned with the ability to determine identity through material traces. Indeed most archaeological studies make use of similarities in material culture to support claims regarding identity and cultural affiliation. In practical terms, archaeologists may find it difficult to explore identity at the level of the individual, even though the consideration of the individual, their experiences, and the embodiment and performance of their identity has been a popular endeavor (Joyce 2003, 2005; Fisher and Loren 2003). Many archaeological data sets, however, lend themselves better to the study of identity at the community level. Schortman et al. (2001: 314) write that one of the most important ways of "...formulating and maintaining social identities is strategic manipulation of artifact styles, those attributes whose forms and combinations are determined more by choice than functional or technological necessity." Objects have the ability to proclaim, reaffirm, and even manipulate social identities (Costin and Earle 1989; Schortman et al. 2001), and are therefore a powerful tool for elites in acquiring and

retaining social power (DeMarrais et al. 1996), and for archaeologists interested in studying these issues. Even if archaeologists differ on the definition of style, they are able to make use of it as a concept in exceedingly similar ways (Hegmon 1992: 518).

Although I may only be able to explore community identity using figurines from surface collection and limited horizontal excavations, this is still a useful endeavor, especially in the context of a regional comparative study. All conclusions will carry the caveat that the variability in personal identities both within and between communities cannot be perfectly encapsulated by a general rendering of a community-level identity, and this is a setback that needs to be addressed when possible, and remedied through the addition of further case studies and datasets that facilitate more fine-grained investigations of identity in archaeological societies.

Ritual and the Performance of Identity

One of the best ways to explore the formation and maintenance of personal and community-level identities in the archaeological record is through a consideration of the residues of ritual activity, which have the ability to inform us on a range of issues related to identity. Ritual and ideology are strongly linked to identity both at the individual and group level, and are important elements in the maintenance, construction, and expression of identities.

The following is a discussion of the theoretical approaches that are especially pertinent to the theorization and interpretation of the values and uses of figurines within society. The majority of figurine literature frequently discusses them in terms of ritual—

mostly as ritual objects. Archaeological research has linked figurines to domestic ritual in many areas around the world, particularly in Mesoamerica (Lesure and Blake 2002; Marcus 2009; Guillen 1993). For example, Guillen's (1993) study of Chalcatzingo figurines documents their ritual use as well as the changing patterns of use over time in highland Mexico. Although discussion of this possibility is necessary, it is hardly sufficient for understanding how figurines relate to ritual and the implication of this knowledge on our understanding of society, which is our ultimate goal. First we must understand the meaning, purpose, and effects of ritual in society, the relation of ritual to the individual, and the individual's relationship to society. Secondly, we must be able to apply this understanding to the archaeological record and material culture. Only then can we integrate figurines into the discussion.

Anthropological theories of ritual typically stress its repetitive, symbolic, formal, and structured nature, and often ritual is equated with non-functional activity as well. (Brück 2007: 282-284). Rappaport's definition of ritual is frequently cited in the anthropological and archaeological literature, and has been heavily used in the formulation of 'ritual economy', which I discuss later. By his definition, ritual is the "...performance of more or less invariant sequences of formal acts and utterances not entirely encoded by the performers" (Rappaport 1979: 175, 1999: 24). In this he joins many other theorists who place an emphasis on the formalization and repetition of certain acts. Similarly, he stresses the communicative nature of ritual, which other scholars have adopted to varying degrees (Bell 1992: 72).

In another work, Rappaport (1999) stresses ritual's structural function, which is integral to religious systems. He characterizes ritual as a structure:

...a more or less enduring set of relations among a number of general but variable features. As a form or structure it possesses certain logical properties, but its properties are not only logical. Inasmuch as performance is one of its general features, it possesses the properties of practice as well. In ritual, logic becomes enacted and embodied—is realized—in unique ways" (Rappaport 1999: 3).

It is this ritual practice that gives form and meaning to religion. In Rappaport's (1990: 3) words, "...religion's major conceptual and experiential constituents, the sacred, the numinous, the occult and the divine, and their integration into the Holy, are creations of ritual." Since ritual is one of the most crucial pieces in the creation and maintenance of religious systems and in the expression of religious beliefs, it provides an important opportunity for anthropologists and archaeologists interested in belief systems.

Although Rappaport's (1979) definition of ritual stresses the formal aspects of it, Bell (1992: 74) makes the point that formalization is not necessarily the most important aspect of ritual, and that the idea that there is something separating ritual from non-ritual acts is key to understanding it. She uses the term 'ritualization' to highlight how certain actions distinguish themselves from other, more mundane activities, and writes, "...ritualization is a matter of various culturally specific strategies for setting some activities off from others, for creating and privileging a qualitative distinction between the 'sacred' and the 'profane,' and for ascribing such distinctions to realities thought to transcend the powers of human actors" (Bell 1992: 74). With this definition, Bell makes room for particularism, which is an important element in the study of ritual behavior. As

with other types of social behavior, we can and should expect a high degree of variation in the methods and goals of ritual activity.

Bell (1992) gives an excellent account of the progress that has been made in theorizing ritual in anthropology and how this ties into other recent popular theoretical trends. In its simplest form, ritual appears to be an act or collection of acts that are set apart from normal behavior through culturally specific form or intent. Most attempts at definitions of ritual have revolved around discussions of behavior and how this behavior differs from other 'profane' behaviors. Critiquing this, Brück (2007: 284) writes that in archaeology, "...ritual is identified by default: if sites or artifacts cannot be explained according to a contemporary functionalist rationale then they become relegated to a residual ritual category." Many scholars now see the difficulty in trying to separate symbolic from profane, or special from mundane behavior in that it both privileges and dismisses the importance of ritual action. In the view of post-Enlightenment rationalism, religious ritual defies functional categorization because of the lack of value we place on its power. We have created a false dichotomy between functional and non-functional symbolic behavior, but it is clearly incorrect to assume that past people shared this estimation of the importance of ritual action. In fact, those who engage in ritual probably do not distinguish between the functionality of mundane and ritual behavior—they see ritual as completely practical (Brück 2007).

Brück goes as far as arguing that the question of how archaeologists can identify ritual practice is a redundant one, and actually obscures the fundamental issue that the archaeological societies we study employed historically and culturally contextual logic

and beliefs to the world around them, which are not explored best through a distinction between functional and non-functional or symbolic practice (2007: 293). In her view it is entirely possible that archaeologists may not be able to distinguish between ritual and non-ritual action in the archaeological record at all.

As with all formulations of ritual, however, at its simplest it reduces to action or activity, which may (but importantly also may not) differentiate itself from other types of activity. To work towards a theory and a complete understanding of ritual, therefore, necessitates a discussion of the activity itself, or practice. Practice as a theoretical construct has been in use since Marx who—as Bell argues—used it somewhat loosely in both a descriptive and prescriptive sense. In the first sense, practice is used methodologically as 'practical activity,' which is a unity of consciousness and social being with the potential of transforming reality (Bell 1992: 75). In the second, prescriptive sense, practice exists in a dialectical relationship with theory whereby practice actualizes and tests theory, while also providing data for continuing theory (Bell 1992: 75). Bell (1992: 77), however, is critical of the application of Marxist theory to anthropological discussions of practice, especially when concerned with topics such as ritual since it finally renders consciousness as derivative of practice (either being created or expressed by it) even though the objective is to understand how practice mediates human consciousness and the social being. In the end, a strict reading of Marxist practice theory gets caught in the dichotomies that it is supposed to solve. It has, however, given rise to another generation of theorists who take practice beyond this early formulation.

Bourdieu's theory of practice states that "...the objects of knowledge are constructed, not passively recorded, and, contrary to intellectual idealism, that the principle of this construction is the system of structured, structuring dispositions, the habitus, which is constituted in practice and is always oriented towards practical functions" (Bourdieu 1990: 52). He is similarly famous for his elaboration on the concept of *habitus*, which is central to his definition of practice, and in its simplest form is the idea that people have a set of habitual thoughts and behaviors that reflect and also constantly form social conventions (Bourdieu 1990, 2004; Bell 1992). Bell (1992: 79) writes that "...a more complete definition would add that habitus is the principle by which individual and collective practices are produced and the matrix in which objective structures are realized within the (subjective) dispositions that produce practices." By this account, *habitus* can be understood to be an example of practice, but also a constituent of it—a dialectic in which social conventions give rise to, but are also reflections of, individual behavior.

Bourdieu's most important contribution to this discussion of ritual, however, is derived from his work on the concept of *habitus*. The "socially informed body," which is governed by its habitus, is invested with many senses that shape a person's experience of the world (and therefore their actions) such as the sense of duty, reality, and the sense of the beautiful, among others (Bourdieu 1977: 124). Although having a sense of ritual is not one of the examples included by Bourdieu, the concepts of *habitus* and the socially informed body represent an important framework for considering the role of ritual in society. The majority of people seem to be invested with an innate (culturally-specific)

sense of proper and just behavior, which frequently is associated with a knowledge of ritual, but it cannot necessarily be predicted how people will act out these socially informed ritual urges.

In order to better connect Bourdieu's ideas of habitus to her discussion of ritual, Bell (1992: 81) identifies four aspects of human activity that are inherent in the concept of practice, namely that practice is: situational, strategic, embedded in a misrecognition of what is being accomplished (cf. Rappaport 1979), and able to reproduce or further a vision of world order. These aspects of practice are necessarily shared with ritual acts, and they also aid the discussion of how ritualization diverges from other types of practice. Going back to Bell's concept of ritualization (1992: 74), ritual and ritualized acts distinguish themselves from more quotidian activities through the reproduction of privileged ways of acting. To put it slightly differently, ritual practice derives its meaning by standing in contrast to non-ritual practice. This is of course impossible to speak of generally except in the most abstract since the ways that ritual differentiates itself are so highly culturally specific that its unifying rules will always have to be discussed on the level of practice theory.

Although Lohse (2007) would agree with many aspects of Bell's discussion of ritualization, in his discussion of the connection between ritual, religion, and ideology Lohse points out that not all rituals are ideologically motivated and not all ideological practices necessarily reflect or project political agendas. Scholars must be mindful of this fact that not all repetitive actions are necessarily ideologically motivated, or at least not in a way that would be pertinent to scholars' investigations of religious ritual. Yet mundane

repetitive activities also inform us on a range of issues including identity and certain aspects of ideology as well—we should just not conflate them with religious ritual activity.

The Ritual Economy Approach

In the second half of the 20th century as anthropological thought moved away from rigid formalist ideas of society and towards substantivism, a novel range of theories emerged which dealt with the complex interplay of economic systems and other types of behavior including religious and political activity. One of the most influential of these theories has been political economy. Political economy models typically follow a top-down approach where a small, elite segment of the population manages resources and wealth, thereby exercising power and influence over the rest of the population (Davis-Salazar 2007; Wells 2006; Rice 2009). Rice (2009: 70) adds that decisions are made at a level above the domestic group in the sociopolitical system. These models are grounded in Marxist theories of labor and exchange (Wells 2006) and attribute decisions regarding the procurement of resources, production, and even consumption to a small high-level group within the sociopolitical hierarchy, thereby investing that small segment of society with most of the responsibility (and credit) for societal maintenance or change.

Political economy has been criticized for its lack of concern for individual agency among non-elites, and as a result many scholars have searched for alternate modes of theorizing the past, which has led some towards a more aggressively agentive theoretical paradigm. The concepts of political economy and agency are by no means incompatible,

however, but political economy typically focuses on only a small subset of the population—generally the elites. Some have moved towards agency-driven theoretical models, which ideally take into account a greater range of human behavior. While the benefits of such approaches are numerous, they similarly fall short in certain areas. Specifically, it becomes hard to develop testable hypotheses when using agency models, particularly involving greater social systems and the roles that individual actors play in them. The hierarchical system that is implicit in political economy models often discourages inquiry into the minds, motivations, and behaviors of all but a small percentage of the population. The analysis of producers and consumers—some of which probably fell low within the hierarchy—tends not to exceed the level of considering them as passive actors. The agency models that were believed to be a remedy to this problem made great strides towards reincorporating the individual and personalizing ancient behavior and history, but their weaknesses are the very strengths of political economy approaches. As a result, a number of theoretical frameworks have emerged that attempt to hybridize substantivist theory with more agency-based approaches. One of these frameworks is the ritual economy approach.

Ritual economy is defined as the materialization of values or beliefs through acquisition and consumption for the management of meaning and the shaping of interpretation (Wells 2006: 284). This definition emphasizes the dynamic nature of the process of materialization, and allows us to understand how material transfers may be embedded with nonmaterial motives (Wells and Davis-Salazar 2007: 2-3). Barber and Joyce (2007) not only accept this definition, but argue that the concept of ritual economy

can be expanded to include evidence beyond easily transferable commodities such as architecture. Similarly, processes of production and consumption—which were previously treated as a means by which the elites increased their own power—"...are revealed to have constituted corporate identities that crosscut relations of status" (Barber and Joyce 2007: 222; see also Davis-Salazar 2007). The strength of the ritual economy approach lies in its flexibility, and its invitation to ask questions that frequently are not considered under other theoretical frameworks.

The goals of the ritual economy approach directly relate to the previous discussion of Bourdieu and his ideas surrounding practice, *habitus*, and the socially informed body (Bourdieu 1990; 2004). If we recognize that every individual has the power to maintain or change society in the continual process of producing and reproducing social practices and conventions, then we must deemphasize the hierarchical structure central to political economy, and explore the ways that the population as a whole is constantly and actively (albeit unconsciously) participating in the construction of society. In this approach, no group of society is less worthy of investigation than the next as their collective practices constitute social norms. Although this may be a rather liberal interpretation of Bourdieu's conceptualization of practice—Graeber (2001: 27) critiques Bourdieu's work on economic action as being entirely formalist—these ideas have been heavily borrowed by substantivist scholars and are central to the ritual economy framework.

Ritual economy urges scholars to consider how and when social value systems articulated with economic and political ones in the continual process of shaping social

meaning in ancient societies. Since economic approaches typically require the consideration of multiple actors with different goals, ritual economy encourages us to explore how different people with individual beliefs, goals, and motivations, existed together in social systems where people acted as producers and consumers of different goods and services, according to 'rational'—in the strictly economic sense—reasons and other personal motivations. It would be simplistic to believe that economic production never intersected with other realms of human values and beliefs. Indeed a number of studies easily combine considerations of economic value with discussions of social status, ideology, prestige, identity, group affiliation, and so on (e.g. Costin 1991, 1998; Inomata 2001), and these studies are made more complete by considering the multiple factors that shape human action.

The ritual economy framework can be particularly useful when studying certain classes of artifacts, such as ritual objects. By definition, ritual activities—and associated artifacts—are privileged and set apart from mundane activities and artifacts by culturally-specific and widely varying factors (Bell 1992). But to consider ritual artifacts solely in this specialized domain is to divorce them from their inextricable ties to the mundane world, which is subject to economic concerns that are readily investigated through archaeological materials. On the other hand, if we were to reverse the analysis and treat them as mundane objects subject to the same social and economic value as any other commodity, while we would be focusing on the important economic processes related to production, exchange, and demand, we would be missing their arguably higher emotional

value to their consumers, and as a result the behaviors and practices that separate them from quotidian categories of artifacts.

Thus, artifacts such as ritual objects should be analyzed in a combined approach that recognizes their role in economic processes of production and consumption, their social value that transcends their material value, and their role in specialized practices that set them apart from other mundane objects. Moreover, similarities and differences between objects in their form, decoration, or in the ways that they were used will be revealing in a number of ways, creating theoretical space for a discussion of alternate identities, and competing or dissenting value systems within the same society.

Conclusion

The sociopolitical importance of ideology and religious practices has been of longstanding interest to anthropologists, and Mesoamerican scholars are no exception (Schortman, Urban, and Ausec 2001; Demarest 1989). Discussions of ideology and state religion are particularly important for Teotihuacan scholars (Sugiyama 1993; Aveni, Hartung, and Kelley 1982). The widespread presence of Teotihuacan artifacts in Mesoamerica demonstrates its far-reaching influence, but even within its own territory the nature of that influence is still a cause for debate. Discussions regarding its political, social, and economic structure are ongoing (Manzanilla 1996; Manzanilla 2001). The monumental scale of the city's civic-ceremonial architecture and the associated archaeological findings have led many scholars (Sugiyama 1993; Sugiyama 2004; White et al. 2002; Headrick 2007) to place an overwhelming amount of importance on religion

and ideology in the political functioning of the polity, but our understanding of its effects on the general populace is severely underdeveloped. More importantly, this hypothesis of a link between ideology and politics has gone untested, and further work must be done to clarify their relationship.

The ritual economy construct—defined as the materialization of values or beliefs through acquisition and consumption for the management of meaning and the shaping of interpretation (Wells 2006)—incorporates ritual into a substantivist economic approach and encourages the exploration of how cultural values integrate with mundane economic processes of production and consumption (Wells and Davis-Salazar 2007; Wells 2006). This definition emphasizes the dynamic nature of processes of materialization and allows us to understand how material transfers may be embedded with nonmaterial motives (Wells and Davis-Salazar 2007: 2-3). The hierarchical system that becomes the focal point in other substantivist models—such as political economy—often discourages inquiry into the behaviors of all but a small percentage of the population. In addition, Stein (2002: 903) warns that anthropological studies of interaction have historically downplayed the importance of internal social processes resulting in unidirectional models of culture change that assume "power relations, economic influences, or ideological forms of hegemony" only work in one way. This has led to the assumption that peripheral populations are passive recipients of core ideas and culture (Lightfoot and Martinez 1995), and to macro-scale analyses of societies that overlooks the study of individuals and peripheral populations.

Conversely, ritual economy encourages a bottom-up exploration of social processes by emphasizing the role of the individuals that comprise the social system, and asking what the values held by these people were, how they were constructed, and the implications of value construction on society. Such invisible values are materialized through the archaeologically visible processes of production and consumption, making figurines—as ritual objects—an ideal class of artifacts to study.

Through a comparative approach guided by the principles of ritual economy, I argue that great strides can be made in the interpretation of figurines and connecting them to great social processes. Given their significance—partially demonstrated by their staggering abundance at the site—to the ancient inhabitants of Teotihuacan, they represent the ideal category of artifacts through which we can study social value creation and maintenance, ideological domination or resistance to it, and the social cohesion of the ancient polity. The exploration of these concepts is facilitated by an analysis of the underlying processes of production and consumption that materialize worldview and social values (Wells and Davis-Salazar 2007a; Wells and Davis-Salazar 2007b).

In this dissertation I use a ritual economic approach to explore regional patterns of figurine distribution, consumption, and stylistic variation which will inform us about the interaction and mediation of political and ideological processes within the state. Additionally, exploring how ideational values were maintained or altered, accepted or rejected, and imposed on or resisted by individuals and different populations within the Teotihuacan state has the potential to reveal dynamic social processes in ancient complex societies. These key concepts are critical to understanding how Teotihuacan controlled its

sustaining hinterland and the role of ideology in its regional political system, which can be used as a comparative model for other early state-level societies.

CHAPTER 3. CORE-HINTERLAND DYNAMICS DURING THE EXPANSION OF TEOTIHUACAN

The ancient site of Teotihuacan is located in the semi-arid highlands of central Mexico, 50 kilometers northeast of modern day Mexico City. At its height (ca. 150-600 CE), Teotihuacan was one of the largest cities in the world—certainly the largest in the Americas—and was the urban core of an eponymous expansive polity that had ties throughout much of Mesoamerica. The material correlates of these connections have been found in northern and western Mexico, the Gulf Coast, and as far south as the Maya region. Teotihuacan material culture is ubiquitous throughout the Basin of Mexico and many of the adjoining regions during its height. The widespread presence of Teotihuacan artifacts demonstrates its far-reaching influence, but the nature of that influence, and how it varied from one area to another, is still subject to debate.

In many ways Teotihuacan civilization (ca. 100 BCE-600/650 CE) was a departure from the preceding cultural and political environment in the Basin of Mexico. In being the first of many successive states in the Valley of Mexico, Teotihuacan diverged from the scale and complexity of the polities that had come before, and can be considered an unprecedented rise in size and social complexity. There is a striking continuity, however, that remains present throughout Teotihuacan's ascendance, and a connectedness to the societies that came before. Teotihuacan did not arise in a cultural vacuum, and the tendency to refer to certain cultural elements as being of Teotihuacan or not of Teotihuacan gives it a primacy that is not always supported by our increasingly sharpened understanding of its history and the cultures that preceded it (Plunket and

Uruñuela 2005, Carballo 2007a). This project seeks to understand the connection between Classic Teotihuacan and its antecedents, and to understand an important aspect of daily life in its deserved context. The central question that this dissertation explores asks how certain elements of ritual and social life changed in the Basin of Mexico coinciding with the rise of Teotihuacan, and what, if anything, was preserved from before, even though only a portion of this exceedingly large issue can be dealt with here.

Over the years, many models have been proposed to account for Teotihuacan's widespread presence in Mesoamerica and to explain how it functioned as a political entity. Due to the monumentality of its religious edifices and dramatic iconography present throughout the city, religion has been central to models of how Teotihuacan projected its power over local portions of Mesoamerica. Beyond the primacy historically accorded to religion and ideology, the polity has been called variously a state, a city-state, and an empire, but in the end the problem will only be solved by understanding the details of the nature of its interaction with its hinterland and periphery.

This chapter explores the rise of the Teotihuacan polity contextualized in its regional sociopolitical environment. To that end, I discuss the city of Teotihuacan and the current understanding of the social and political organization of this early urban center, and the nature of the connections between the center and smaller rural sites in its immediate hinterland. I synthesize evidence amassed by survey projects and excavations from the last century to discuss how Teotihuacan was structured in relation to its hinterland, with an aim towards understanding the nature of the city's interactions with its immediate hinterland. The evidence used in this dissertation comes from both the core

city of Teotihuacan and three smaller rural sites in the Basin of Mexico: Axotlan, Huixtoco, and Cerro Portezuelo. The discussion in this chapter covers the occupational history of each site as well as the models that have been proposed to explain the relationships between them and Teotihuacan. I end with a consideration of the power dynamics between the urban core and the rural settlements in its hinterland, and of just where that hinterland stops, and greater Mesoamerica begins.

Teotihuacan: The Rise of the Core

Teotihuacan was a dominant regional polity from approximately 150 to 600/650 CE (and the site was occupied from at least 100 BCE), but for much of the preceding millennium, the Basin of Mexico was populated by sparse, egalitarian, and politically autonomous villages. The more arid northern Basin had only a few hamlets in the area where Teotihuacan eventually arose, and larger villages clustered in the southern half of the Basin since the wetter climate made simple rainfall agriculture sustainable.

During the second half of the first millennium BCE, the site of Cuicuilco arose as a regional center in the southwestern Basin with an estimated population of 10,000-20,000 (Sanders et al. 1979; Evans and Berlo 1992; Cowgill 2015). In the northern Basin, a community of substantial size arose at the site of Teotihuacan in the Teotihuacan Valley, and Sanders et al. (1970) estimate the Patlachique-phase (first Century BCE) occupation at around 5,000 people. During approximately the first Century CE, Teotihuacan became the dominant population center in the Basin, having enjoyed an explosion in population due to migration and the possible resettlement of environmental

refugees from other areas in the wake of natural disasters (Cowgill 2015; Plunket and Urunuela 2005).

	Basin of Mexico Chronology	Major Ceramic Phases	Teotihuacan Chronology
1000	Early Postclassic	Atlatongo	Post-Teotihuacan
		Mazapan	
800	Epiclassic	Coyotlatelco	
600	Classic	Metepec	Late
400		Xolalpan	
200	Early Classic	Tlamimilolpa	Teotihuacan
		Miccaotli	
CE 0 BCE	Terminal Formative	Tzacualli	Early
		Patlachique	
		Tezoyuca	
200	Late Formative	Ticomán	Pre-Teotihuacan
600	Middle Formative		
1000		Zacatenco	

Figure 3.1: Basin of Mexico chronology

Early theories regarding the source of the population increase at Teotihuacan focused on Cuicuilco, and cited volcanic activity from Xitle as the cause for an exodus from the Southwestern Basin. Cuicuilco, however, seems to have been occupied through the Patlachique phase at Teotihuacan, and was abandoned at the beginning of the

Tzacualli phase, before the eruption of Xitle (Cowgill 2015: 45). A more likely source of the vast population increase during the Patlachique phase may have been Puebla, where the volcano Popocatepetl was active in the first two centuries BCE (Cowgill 2015: 48; Plunket and Urunuela 2005: 100). A large influx of people from Puebla would also help explain the many shared architectural features between the Formative period occupation in Puebla and the Classic Teotihuacan style. Many important cultural and religious elements of Teotihuacan society have strong connections to Late Formative sites in Puebla, east of the Basin of Mexico. Certain building plans, such as a triadic temple layout, as well as the *talud tablero* style (an architectural style very common at Teotihuacan that alternates sloping and vertical elements on a façade) have their roots in Formative Puebla culture (Plunket and Urunuela 2005). Similarly, Carballo (2007a) presents evidence that puts the origin of two popular Classic period deities (the Old God of Fire and the Storm God) in Formative period Tlaxcala, to the east. As a result of this research, diverse elements of Teotihuacan culture are increasingly being understood as elaborations on preexisting Formative cultures in areas surrounding the Basin of Mexico.

Regardless of the source of the migrants, Teotihuacan's population had reached 20,000-40,000 by 1 BCE, and then doubled again within the following century (Fowler et al. 2015). Based on extensive survey of Teotihuacan in the 1960s, Millon estimates the Teotihuacan population at 125,000 for the city at its apogee during the Classic period (200-600 CE), but allows that the number may have been much higher, perhaps more than 200,000 depending on how many people lived in the apartment compounds (Millon 1973). A more recent estimate given by Cowgill places the population at the height of the

city around 85,000, similarly allowing that it conceivably could have been lower or higher (2015:143). (Note 1)

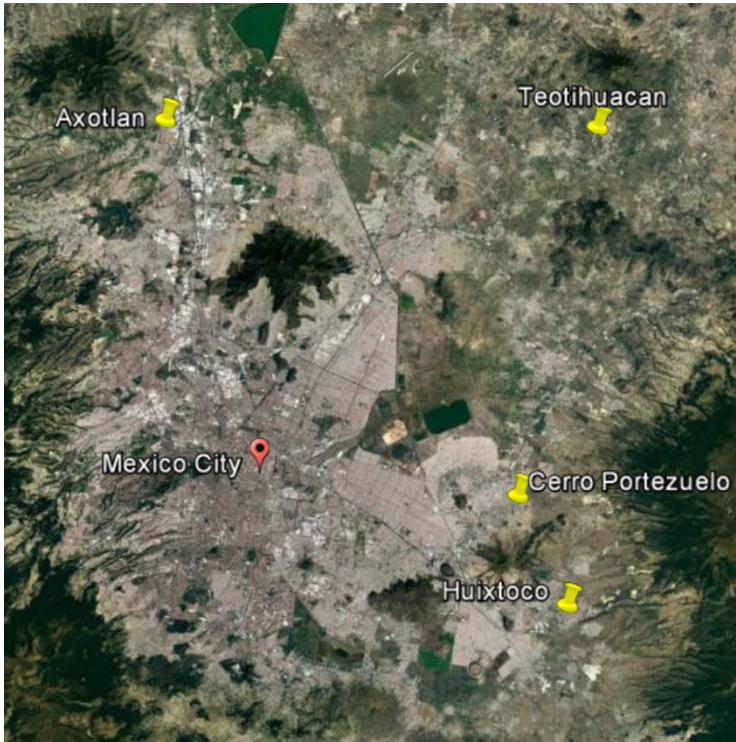


Figure 3.2: Satellite image of the Basin of Mexico with sites under investigation highlighted (Google Earth, accessed 03/10/17)

The urban area of Teotihuacan expanded rapidly coinciding with its population boom during the Late Formative/Early Classic transition, eventually coming to cover roughly 20 square kilometers (Cowgill 1997, 2008; Evans and Berlo 1992) (Fig. 3.3). Sanders, Parsons, and Santley have suggested that at Teotihuacan's zenith, as much as 90 percent of the Basin of Mexico's population lived within the urban limits, which would have represented a massive depopulation of the immediate hinterland (Sanders et al. 1979), although this number may be a bit too high (Cowgill 2015: 61). Scholars have suggested that due to the depopulation of the surrounding countryside and the massive

amounts of food required to provision such a large urban population, many of Teotihuacan's food producers were in fact city dwellers that made the daily trek to the surrounding agricultural lands (Cowgill 1997).

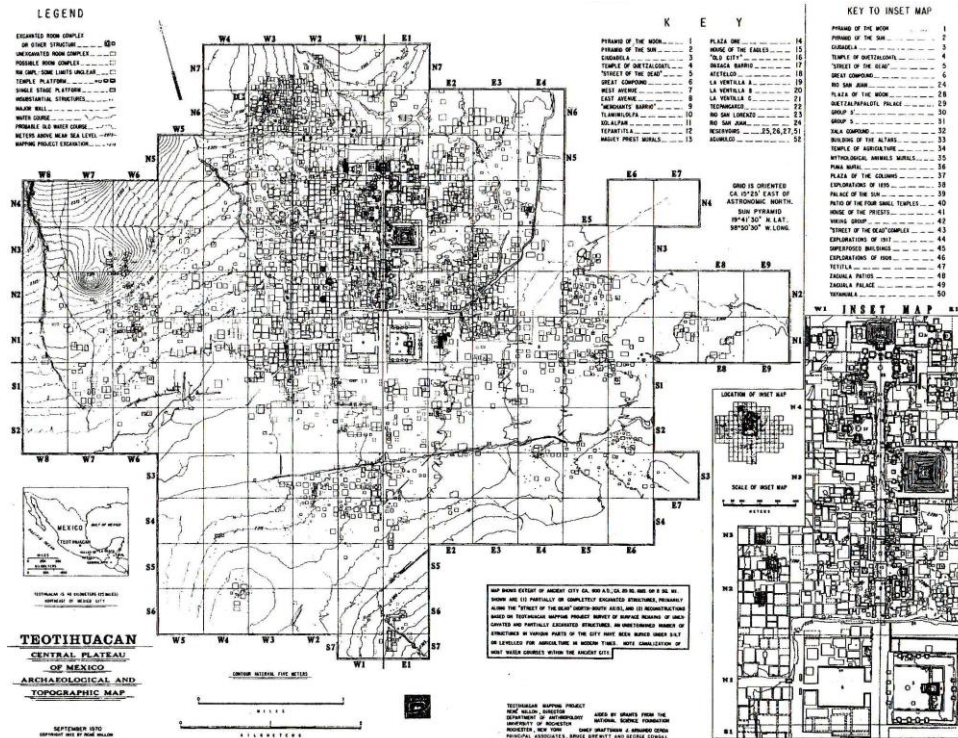


Figure 3.3: Teotihuacan Mapping Project (TMP) site map (Millon 1970)

By the second century CE (Miccaotli phase), many of the notable monuments were either under construction or completed. By the Miccaotli phase Teotihuacan "...had the largest integrated complex of monumental structures in Mesoamerica: the gigantic Sun Pyramid.....the Moon Pyramid, the 16-ha Ciudadela enclosure with its Feathered Serpent Pyramid, and the broad 5-km-long Avenue of the Dead..." along which these monuments as well as many other civic-ceremonial buildings and residences were arranged (Cowgill 1997: 130). Sugiyama provides persuasive evidence for the monumental center being laid out according to a master plan that shaped the civic-

ceremonial core as a cosmogram (Sugiyama 1993). In addition to the impressive monumental structures built in the ceremonial core, other equally important urban components were present by the Early Classic period (250-300 CE) such as main axes and streets in the city, water and drainage systems, areas of craft production, and residential compounds (Manzanilla 2004). Beyond the Avenue of the Dead, Teotihuacan was laid out in a highly standardized grid system consisting of walled apartment compounds, which housed the vast majority of Teotihuacan's population. Millon's survey indicates that by the Xolalpan phase (a century or two before the collapse), about 2,300 of these compounds were occupied (Cowgill 1997, 2015; Millon 1973). Based on the size and large number of rooms and differentiated areas in these compounds, Millon (1973) concludes that they housed multiple families, both extended and unrelated.



Figure 3.4: Satellite image of Teotihuacan site core taken in 2017 (Google Earth, accessed 03/10/17)

Ethnicity, Religion, and Politics in the Urban Center

Archaeological evidence demonstrates that Teotihuacan was both an ethnically and socioeconomically diverse society that relied on immigration as an active and necessary component in shaping and populating the city of Teotihuacan. Numerous ethnic enclaves have been discovered within the city, such as the Zapotec enclave in Tlailotlacan (White et al. 2004; Spence 1992), a Merchants' enclave on the northeastern edge of the city where Gulf and Maya ceramics were found (Cowgill 2008), and a Maya group in the Tetitla compound (Taube 2003). Immigration was not limited to ethnically specific enclaves, however; immigrants most likely made up a larger percent of the population than we realize, and certainly were not contained solely in enclaves (Storey 1991, 1992). Isotopic work conducted by White, Storey, Longstaffe, and Spence at the Tlajinga 33 compound demonstrates that immigrants from outside the Basin were constantly moving to Teotihuacan and being incorporated into extant apartment compounds (White et al. 2004). In these cases, evidence points to full assimilation of foreigners, whereas in the ethnic enclaves ethnic identity persisted or was deliberately maintained for a longer period of time. Wealth and status have also been shown to vary both within and between compounds, painting a picture of a highly diverse and stratified society.

In comparison to our knowledge of the general populace of Teotihuacan, our knowledge of the ruling elite is very incomplete. Amazingly we are still unable to accurately characterize how the city—and the state for that matter—was structured politically. It remains unclear whether there was a monarch or other types of governing

institutions in place (Cowgill 2008). A number of different hypotheses have been offered over the years, such as monarchies, oligarchies, theocracies, and so on, but the fact remains that there is still no resolution to this debate. Those who subscribe to the monarchy theory see the rapid expansion and early construction of such colossal monuments as the work of powerful individuals. The utter lack of recognizable potentates in Teotihuacan art, however, discourages others from subscribing to this theory, especially when compared to other Mesoamerican societies such as the Olmec and Maya with numerous depictions of rulers. Additionally, the near cessation of monumental building after 250 CE has been interpreted by some as reflective of a change in the political structure—perhaps either a transition to an oligarchy, or at the very least the waning authority of rulers (Cowgill 2008).

By the late fifth Century CE, Teotihuacan was in decline, and seems to have collapsed sometime in the early to mid-seventh Century CE (Beramendi-Orosco et al. 2009). Although specifics are still unclear, the population does not seem to have completely disappeared but does decline significantly to 30 or 40,000, and the very heart of the city seems to have been burned. Manzanilla (2011) has suggested that the collapse may have been related to mid-level elites gaining power, which destabilized the political order (see also Cowgill 2008: 971).

The lack of a written history has made it difficult for archaeologists to decipher the ancient political system at Teotihuacan, and the imposing nature of its supposedly religious monuments have led many to suggest that Teotihuacan may have been a theocracy or a theocratic oligarchy. Indeed, in most theories surrounding the ancient

state, religion takes a dominant role in its sociopolitical functioning, and an active or causal role in most state-level decision-making. The roles that religion and imperial ideology have historically taken in explaining Teotihuacan's rise is understandable, however, considering the large number of religious architecture in the core of the city, and the importance that many early archaeological projects placed on these structures.

In addition to the spread of a dominant religion, several additional approaches have been favored by scholars to account for Teotihuacan's rapid rise to power in the Basin of Mexico. Sanders et al. (1979) take an ecological and cultural-materialist approach, which some criticize for its exclusion of factors such as warfare, religion, and individual agency (Sanders et al. 1979; Cowgill 1997). Kurtz (1987) has criticized ecological models as being reductionist, and instead offers a dynamic economic model that stresses the interplay between imports and exports, which in turn encouraged growth and occupational differentiation within the growing city. The truth, however, is probably that the rise of Teotihuacan was dependent on a number of factors, including but not limited to economic, demographic, and ecological.

At its height, the city of Teotihuacan is thought to have ruled over a territory that covered at least the Basin of Mexico, and its influence abroad has been documented as far as the Maya heartland, 1,000 kilometers away. That being said, the exact nature of its relations with communities both near and far is still under investigation. At the very least it is known to have had active trade relationships with communities and societies across Mesoamerica, but the limits of its direct control are still being explored. According to Cowgill, "Teotihuacan controlled, or at least was very influential over, a territory of

culturally similar populations covering at least a 60km radius from the city...At its peak it may have controlled enough people over large enough distances to have qualified as an empire" (Cowgill 2008: 969). This dissertation tests this statement by exploring the preexisting religious and cultural traditions in rural communities in the Basin of Mexico, using ceramic figurines as proxies for ritual practices, and tracks the effects of the rise of Teotihuacan on these systems of belief and practice.

Research in the Place of the Gods: Survey and Excavation Projects at the City of Teotihuacan

The city of Teotihuacan has captured the attention of explorers since at least the 19th Century. Desiré Charnay (1887) visited the city during his travels in the late 1800s, and Leopold Batres, who was eventually charged with excavating the Pyramid of the Sun, began excavations at the Temple of Agriculture and the Pyramid of the Moon in the late 19th Century (Batres 1906). The early 20th Century saw the beginnings of serious archaeological investigation at the site, and archaeologists such as Manuel Gamio (1922), Alfred Tozzer (1921), Sigvald Linné (1934), and Eduardo Noguera (1935, 1965), and Pedro Armillas (1944) all made significant contributions to the field. Gamio (1922; 1979) was perhaps the earliest scientific excavator to work at Teotihuacan, and responsible for putting together the first stratigraphically determined sequence of cultures in the Basin of Mexico. His work in the city focused on the civic-ceremonial core, with excavations at the Ciudadela, the Pyramid of the Sun, and other constructions along the Street of the Dead. A decade later, Linné's excavations at the residential compounds of Las Palmas,

Xolalpan, and Tlamimilolpa in the 1930s added some of the earliest data on domestic contexts in the city, and expanded our knowledge of those living in the outskirts of the city (Linné 1934; Scott 2001). Around the same time, Eduardo Noguera excavated at Teotihuacan, tunneling into the Pyramid of the Sun and the adosada (Noguera 1935). In the 1940s, Pedro Armillas excavated several additional apartment compounds across the city, and was the first to adopt named ceramic phases instead of the numerical system that had preceded it (Armillas 1944, 1950, Cowgill 2015: 19). Over the next two decades, Laurette Sejourne built on the work begun by Armillas and continued to excavate at several apartment compounds (Sejourne 1966, Cowgill 2015).

In addition to the above projects, much of what we know now about the ancient city is in part due to an ambitious survey project carried out by Rene Millon and a large group of collaborators in the 1960s and 1970s (Millon 1960, 1973). The goal was to create a finished map that recorded all visible architectural features, and which would help in further explorations of the city (Millon 1973, Millon and Althschul 2015). The first field season for the Teotihuacan Mapping Project (TMP) began in 1962, and the final version of the map was published 11 years later (Millon 1973; Millon and Althschul 2015: 138).

Millon and colleagues created a photographed base map of the city using aerial survey photographs, and divided the area into manageable sections that could be surveyed on foot. The site was divided into a grid of 500m by 500m squares, oriented parallel to the city's north-south axis (about 15 degrees east of north). The center of the grid is near Teotihuacan's civic-ceremonial core, and grid squares are named based on

their distance from the zero point using cardinal directions (ex. N2W3 is the grid square that is in the second row to the north and the third column to the west). Structures within the grid squares were given numerical designations, and written as prefixes to the grid square name (ex. 10:N2W3). Survey included surface collection of artifacts and noting the location, size, and interpretations of architectural features on the surface. In many cases, the team conducted follow up test excavations to check interpretations of surface architecture. The data from the massive project lead to several volumes, and a number of dissertations and publications, many of which are referenced in this dissertation (e.g. Barbour 1975, Goldsmith 2000, Robertson 2015). The TMP was a critical step in the modern, processual investigation of the ancient city.

The TMP collected in excess of one million artifacts from the Teotihuacan and post-Teotihuacan periods including pottery rim and body sherds (634,000), assorted ceramic objects including figurines and candeleros (61,000), obsidian tools (230,000), and other worked stone implements (25,000) (Cowgill 2015: 23). The vast collection of artifacts generated from surface collection and test excavations is now housed in the Arizona State University Teotihuacan Research Laboratory in the town of San Juan Teotihuacan, adjacent to the archaeological zone. The figurines collected from over a quarter (27%) of the total survey area during this multi-year project were analyzed as part of this dissertation.

Since 1980, a large number of excavations have been conducted within the limits of the city. Some focused on the monumental core and civic-ceremonial center of the city (Cabrera et al. 1991, Manzanilla et al. 1996, Sugiyama and Cabrera 2007, Sugiyama et al.

2013), while others focused on residential compounds (Manzanilla 1993, 2012, White et al. 2002, 2004, Rattray 1993). These projects have made countless invaluable contributions to our knowledge of the ancient metropolis, including refined ceramic and construction chronologies, and have contributed to an increasingly clear understanding of the urban population and demographics. Despite these efforts, less than 5% of the city has been excavated (Cowgill 2015: 23), and perhaps even fewer excavations have taken place in Teotihuacan period sites in the broader Basin of Mexico. Much of our information about occupational history and demography from outside of the urban core comes from the ambitious Basin of Mexico regional survey project that was contemporaneous with the TMP.

Settlement Patterns and Their Implications

This section reviews some of the more important survey projects of the Basin of Mexico and what their results can tell us about the nature of the Teotihuacan polity and its interactions with the areas directly under its control.

The Basin of Mexico

The seminal settlement survey in the Basin of Mexico was conducted by Sanders et al. (1979), whose team systematically surveyed 3,500 square kilometers of the Basin between 1960 and 1975. The impact this series of surveys had on Teotihuacan studies cannot be adequately stressed, and in the absence of sufficient excavation data, the Basin of Mexico survey project volume represents perhaps the single best source on Formative,

Classic, and Postclassic period settlement patterns, demographics, and the natural environment in the area.



Figure 3.5: Basin of Mexico map with important sites and regions

Sanders et al. divided the Basin of Mexico into four zones based on settlement and exploitation patterns in each area which, they hypothesized, were probably related to differing types of resource exploitation. Zone 1 included the site of Teotihuacan, the middle and lower parts of the Teotihuacan Valley, the Patlachique range, and the northern half of the Texcoco region (Sanders et al. 1979: 122-123). This area represented a core or inner zone that was exploited for agricultural and raw materials resources needed by the core. Zone 2 covered the center of the Basin where—unlike Zone 1—there

was a rather large rural population grouped into large individual settlements. The areas covered in this zone are the Tenayuca, Tacuba, Cuautitlan, and Temascalapa regions, as well as the upper portion of the Teotihuacan Valley. Interestingly, the larger and better preserved sites in this zone (including two regional centers) exhibited strong organizational and architectural similarities to the urban core, including the presence of grid systems, apartment compounds, and linearly arranged ceremonial precincts that seem to have been built in emulation of Teotihuacan.

Zones 3 and 4 are located on the southern and northern (respectively) margins of the Basin. Zone 3 included the southern half of the Texcoco region, the Ixtapalapa Peninsula, and the Chalco-Xochimilco region, which experienced rather dense settlement during the Formative period, and a sharp demographic decline during the Classic. Sanders et al. (1979) observed that "...some of the smaller sites lack the full range of ceramic types commonly found on [Classic period] residential settlements" (Sanders et al. 1979: 125). This observation has important implications for the later discussion of the excavations of Axotlan and Cerro Portezuelo. Zone 4 is comprised of primarily the Zumpango region in the northwestern part of the Basin. In this area Sanders et al. observed that there was relatively sparse Formative occupation, but a large Classic occupation, which was no doubt linked to exploitation of the plentiful lime deposits in the area (Sanders et al. 1979: 126-127). The exploitation of key natural resources seems to have driven Teotihuacan settlement patterns, both within the Basin and also in territories outside of it.

The Teotihuacan Valley

During the survey of the Teotihuacan Valley, Sanders collected settlement data ranging from the Formative to Late Postclassic periods, which shed light on the population dynamics and sociopolitical organization in the valley leading up to, and more importantly during, the rule of Teotihuacan (Sanders 1965). For the Formative period, Sanders described approximately 150 separate localities within the Valley.

During the Cuanalan phase there was a marked change in settlement patterns in the valley compared to previous phases. A diversification in community size (although there were only hamlets and villages) as well as an increase in settlement nucleation occurred, and occupation became more evenly distributed across the valley (Sanders 1965: 93). Judging by the increase in the number and size of sites in the following Patlachique phase, Sanders proposed that the population in the valley doubled since the Cuanalan phase. The settlement types associated with this period were predominantly large yet widely dispersed hamlets and smaller nucleated population centers associated with specialized religious architecture. (Note 2)

By the subsequent Tzacualli phase we find the beginnings of true urban settlement. With respect to the rural areas, there appears to have been an abrupt change in settlement patterns during the Terminal Formative Tzacualli phase compared to earlier phases. The Patlachique range to the south—where over half of the previous phase's population was located—becomes nearly depopulated during this time. To the west in the Lower Valley and near Cerro Chiconautla there was a scattering of small, localized occupations. In the Cerro Malinalco area (just northwest of Teotihuacan) there was a

dense band of hamlets running along the piedmont almost to the edge of the later city, and a similar population explosion occurred in the northern Cerro Gordo area. Problems exist in defining the true extent of Tzacualli occupation, the foremost of which being the fact that many sites were either mixed in with or simply covered by later Teotihuacan period settlements. Sanders estimated, however, based on the survey data that the total residential area covered by Tzacualli sites was approximately 20-25 hectares, with no individual site totaling more than 2 hectares, and the majority being 1 hectare or less in size.

In light of this data and in the absence of any ceremonial structures from this phase, Sanders concluded that sites from this phase were socially and economically tied to Teotihuacan proper, saying "the sudden population growth has all the earmarks of an intentional, but not formally planned, colonization from that center" (Sanders 1965: 100). The general picture during the phase is of a rapidly growing population that is both densely settled around the urban area that later became the city of Teotihuacan, and also widely dispersed in the rural areas. Over 90 settlements (not including the growing urban area) were located for this phase by the Sanders survey, most of which were in locations that had been previously unoccupied. At that time, the settlement pattern characteristic of Teotihuacan at its apogee emerged: the tightly clustered urban core, and small, widely spaced and dispersed rural hamlets (Sanders 1965). The Pyramid of the Sun was also constructed during this phase, which is indicative not only of the emergence of true Teotihuacan culture and ideology, but also that there was an institution or leader by this

time capable of amassing enough materials and labor to build such a monumental construction.

Sanders (1965) located approximately 100 distinct settlements dating to the Teotihuacan period within the Teotihuacan Valley. Of these, only 90 had any sizeable occupation, and were categorized as small towns (10-30ha), villages (4-10ha), and hamlets (1-2ha). The small towns were located approximately eight to ten kilometers away from the city, tightly nucleated, and had pyramids and elaborate ceremonial complexes with adjacent residential areas. In at least two of these sites (TC 73 and TC 40) the survey crew found evidence of residential planning, similar to Teotihuacan itself (Sanders 1965: 107). The villages and hamlets were similarly nucleated, and some of the larger ones showed evidence of ceremonial structures and formal planning. In addition to these rural settlements, the survey also located two ceremonial centers atop Cerro Malinalco and Cerro Atlatongo (Sanders 1965).

The Zumpango Region

The survey of the Zumpango region, conducted by Parsons in the 1970s, was a continuation of the previous studies conducted in the Basin by himself and his colleagues (Sanders et al. 1979; Millon 1973; Sanders et al. 1975; Parsons 1971). In contrast to other areas of the Basin, there was relatively little Formative period settlement in the Zumpango region, which is surprising in light of its proximity to the Teotihuacan region and to the lake. The Zumpango region remained relatively unsettled until the Tzacualli phase, when the first settlements (hamlets and small villages) began to appear in the area

north of Lake Xaltocan-Zumpango. It was not until the Classic period, however, when settlement density reached a level that was comparable to other areas of the Basin, and population size grew accordingly (Parsons and Gorenflo 2008: 68).

The increase in population and settlement density from the Late Formative to the Classic period in this region was inversely correlated with contemporary population dynamics from the more central and southern areas of the Valley of Mexico. As Teotihuacan grew and consolidated its power, the nearby rural population flowed into the city, practically depopulating the central and southern hinterland. In light of the depopulation witnessed in other areas, Parsons and Gorenflo (2008) interpret the increasing population of the Zumpango region as the result of an active program conducted by Teotihuacan of expanding settlement into the "sparsely settled northern sectors of its heartland" (Parsons and Gorenflo 2008: 72). They hypothesize that the aridity in this region was the reason for such limited Formative settlement, but valuable commodities such as salt, aquatic resources, and lime provided powerful incentive for the later Teotihuacan state to expand into the area. Similarly, with the introduction of irrigation agriculture, the local population would not only have been self-sustaining but also have been able to create a surplus that would have been sent to the capital (Parsons and Gorenflo 2008: 96).

A site size histogram of Classic period sites in the Zumpango region revealed a bimodal distribution, with four large sites that Parsons and Gorenflo interpret as possible regional centers. One of the four sites (Zu-CI-89) had modest amounts of public

architecture, which led Parsons and Gorenflo to label it as an administrative center with close ties to Teotihuacan (Parsons and Gorenflo 2008: 84).

The Cuautitlan Region

The Cuautitlan region lays directly to the west of the Teotihuacan region, on the opposite side of Lake Xaltocan and Lake Texcoco, and is the location of the site Axotlan, which is discussed in further detail later in this chapter. The region was surveyed by Sanders and colleagues in the 1960s and 1970s (Gorenflo and Sanders 2007). The survey indicated that until the Late Middle Formative period, there were no significant occupations in the area, but at that time a number of nucleated villages of varying sizes appeared near the ancient lake shore—no doubt positioned in order to exploit lacustrine resources—while a second area of settlement arose to the west at the base of the Las Cruces Range. The population and number of sites continued to grow through the Late Formative, at which time there seems to have been at least three large nucleated villages in the region, each with a population estimate of around a thousand people. In the Early Terminal Formative a supposed regional center appeared near the lake shore with an estimated population of 2,400. Interestingly, the settlement maps show what appears to be a depopulation of the piedmont area in the Cuautitlan region during the Terminal Formative, and the population clustered along the lake shore (Gorenflo and Sanders 2007).

Unfortunately, Gorenflo and Sanders (2007) do not separate the Teotihuacan occupation data by phase the way they organize their Formative period maps. It is

difficult, therefore, to determine the process or timeline for the repopulation of the lower piedmont area during the Teotihuacan phase—suffice to say that it became significantly denser than it had been during any previous period, in large part due to significant population growth that was experienced Basin wide. In addition, three large centers—which Gorenflo and Sanders (2007) label as provincial centers—materialized along the Lake Xaltocan shore, each with a population between 1,180 to 1,350 people. Interestingly, there are several other sites that the authors list as large nucleated villages, but with populations exceeding the most populous of the provincial centers. In addition to the settlements, during the Teotihuacan period there appears to have been a salt making or processing station on the Lake Texcoco shore, just south of the southernmost of the provincial centers (Gorenflo and Sanders 2007: 41). During the Teotihuacan period, population in the Cuautitlan region dramatically increased, and while settlement was present in all areas, the largest population centers were either on or near to the lake shore, which was likely tied to salt production. Whether Teotihuacan was actively settling people in this region or whether it happened naturally is unknown. The proximity of the majority of the population to the lake shore and alluvium, however, indicates that lacustrine resource exploitation, agriculture, or both were intensified during this period. This mirrors similar processes in other regions in the Basin of Mexico during this period.

The Temascalapa Region

The Temascalapa region lays to the north and west of Cerro Gordo, the western portion bordering Lake Xaltocan. Gorenflo and Sanders (2007) provide maps with the

settlement data from this region in the same volume as the Cuautitlan region. Terminal Formative settlement was quite sparse, with population clustering around the lake shore, and no settlement appears to have exceeded the size of a hamlet. In the Teotihuacan period, however, population exploded into the thousands (population estimates for this period are roughly 5,000 people) with an increase in both the number of settlements and in their individual sizes. During this period a number of small and large nucleated villages appeared in the alluvium to the north and west of Cerro Gordo. Two large villages (TM-CL-8, TM-CL-9) appeared in the western alluvium close to Lake Xaltocan, both with populations well in excess of a thousand people. Gorenflo and Sanders (2007) mention that the modern day residents use the land in these two areas for agricultural purposes, and it seems very likely that the ancient residents were engaged in similar activities.

As was the case with the Cuautitlan regional survey, there are important limitations in our ability to interpret the Classic period settlement data in the Temascalapa region. Unfortunately, Gorenflo and Sanders (2007) only provide one map for the entire Teotihuacan period, thus a more fine-grained analysis of population dynamics within the period is impossible. Keeping this important caveat in mind, it would appear that between the Terminal Formative and the Early Classic period there was a spike in regional population, which manifested itself in the emergence of approximately 40 small and large villages. One possible explanation for the pattern may be that Teotihuacan was actively resettling people in its immediate hinterland in order to supply the urban core with agricultural staples. Another hypothesis, however, is that this

population increase came about naturally as people were attracted towards the core. Whatever the reason, population in the area increased dramatically in the Classic period, but then fell off by the Early Toltec period after the collapse of Teotihuacan.

The Texcoco Region

The Texcoco region is located directly south of the Teotihuacan Valley in the southeastern portion of the Basin, and contains the site of Cerro Portezuelo, discussed later. This area was surveyed by a team lead by Parsons in 1967. He writes that in this area, "with one exception, Classic [period] communities were hamlets and small villages, 100 to 500 meters in diameter, with light to moderate occupational debris, containing very little in the way of obvious architectural remains...The single exception to this general pattern is a larger community near the southern edge of the Texcoco region: the Portezuelo site" (Parsons 1968). Based on his survey data from the Texcoco region, Parsons concluded that population density decreased by a factor of four from the Terminal Formative to the Early Classic (195 ha), and continued to decrease throughout the Classic, leaving only 146 hectares of occupied sites outside of the city (Parsons 1968). Outside of Cerro Portezuelo, in the Early Classic there was only evidence for 135 hectares worth of settlements within the Basin, which sharply declined to 66 hectares by the Late Classic. This data supports the theory that many areas of the Basin were depopulated during the ascendancy of Teotihuacan, and that peripheral regions of the Basin apparently lacked a robust hierarchical settlement pattern. The southeastern area of the Basin seems to have been particularly depopulated, or neglected by imperial designs.

The Chalco-Xochimilco Region

Parsons et al. 1982 conducted a settlement survey from 1969 to 1972 of the Chalco and Xochimilco regions, which are located at the extreme southern end of the Basin of Mexico. The site of Huixtoco, which is among the four sites included in this dissertation, is located in this region and was first recorded by the Parsons survey. There was a small, steadily growing population in the area by 1,000 B.C., and growth rates increased almost exponentially through the Middle Formative period, reaching almost 30,000 people by 300 B.C. (Parsons et al. 1982). Surface collection yielded virtually no Tzacualli phase ceramics, and although the authors mention their discomfort with the following, they conclude that by 1 A.D. the area experienced a rapid, almost complete depopulation. Population started growing immediately after the depopulation event however, and continued to steadily increase throughout the Classic period, although it never exceeded a regional population of 10,000 during the Teotihuacan period.

Terminal Formative settlement clustered rather closely around the southern lake shore and the two rivers: Rio Amecameca and Rio Tlalmanalco. This pattern largely held in the Classic period, except that there was a further expansion to the northern lake shore, and additional settlements were established farther away from the rivers. As for the size of settlements in each of these periods, in the Terminal Formative Parsons et al. (1982) describe four local centers (including Cuicuico, just outside the western boundary of the region), three of which clustered around the Rio Tlalmanalco to the east. Additionally, there were also many large nucleated villages, mostly around the lake shore, and many smaller villages and hamlets scattered through the rest of the region. A site size histogram

for this period suggests that there was initially a 3-tier settlement hierarchy, which decreased to a 2-tier hierarchy during the Classic. For the Classic period they located five sites large enough that they were labeled probable administrative centers, and the rest of the sites in this period were smaller villages and hamlets.

The depopulation coinciding with the rise of Teotihuacan and the only partial repopulation during the state's height is interesting given the fertile environment and the potential for successful and intensive agriculture. "For a sedentary population, the resources of the Chalco-Xochimilco Region are overwhelmingly agricultural. Lacustrine products...are also significant, but distinctly secondary relative to the productive potential of cultivation" (Parsons et al. 1982: 282). Especially given the ease of water transport from the region, it is puzzling that the area does not seem to have been more heavily exploited by the state—in this regard it is similar to the neighboring Texcoco region. Scholars have cited the virtual depopulation of the Basin of Mexico coinciding with (and undoubtedly contributing to) the rise of Teotihuacan (e.g. Sanders et al. 1979), and others (e.g. Hirth and Villaseñor 1981) have argued that in some areas outside of the Basin the state intentionally reduced and scattered the population to keep them from getting too complex and becoming potential competitors, but given the evidence from other areas (see Hirth 1978, Clayton 2013) both within and outside of the Basin where it appears that the state was actively manipulating settlement patterns and placing agricultural colonies throughout its hinterland, it is odd that the state would not more intensively exploit this highly productive region in its hinterland. It is possible, however, given the distance of this region from the core that the state would have preferred to extract agricultural goods

from closer regions, and if there was indeed an intensively managed hinterland, then it perhaps did not extend as far south as the Chalco-Xochimilco region (i.e. beyond a radius of 50km). The Teotihuacan Valley, and Cuautitlan and Temascalapa regions may have been able to sufficiently provision the urban center with the goods they required.

Models of the Teotihuacan Polity

Our understanding of Teotihuacan's presence and the nature of its influence inside the Teotihuacan Valley is much more developed than in the greater Basin of Mexico and adjoining regions. It is not surprising, therefore, that most models of Teotihuacan are core-centric. Our understanding of Teotihuacan's rural periphery outside of the Teotihuacan Valley is based mostly on the results of survey projects; excavations at Classic sites within the Basin historically have been limited in number and scope. Based on the extensive surveys conducted in the 1960s and 1970s, Sanders and colleagues write that the rural settlements in the Basin were no more than "...economic and sociological extensions of the center, with little of the urban-rural dichotomy which presumes a dominant role in most sociological models of urban societies" (Sanders et al. 1979: 128). Thirty years later, with the advantage of more excavation data, Clayton (2013) disagrees with the view that all rural settlements were no more than mirror images of Teotihuacan urban society (albeit in reduced scale) and advocates for a more dynamic understanding of urban-rural relations, arguing that the "...dynamic histories of interaction, which may have been variably characterized by diplomacy or resistance, no doubt factored in the relative manageability of different settlements. Some rural communities may have

engaged willingly with state institutions while others were reluctant, depending upon local social histories and economic patterns" (Clayton 2013: 103). In this section I discuss several models that have been suggested for how the Teotihuacan polity was spatially organized and the nature of its relationship with its hinterland.

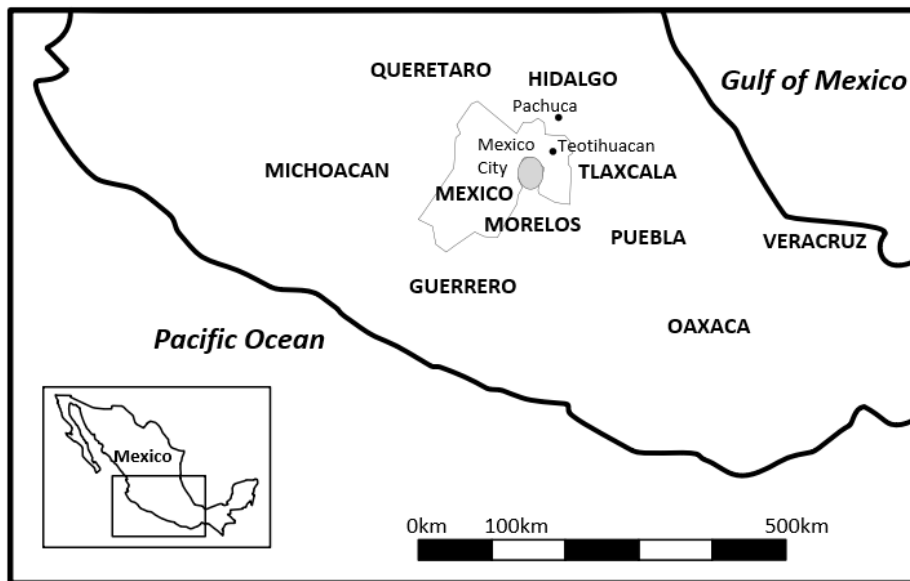


Figure 3.6: Map of the central Mexican highlands

The Extent and Nature of the Hinterlands

Based on research conducted in the Rio Amatzinac Valley in Morelos (approx. 100km southwest of Teotihuacan), Hirth (1978) proposes two different levels of hinterland—an inner and outer—that were brought into submission at different times and for different purposes. The foundation for the inner hinterland, which was composed of the relatively small area of the Basin of Mexico and adjoining parts of western Tlaxcala and southern Hidalgo, was laid during the Terminal Formative period and included the area that directly participated in Teotihuacan's formation. This inner hinterland was

characterized by a top-heavy administrative structure and settlement patterns that gave primacy to the urban core (Hirth 1978: 331). All sites included in the present study fall within Hirth's proposed inner hinterland.

The outer hinterland came about after Teotihuacan solidified its local power base in the Basin and moved outwards with a view towards expansion. Regions such as the Rio Amatzinac Valley, and parts of Morelos, Toluca, Puebla, Tlaxcala, Hidalgo, and Guerrero appear to have been included in this outer hinterland, although our knowledge of some of these areas and of the roles they played in the Teotihuacan state is still incomplete. The role of the outer hinterland was twofold—it both provisioned the core and acted as a market for Teotihuacan exports. Teotihuacan relied on these areas to both supply the core population with certain commodities and to provide an expanded market system into which Teotihuacan could send the wares from its expansive craft sector. Hirth argues for a dynamic relationship between Teotihuacan and its hinterlands, yet it is unclear whether the relationship was one of military, ideological, cultural, or economic subordination and control, or whether subordination is an appropriate description at all. It is equally possible that outer hinterland communities were allied to the core and engaged in mutually beneficial cooperative relationships without having been formally subordinate to Teotihuacan.

Algaze (1993) provides a model of the hinterlands in which even the most distant areas in Mesoamerica that display evidence of Teotihuacan influence can be incorporated. In his article on the expansionary dynamics of early states, Algaze (1993) presents a series of hypotheses concerning the strategic placement of outposts through an

expanding state's periphery. These outposts, which were positioned in peripheral, underdeveloped areas by core areas functioned as "dendritic centers" that attracted information and resources and channeled them to the core area. Algaze presents a modified form of Santley's (Santley 1989; Santley et al. 1984) three-pronged peripheral outpost scheme, stating that there were three distinct types of core outposts utilized by Teotihuacan: those that were 1) placed along natural corridors of trade and communication, 2) in the midst of important polities controlling desired resources, and 3) near previously undeveloped resource concentrations (Algaze 1993).

Following Santley (e.g. 1984; 1989), Algaze (1993) cites the placement of the first type of site in areas such as the Tehuacan Valley and Matacapán. Kaminaljuyu is cited as an example of the second type of site. Sites of the third type were exemplified by El Grillo, Tingambato, and Ixtepete—sites with Teotihuacan materials in the mineral-rich regions of northern and western Mexico. It could also be argued that many sites described in the Basin of Mexico surveys (Sanders et al. 1979, Gorenflo and Sanders 2007) that appear to develop rapidly in the Early Classic are sites of the third type, where Teotihuacan was actively controlling the procurement of natural resources such as obsidian, lime, and salt. The proposed scenarios for contact with less developed polities, or those in control of valuable resources are useful in the sense that they force us to consider that not all sites within ancient states and empires necessarily had the same relationship to the core as others, but in each case further detailed research is needed to determine the exact nature of that contact.

Algaze's model further suggests that the outposts in less (or asymmetrically) developed polities frequently were not only beneficial to the core, but also to the receiving polity or area where the outposts were placed. This departs from most core-periphery theory that posits that the core is uniformly exploitive and the periphery is invariably exploited. Algaze maintains that the nature of the relationship was asymmetrical in the core's favor, but that the outposts were not necessarily forced on the recipient communities; to do so would have been expensive and impractical. Instead, this peripheral outpost system was a convenient way of informally and inexpensively controlling the flow of information and resources to the core. Similarly, Manzanilla (2001) argues that Teotihuacan operated as a dendritic state, or one that placed "extractive colonies" in key locations in resource-rich zones in its periphery, without maintaining control over a large continuous territory.

Blanton et al. (1996) take a divergent yet complementary approach to characterizing the nature of Teotihuacan. In their discussion of the dual-processual model of the development of Mesoamerican civilizations, the authors argue that the Teotihuacan state epitomizes the corporate strategy model of power relations (Blanton et al. 1996: 9). The supporting evidence Blanton et al. (1996: 10) draw on includes the large open spaces at Teotihuacan such as the Ciudadela that could have held much of the city's population for communal events, the emphasis on building large monuments while simultaneously lacking evidence for a cult of the ruler, an inclusive state ideological system that focused on natural forces and cosmological principles rather than an ethnic-centric or patrimonial religious system, and the dissemination of its ideological system across large territories

that indicates "...its strategy of institutional and cultural restructuring of a periphery." Interestingly, and in direct contrast to the other models discussed above, most of the criteria used by Blanton and colleagues (1996) to underscore Teotihuacan's corporate structure are the same criteria used by others who argue that Teotihuacan is better understood as an empire (e.g. Bernal 1966; Smith and Montiel 2001).

The Case for Imperialism

Traditional definitions of empires view the "...empire as a territorially expansive and incorporative kind of state, involving relationships in which one state exercises control over other sociopolitical entities (e.g. states, chiefdoms, non-stratified societies)..." and these empires occur "...along a continuum from weakly integrated to more highly centralized polities" (Sinopoli 1994: 160). While the domination of surrounding areas (both near and far) by a central polity is key to the definition of an empire, scholars distinguish between a range of imperial forms that differ based on the degree to which they exert political and economic control over conquered areas. At one end of the spectrum are weakly integrated hegemonic empires, which are characterized by informal and indirect methods of rule as they rely more heavily on influence than direct intervention in the day to day workings of their subordinates. At the other end of the spectrum are centralized, highly integrated, territorial empires that take a more direct hand in administering subject territories, often through the use or threat of force (Doyle 1986: 40).

Empires have historically taken diverse (and often variable) approaches to the incorporation and control of territories, some of which alternately required less or more direct forms of intervention. Variability in the development and expression of imperial states makes comparisons between them and recognizing them in the archaeological record difficult. Empires may differ from each other in a number of ways, including the degree to which local elites in newly conquered regions are incorporated or replaced, the ways in which ideology is wielded by the empire and the extent to which preceding or local belief systems are maintained or subordinated to the imperial ideology, the patterning of incorporated territories, and the extent to which regional settlement patterns are affected, to name a few (Sinopoli 1994: 163-171; Alcock et al. 2001). These criteria are seen to vary not only between empires, but also within empires, since different strategies may be employed for conquering and controlling certain territories based on local and historical contexts (Ohnersorgen 2006). Furthermore, the strategies of expansion and consolidation may vary even within the history of a single empire, meaning that a characterization of imperial control during one period will not necessarily apply to other periods of its history (Luttwak 2016). However, there are enough similarities between polities categorized as empires that the term remains a useful one in describing certain expansive sociopolitical formations, and to give rise to a substantial body of scholarship on historical and archaeological empires (e.g. Sinopoli 1994; Chase et al. 2009; Smith and Schreiber 2006; Alcock et al. 2001; Turchin 2009; VanValkenburgh and Osborne 2012; Smith and Montiel 2001; Conrad and Demarest 1984).

The Aztec empire provides an excellent example of how imperial strategies may have been locally variable subject to the needs of the empire. The Aztec empire has traditionally been viewed as an example of a hegemonic empire, or one that preferred to rule through indirect means (Smith 2001). However, research at the Aztec period site of Cuertlaxtlan, Veracruz, revealed Aztec artifacts that suggested a more direct relationship to the empire. The Aztec materials present at Cuertlaxtlan included sculpture, ceramics, figurines, and architecture, which indicate that the Aztec empire intervened and materially invested in the area to a rather strong degree. These finds suggest that not all provinces in the empire were managed through indirect rule (Ohnersorgen 2006). One of their strategies, which are increasingly thought of as being of variable intensity depending on location and time, possibly included colonization and other more intensive forms of administrative rule. Artifacts such as temple models and figurines, which have been linked to domestic ritual, underscore the presence of imperial ideology in hinterland provinces, and suggest their importance in the maintenance and control of provinces.

Teotihuacan has also been characterized as an empire. Smith and Montiel (2001) argue that Teotihuacan qualifies as an empire under the model they lay out, which closely follows Doyle's (1986) behavioral definition of imperialism as a society that either formally or informally dominates a subordinate one. They single out three important traits of an empire that can be tested archaeologically: 1) a capital city that is sufficiently large and complex to rule an empire, and also one that manifests a certain imperial ideology, either by overt displays of militarism, or the glorification of the ruler, 2) there must be evidence for the domination of a territory that may include economic exchange

between the capital and the provinces, or some sort of political control of the provinces, and 3) the projection of economic, political, and cultural influence over a broader international context, which may be evidenced by things such as long-distance trade, military activity in border areas, the adoption of imperial gods, rituals, and styles by distant communities (Smith and Montiel 2001: 247).

Smith and Montiel argue that all three criteria are satisfied, and that there is sufficient archaeological evidence to conceptualize Teotihuacan as an empire, albeit a hegemonic one outside the Basin of Mexico. In regard to the first criterion they state "...the high degree of urban planning suggested by the extensive orthogonal grid layout of Teotihuacan is consistent with [the] city's status as an imperial capital" (Smith and Montiel 2001: 256). Their proposed archaeological correlates for studying the second criterion (political control of the provinces) include evidence of military conquest, the construction of imperial infrastructure, evidence of taxation, exchange between the capital and the provinces, settlement reorganization, and the co-option of local elites. The second criterion is much more difficult to study due to the fact that while imperial iconography emphasizes warfare, there is very little archaeological evidence for military activities outside of the city, which they attribute to the hegemonic nature of Teotihuacan. Nevertheless, Smith and Montiel cite the circulation of several trade goods—many of which are thought to have been controlled by Teotihuacan such as Pachuca obsidian and Thin Orange ware—between nearby regions and Teotihuacan as evidence of imperial domination of a territory. Their argument is that within the proposed territory, the quantities of these trade goods were significantly higher than in areas where Teotihuacan

did not have direct control, such as in the Maya region. (Note 3) Similarly, the discovery of Teotihuacan-like urban planning at many sites in conjunction with the presence of Teotihuacan-dominated trade goods has been used as evidence of imperial control of these areas. The list of sites that Smith and Montiel (2001) consider to have been within the realm of Teotihuacan imperial control include Chingu (near Tula), Huapalcalco, Zazacula, the Yautepec and Amatzinac valleys in Morelos, Ocoyoacac in Toluca, and Calpulalpan in Tlaxcala, among others.

The third and final criterion—international influence, or, as Smith and Montiel put it, the Mesoamerican world system—is studied through long-distance trade and exchange in areas further afield than Teotihuacan's direct hinterland, namely the Maya area. Teotihuacan's cultural influence—as witnessed in both architecture and material culture—can be found as far as Guatemala in sites such as Kaminaljuyu and Tikal (Braswell 2003a, 2003b; Laporte 2003). Many areas within Mexico such as Oaxaca, Yucatan, and the Gulf Coast, show similar or even stronger Teotihuacan influence than the Maya area. Although support for conceptualizing Teotihuacan as an empire has lagged in the archaeological community, based on the supporting evidence for all three of their criteria, Smith and Montiel (2001) conclude that Teotihuacan should in fact be considered a hegemonic empire. They see the complex urban core, the direct influence over an expansive territory in the Basin of Mexico, and cultural and economic influence as far away as the Maya region as *prima facie* evidence for the existence of an empire.

Smith and Montiel provides a convenient checklist of testable criteria for archaeologists, however much of the evidence they cite can and has also been cited by

others in favor of Teotihuacan being seen as a state with dendritic colonies, and does not approach the question of how these hinterland communities related to the core in terms of community and ethnic identity. Although the presence of contact is easy to establish using the archaeological record, determining the true nature and intensity of the influence exerted by the core proves much more difficult. For this reason, a continued combined approach of survey, settlement pattern analysis, excavation, and artifact analysis is needed in order to develop a clearer picture of the social, political, and economic structure of the Teotihuacan polity. And in conjunction with these other types of data, analysis of ritual artifacts has the ability to clarify one way in which Teotihuacan exerted its influence over its hinterlands, which speaks to its nature as a hegemonic or territorial polity.

Excavations in the Basin of Mexico

Scientific excavations of several sites from within the Teotihuacan Valley in the 1960s demonstrate that there were a number of rural villages in the valley that were all more or less strongly affiliated with Teotihuacan, both culturally and economically. In all likelihood the inhabitants were ethnically Teotihuacanos, or if not, then at least so fully integrated that there is no material evidence to suggest otherwise. All of these sites are easy walking distance from the city and therefore probably were involved in supplying the city's population with much needed resources. Based more on the sites' geographic locations rather than on the artifact assemblages it seems that certain sites such as Maquixco Bajo, Tlaltenco, and Tenango were engaged in various types of agricultural

production, while others like Venta de Carpio were exploiting lacustrine resources and producing salt for urban consumption (Sanders 1994; Sanders et al. 1975). These excavations are revealing in that they demonstrate the close connections between the urban center and the nearby settlements in the Teotihuacan Valley.

Most of our knowledge of Teotihuacan-period settlements outside of the immediate vicinity of the urban center, however, is derived from surveys. Excavations in the wider Basin of Mexico are necessary in order to understand the nature of the relationships between the core and its hinterland, and there is a small yet growing number of sites outside of the Teotihuacan Valley that have been explored through archaeological excavations. Many of the excavations were undertaken as brief salvage archaeology projects as modern urban centers in the Basin expand, and the results remain virtually unpublished. This section provides a brief assessment of some of the excavations from the city of Teotihuacan, and then moves outward to several important excavations within the Basin that shed light on the development of rural communities before the rise of Teotihuacan, and how the later state controlled and related to its hinterland. The sites discussed here form the dataset used in this dissertation project.

This project involved the analysis of previously excavated and collected figurines from four sites within the Basin of Mexico. These sites were chosen in order to unravel the complex historical and sociopolitical relationships between smaller sites in the Basin of Mexico and Teotihuacan during the initial emergence and later development of the Teotihuacan state. All four sites selected for this study experienced Teotihuacan period occupation, but all of them had occupation histories that began before or extended after

the period of Classic Teotihuacan. Of the four, Axotlan and Huixtoco were the earliest, followed by Cerro Portezuelo, and Teotihuacan itself. Having a full sequence including a Formative period occupation and then a Teotihuacan period occupation or reoccupation was important for the present study, which was designed to explore the correlates of ideological and ritual assimilation of communities that were incorporated into the first regional polity. As was discussed earlier, when I began this study the number of excavated and published Classic period sites in the Basin of Mexico outside of the Teotihuacan Valley was relatively low. I consider myself fortunate to have been allowed access to materials from these four sites that were all explored by different archaeological projects over the last 70 years. In spite of the inherent limitations in these data sets, which will be discussed fully in the following chapter, the ability to compare the figurine assemblages from four different sites from the Basin represents an excellent opportunity to explore the ideological environment of the Basin of Mexico leading up to and during a period of intense sociopolitical change.

This section of the chapter introduces the three rural sites under investigation and presents the results of research that has been conducted in them over the past century. Information is drawn from a combination of survey and excavation projects.

Axotlan

The site of Axotlan is one of the better-published salvage excavations from the Basin, and results from this excavation contributed to several publications (García Chávez et al. 2005, 2015, Clayton 2011, 2013), and a dissertation (Clayton 2009).

Axotlan is located in the Cuautitlan region, in the municipio Cuautitlan Izcalli about 40km to the west of Teotihuacan, and was first discovered by the settlement survey conducted by Gorenflo and Sanders (2007). Settlement survey data indicate that there was limited occupation in the area prior to the Classic period, when a number of sites appear in the lower piedmont and the alluvium (Gorenflo and Sanders 2007). Extensive salvage excavations began in 2001 led by García Chávez and colleagues (2004), which explored a Miccaotli-Tlamimilolpa phase site (or Early Classic in the chronology used here). Axotlan is located on the alluvium just east of Lake Xaltocan, an ideal area—from the point of view of the state—in which to establish an agricultural community, and the 10 hectare site and is believed by many to represent part of an active rural resettlement program by the Teotihuacan state during its ascendancy (Clayton 2013: 90, García Chávez 2015).

Excavations in three *frentes* (general areas of excavation) revealed architecture and an artifact assemblage that strongly argued for a close relationship with Teotihuacan. The team uncovered several apartment compounds arranged in the characteristic Teotihuacan orientation of 15 degrees east of north, each containing typical Teotihuacan ceramics, and artifacts strongly connected to Teotihuacan ritual and ideology (García Chávez et al. 2015). The residential compounds had different spatial layouts and were constructed with materials of variable quality, indicating social stratification or variability in the wealth of the settlement's residents. A notable departure from Teotihuacan domestic ritual and building practices, however, was the lack of patio altars in Axotlan apartment compounds, which are nearly ubiquitous at Teotihuacan (Clayton 2009: 20).

Based on Millon's (1973) suggestion that a typical Teotihuacan apartment compound housed between 60 and 100 people and at least two compounds were located during excavations that were not spatially exhaustive, the population of Axotlan during the Classic period may have ranged from several hundred to 1,000 people (Clayton 2009: 88). García Chávez et al. (2004: 101) believe the Classic area of the site may have been occupied for as long as three centuries.

Of the three *frentes* of excavation, Frente 2 yielded the apartment compound with the highest quality construction materials, leading García Chávez et al. (2015) to suggest that the residents of this compound were of the highest status within the Axotlan community, and may have originally housed a lineage head. In Frente 2, which is the only operation for which I was able to locate any of the archaeological material in storage, excavations explored an area of approximately 1,760 square meters (a 40 x 44m rectangle). (Note 4) Excavations revealed structures that were nearly identical to Teotihuacan-style Tlamimilolpa apartment compounds, and a possible neighborhood temple to the east of the domestic rooms, complete with *talub-tablero* architectural features (García Chávez et al. 2004: 99-104; 2015: 434). Unfortunately, the walls and many areas of the structures were in poor condition due to 20th century agricultural activities. Nevertheless, enough survived that the excavators were able to reveal the layout of the compound, and at least 60 rooms and four patios in the portion of the compound that was excavated (García Chávez et al. 2015).

Axotlan had the full range of standard Classic Teotihuacan wares including exotic imports such as Thin Orange Ware, utilitarian wares produced within the city such as San

Martín Orange, and typical Teotihuacan ritual artifacts such as candeleros and composite censers. They note, however, that despite not finding any Formative period structures, Ticomán ceramics were found all over the site as well, and beneath the Tlamimilolpa phase floors (García Chávez et al. 2004: 35, 144).

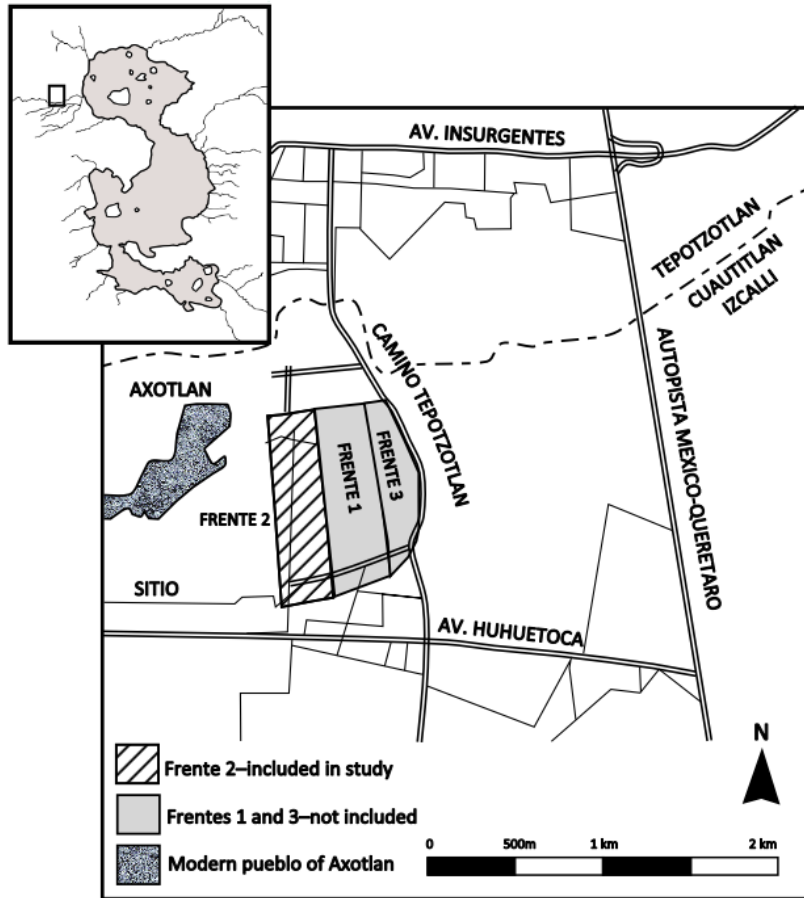


Figure 3.7: Axotlan site map (after García Chávez et al. 2004)

Based on a comparative analysis of mortuary ritual and burial practices at Axotlan and several Teotihuacan apartment compounds, Clayton (2013: 102) concludes that

...the architectural, ceramic, and mortuary data from Axotlan demonstrate its close relationship with the urban population of Teotihuacan. Residents of this settlement participated in direct exchange with urban potters or merchants and lived in apartment compounds like those of Teotihuacan.

The use of specialized ceremonial objects in some burials suggests that residents of Axotlan shared ritual practices with the urban population that reinforced a similar social structure.

Clearly, the picture that emerges from Axotlan is of a community with strong economic and social ties to the core. If active resettlement of key rural areas did indeed occur, then these individuals may have even originated in the Teotihuacan Valley and would have seen themselves as Teotihuacanos. Evidence suggests that this was particularly true for women at the site of Axotlan, many of whom may have been born in the city and relocated to Axotlan (Clayton 2009: 90). There were some notable differences, however, in certain mortuary practices in Axotlan compared to urban apartment compounds at Teotihuacan itself (among which there was also variability). It is incorrect, therefore, to speak of a uniform and unvarying Teotihuacano identity, although there is evidence to support the claim that residents at Axotlan were strongly connected to the urban core through economic and ritual practices (Clayton 2011).

The general consensus between scholars (i.e. Clayton 2009, 2013; García Chávez et al. 2004, 2015) is that Axotlan was part of an active program of rural resettlement and colonization by Teotihuacan in the Early Classic, after an occupational hiatus after the Late Formative. This idea of an occupational break is supported by the lack of pre-Tlamimilolpa architecture and Terminal Formative ceramics, and the strong cultural ties between residents at Axotlan and the urban Teotihuacan population. The lack of Tzacualli or Miccaotli ceramics is somewhat persuasive evidence, however scholars have questioned the utility of using Tzacualli ceramics outside of the Teotihuacan Valley to reconstruct occupational sequences (e.g. Parsons 1971; see discussion in following

section) in the Basin of Mexico. Furthermore, the lack of earlier architecture at the site is somewhat less compelling given that the full extent of the site was not explored by the excavations, and García Chávez et al. (2004: 99) mention that much of the Teotihuacan period architecture had been dismantled in antiquity and the Colonial period for later construction projects, which calls into question whether even earlier architecture would have survived the construction of Teotihuacan period apartment compounds. The presence of Terminal Formative and Early Classic figurines at this site may suggest that there may not have been as great of an occupational gap as has been argued by others. I return to this point in Chapter 5.

Cerro Portezuelo

Cerro Portezuelo is located 40 kilometers south of Teotihuacan in the Texcoco region, and seems to have been continuously occupied from the Late Formative to Postclassic period (based on ceramic evidence), making it an excellent case study for the exploration of how rural sites weather the rise and fall of state-level societies in a regional context. Recent studies of the site suggest that although Cerro Portezuelo displays evidence of interaction with Teotihuacan, and almost certainly was politically subordinate to it, it does not appear to have had as strong a tie to the urban core as did other sites in the Basin (Nichols et al. 2013, Clayton 2013).

Tolstoy (1958) and Parsons (1971) conducted two of the earliest surveys of the area. Tolstoy (1958: 73) made collections in the area of Cerro Portezuelo, and the systematic survey of the Texcoco region conducted by Parsons and his team clarified the

occupational history of the site (and surrounding region) in more detail. The Cerro Portezuelo site (designated Tx-EC-32 and Tx-LC-18) was described as a roughly 60 hectare area covered in "very light" to "light-to-moderate concentrations of surface pottery" in the Early Classic, expanding to as much as 80 hectares by the Late Classic (Parsons 1971: 61, 66). Population estimates for the area were quite low and ranged from 300 to 900 people in the Early Classic to perhaps 400-1200 people in the Late Classic in the more densely populated core of the site, with a highly dispersed population in the surrounding areas. Parsons admitted that a better characterization of the site and more precise population estimates were impeded by a heavy Early Toltec occupation, however he remained skeptical that Cerro Portezuelo was ever a large population center (1971: 196)

The heavy Early Toltec overlay could also explain the virtual absence of Tzacualli pottery and other surface evidence for a Formative occupation of the site. The scarcity of diagnostic Tzacualli pottery both at Cerro Portezuelo and other sites in the Texcoco region was not interpreted as a de facto limited Terminal Formative occupation. Parsons (1971: 189) acknowledged the possibility that the Texcoco region could have been sparsely populated during the Tzacualli period in the Teotihuacan Valley, but he also allowed for the possibility that Tzacualli ceramics may have been a ceramic phase largely confined to the Teotihuacan Valley, which would significantly reduce their effectiveness in locating Terminal Formative occupations elsewhere in the Basin of Mexico. Parsons mentioned that Tezoyuca-Patlachique complex ceramics were more abundant outside of the Teotihuacan Valley compared to Tzacualli, and it is a very real possibility requiring

further investigation that early Teotihuacan-period ceramic phases to did not directly match with ceramic chronologies in the rest of the Basin.

Based on the location of the site in the lower piedmont of the eastern Sierra Madre, Parsons (1971) suggested that the inhabitants could have cultivated a range of different subsistence crops while simultaneously exploiting lacustrine resources. Although there was a robust Formative period population in the Texcoco region, during the Classic Period there was a general trend towards depopulation in the Southern Basin, including Texcoco. Occupation continued at Cerro Portezuelo though, leading Sanders et al. (1979) to suggest that it could have functioned as an administrative center that extracted resources from the region for transport to the urban core, although Parsons (1971) was more hesitant to refer to this site as a regional center during the Classic.

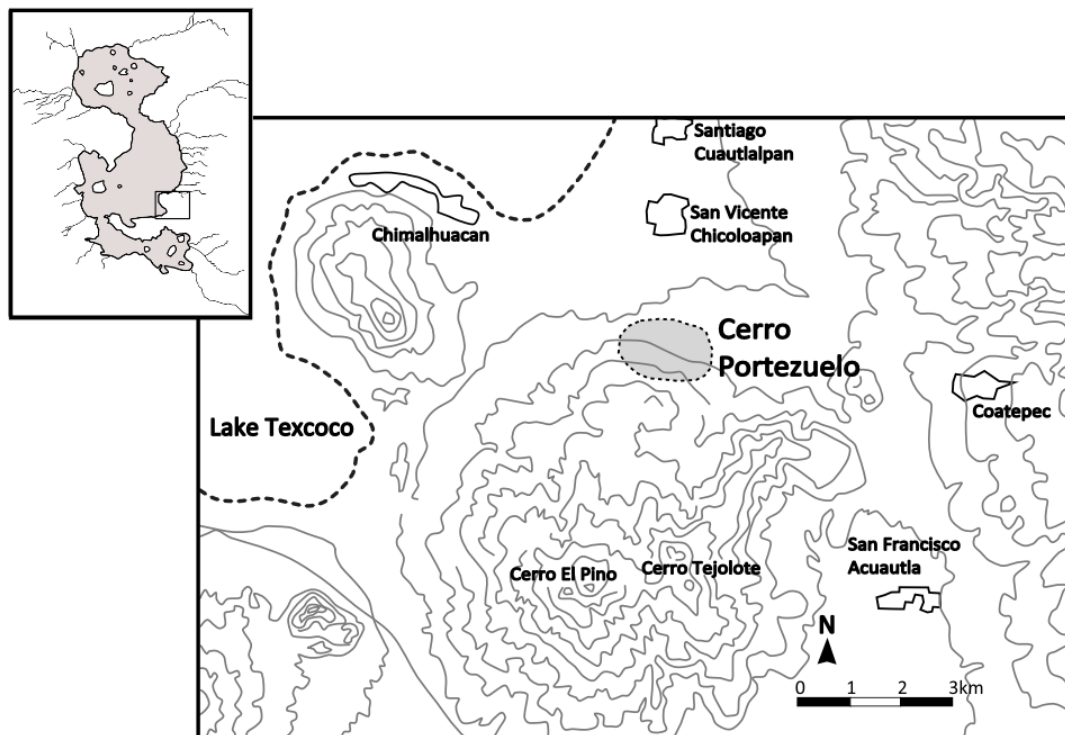


Figure 3.8: Map of Cerro Portezuelo's location in the Texcoco region (after Hicks 2013)

Our knowledge of the site comes from a series of excavations conducted in the 1950s and 1960s, and analysis of the recovered material remains over the next 50 years (Nicholson and Hicks 1961; Nichols et al. 2013, Hicks 2013). In 1954 and 1955, George Brainerd from UCLA mapped the site and began excavations. The first season was focused mainly on establishing a site chronology through stratigraphic testing. His team excavated a series of 2x3m trenches, and expanded two of the trenches that uncovered complex architecture (Nichols et al. 2013: 48). The second season focused on excavating architecture, and to that end, a series of 5x5m exposures were excavated. In all, Brainerd and his team excavated 67 trenches and four larger exposures, referred to as Complexes A-D (Nichols et al. 2013; Hicks 2013). (Note 5) The project was interrupted by Brainerd's untimely death in 1956, but research resumed under the direction of Nicholson and Hicks (1961) in the 1960s and the recovered materials are now housed at the UCLA Fowler Museum in Los Angeles (Hicks 2013).

The majority of the excavated trenches yielded mostly ceramics and other cultural materials, however some yielded civic-ceremonial architecture and burials (Complexes A-D), and these units were extended to better explore the constructions. One of the extended exposures (Complex C) revealed a Teotihuacan-period platform that was built in three construction phases beginning in the Tlamimilolpa phase. Excavations at this complex covered approximately 440 square meters, and explored multiple levels and sides of the structure. (Note 6) Phase 1 of the structure was a 13x13m platform with sloping sides that was then extended to a 21.5x18m platform in Phase 2, and finally was modified again in Phase 3, although the extent of the modification during this phase is not

clear. Excavations of this platform revealed several ceramics caches and burials (Hicks 2013). No domestic structures were located or explored, and we do not know whether there are Teotihuacan-style apartment compounds at the site.

The discovery of the large and well-built stuccoed architecture at Complex C suggests the presence of local elites who might have gained power and prestige through alliances with Teotihuacan (Hicks 2013), but variability in the ceramic complex does not indicate that Cerro Portezuelo was completely beholden to Teotihuacan. Ceramic vessels recovered from a cache (Cache 93-2, Trench 93, Complex C) within this architecture indicate that there were thematic similarities between the types of vessels used in ritual practices at Cerro Portezuelo and at Teotihuacan, but significant differences in the style of execution suggest that these vessels were local wares made in a style related but not identical to the Teotihuacan style (Clayton 2013: 95). INAA confirmed that the vessels were not from Teotihuacan, but also showed origins in multiple regions of the Basin. Clayton suggests that the absence of certain categories of ceramics, such as candeleros, composite censers, and adornos is indicative of divergent ritual practices at this site (Clayton 2013: 100). The absence of candeleros is indeed a significant gap in standard Teotihuacan ritual paraphernalia. However, given that no domestic contexts were excavated at this site, it is possible that they were present at the site and simply not encountered during archaeological investigations.

During the Terminal Formative, Cerro Portezuelo was engaged in regional systems of exchange evidenced by compositional analysis of ceramics, although these connections were mostly confined to the southeastern Basin. During the rise of

Teotihuacan and coinciding with the increasing depopulation of the Texcoco region, these alliances seem to have shifted to the north (Teotihuacan) and west (Azcapotzalco) of the Basin (Clayton 2013, Nichols et al. 2013). Both visual and compositional analysis of ceramics from the site indicate that Cerro Portezuelo was producing the majority of its ceramics locally (Branstetter-Hardesty 1978), and in addition maintained exchange relationships with areas of central Mexico besides Teotihuacan. "Although Cerro Portezuelo was politically subordinate to Teotihuacan, there is little evidence of intensive exchange with, or economic dependence upon, the capital. Significantly, Cerro Portezuelo maintained exchange ties with settlements other than Teotihuacan, suggesting that administration of the area may have been indirect" (Clayton 2013: 91). INAA results for the broader Cerro Portezuelo assemblage indicate that significant numbers of vessels were coming (either directly or indirectly) from the Teotihuacan heartland, as well as from the western Basin (Clayton 2013: 97).

Huixtoco

The site of Huixtoco (alternately referred to as San Buenaventura) is located in the Chalco region in the Southeastern Basin, in the municipio of Ixtapaluca near the modern town of San Marcos Huixtoco, approximately 44km south of Teotihuacan. The site falls within the Chalco-Xochimilco region surveyed by Parsons et al. (1982). Huixtoco is located between the ancient lake shore of Lake Chalco and the sierras to the east, which would have allowed residents to exploit lacustrine and mountain resources, as had also been the case with Cerro Portezuelo.

Parsons et al. (1982: 128) noticed a series of connected mounds and made some surface collections during survey that reflected a Formative through Postclassic occupation (or series of reoccupations). Parsons et al. (1982) estimated the population of the site as having been between 1,200 and 2,400 people, based on the number of visible mounds and the extent of the artifact scatter (approx. 60 ha). Similar to their survey of Cerro Portezuelo, Parsons et al. (1982) noted the near total absence of Tzacualli ceramics, potentially indicating that population in the area declined after the Late Formative, however Tzacualli ceramics are a problematic indicator of population size in the Basin of Mexico (see previous discussion in the Cerro Portezuelo section). Furthermore, the excavators found materials during surface collection and excavation that pointed to Classic and Postclassic period occupations or re-occupations (Gamboa and Garcia 2015: 3).

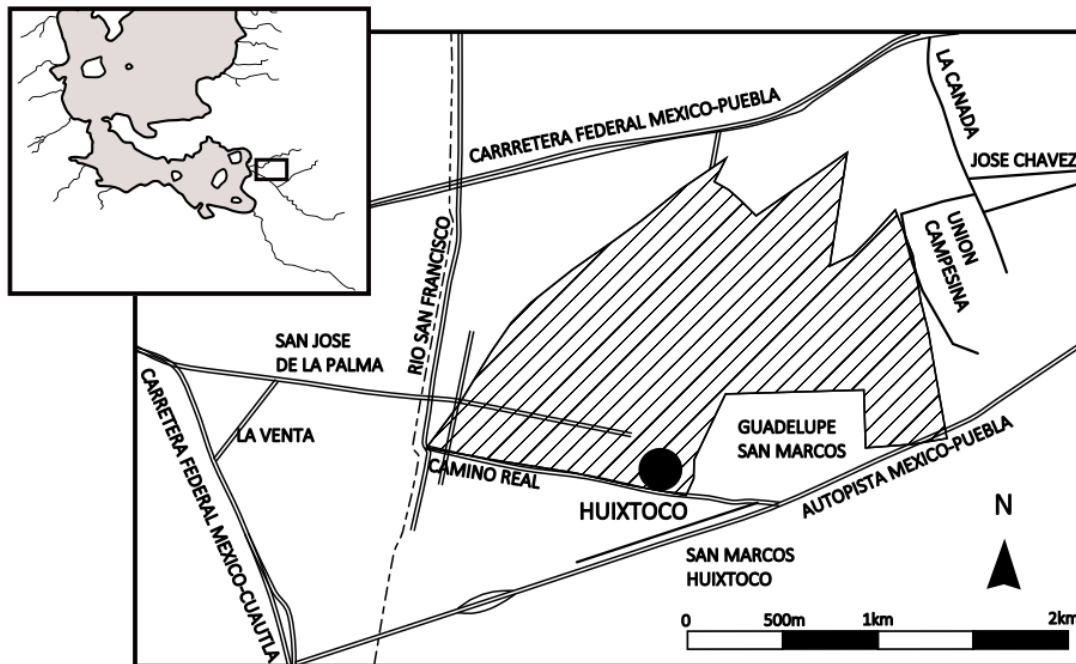


Figure 3.9: Location of Huixtoco excavations (after Valadez et al. 2004)

Between 1998 and 2000, the site was excavated by a salvage archaeology project in advance of a new housing development (Valadez et al. 2004, García Chávez et al. 2015; Gamboa and García 2015). Salvage excavations in different parts of the site revealed Late Formative and Classic period architecture. Excavation of the Late Formative architecture yielded platforms with superstructures. Over 100 burials were found excavated into the platform structure, most of which seem to date to the Formative occupation (Gamboa and García 2015). (Note 7) There was much variation in burial treatment, including the orientation of the body and grave goods. Only three burials were found in which the body was laid in an extended position—all others were flexed and laid horizontally on their left or right sides. Interestingly, those on their right side had their heads pointing east, while those on their left sides had their heads pointing west (Gamboa and García 2015: 8). Gamboa and García do not mention whether age or sex seem to influence this discrepancy. Several detached heads were also found, suggesting human sacrifice or purposeful secondary interment. Burial practices became increasingly elaborate over time. The earliest burials were austere, but later ones had an increasing amount of grave goods and bodies were covered in a layer of red cinnabar, absent in earlier burials. The amounts of grave goods did not seem to correlate with age or sex of the individuals.

Excavation of the Classic period area of the site revealed architectural remains from two Teotihuacan building phases, the earliest of which dated to Miccaotli. The Miccaotli phase walls were roughly made and seemed to belong to a domestic structure, although excavators were unable to determine the limits of the structure (García Chávez

et al. 2015: 426). The excavators found a road or street approximately 30m wide and at least 40m long that abutted the Miccaotli phase construction. The second building phase was a Tlamimilolpa apartment compound that was built directly on top of the Miccaotli architecture. The apartment compound architecture was of a higher quality than the preceding construction phase, and resembled the urban compounds of Teotihuacan itself in a variety of ways. The compound was oriented 15° east of north, and the rooms were gathered around an open patio with evidence of an altar, in typical Teotihuacan fashion. The building also incorporated a typical drainage system, the extension of which led archaeologists to suggest that there were at least four other similar apartment compounds at this site (García Chávez et al. 2015: 427). Burial patterns and practices also strongly resembled those practiced at the urban core, with individuals being interred in holes excavated into the domestic living space floors. At least one of these burials included Thin Orange ceramics as well—an important Teotihuacan export.

Miccaotli and Tlamimilolpa ceramics were found in and around the structures, however García Chávez et al. indicate that there were no later Classic period ceramics were found at the site, suggesting a sharp reduction in population after the Early Classic or an altogether abandonment. All of these findings led García et al. (2015: 427) to conclude that there was an Early Classic community at Huixtoco with strong cultural ties to the core of the state, evidenced by Teotihuacan style domestic architecture, burials that strongly mirrored burial practices in urban apartment compounds, and a range of Teotihuacan style material culture. It remains unclear, however, whether this Early Classic occupation was a continuation from earlier periods, or a reoccupation after a

hiatus during the Terminal Formative. García Chávez et al. (2015) argue that this occupation was similar to that of Axotlan (and many other sites around the Basin) where communities were reintroduced as part of a state-level resettlement program. The paucity of Tzacualli ceramics found by Parsons et al. (1982) could support this conclusion, as would the changes in burial and building practices.

It is still debatable, however, whether the Early Classic population is in some ways a continuation of the Formative occupation or an outright resettlement by Teotihuacan derived populations. Low amounts of Tzacualli ceramics are not enough in themselves to settle the debate. Given that the excavated Late Formative and Early Classic architecture at the sites were spatially removed from each other, it is entirely possible that there may have been an intermediate or continuing occupation from the Late Formative that was not located. If this was the case, however, the appearance of Teotihuacan-style apartment compounds and changing burial practices could still reflect immigration from the core. Similarly these could be results of cultural/ideological imposition from the core onto hinterland areas, or emulation of core practices that were associated with social prestige and rank. As it stands, there may not be enough information to conclude which interpretation is correct—only further excavation and analysis of osteological and cultural material will answer definitively, and the opportunity to excavate more of the site has most likely passed given the rate of urban expansion in the area.

The Relationships Between the Sites Under Investigation

The four sites that comprise this study had divergent social histories and developed in significantly different spatial, cultural, and historical trajectories. The sites of Axotlan, Cerro Portezuelo, and Huixtoco had Late Formative occupations of varying sizes, and in comparison, Teotihuacan was the newcomer. Soon Teotihuacan eclipsed other sites in the Basin of Mexico, becoming a primate center, and was the first expansionary state in the central Mexican highlands. Historically, the Basin of Mexico has been understood by archaeologists to have been under the direct control of Teotihuacan. Although rural sites were no doubt politically subordinate to Teotihuacan, new research is revealing a myriad of possibilities for the way rural hinterland communities articulated with regional economic and political structures. Some sites, exemplified by Axotlan and perhaps even Huixtoco, may have been settled at the behest of the early state during a period of rapid political and territorial expansion when the state was concerned with cementing a network of provisioning communities. Others, such as Cerro Portezuelo, seem to have had dynamic social and economic ties to other areas of the Basin in addition to those they had with Teotihuacan itself.

Survey, excavation, and ceramic data reveal differences between Axotlan and Cerro Portezuelo in a number of areas including local traditions, settlement patterns, and ties to the state. Axotlan was built during the height of Teotihuacan and displayed Teotihuacan-like domestic and civic spatial arrangements and material culture. Similarly, the presence of domestic ritual artifacts such as candeleros suggests that the people living

at Axotlan had ritual practices similar in some key ways to those of residents of the urban metropolis.

Cerro Portezuelo, on the other hand, appears to have had a different relationship with Teotihuacan. Certain gaps in both Teotihuacan-made and exotic imported ceramics at Cerro Portezuelo, as well as marked differences in its ritual assemblage when compared to that of Teotihuacan seem to indicate that it had different—perhaps weaker—social and economic ties to Teotihuacan than did Axotlan (Clayton 2013: 97). Clayton stresses that while Cerro Portezuelo was no doubt politically subordinate to Teotihuacan given its size and proximity to the urban core, it simultaneously maintained economic and social ties to sites other than Teotihuacan. While it does not necessarily follow that lateral exchange relationships between communities within a state or empire equate to indirect control by the core, the gaps in the ceramic assemblage indicate that Cerro Portezuelo had a less direct relationship with Teotihuacan than did Axotlan. Although Cerro Portezuelo did have Teotihuacan ceramics, many were at lower percentages than would be expected (Thin Orange), and some types such as candeleros were entirely absent.

Available evidence indicates that Axotlan and Cerro Portezuelo

...had differing relationships with Teotihuacan. Axotlan remains a strong candidate for an administrative node, while Cerro Portezuelo might have been only loosely integrated into Teotihuacan's political and economic networks. This is not to say that the latter was not subordinate to the state. On the contrary, by virtue of its proximity to the urban center and its small size, Cerro Portezuelo was well within the reach of Teotihuacan's power. However, the data that are currently available do not constitute robust evidence of direct local administration by elites associated with the capital or a close social affiliation with the urban population (Clayton 2013: 102).

Yet this does not answer the question of whether Cerro Portezuelo is atypical for sites within the Basin. Given the powerful influence of Teotihuacan over much of Mesoamerica, it would be surprising to not find traces of its influence at a site as close to the core as 40 kilometers, and there is in fact a large amount of evidence for this interaction. The differences, however, between typical Teotihuacan assemblages (both at the core and at sites like Axotlan) and that of Cerro Portezuelo are striking—they point to an unexpectedly large degree of social and economic differences between presumably subordinate sites within the Basin. It seems that some have strong and direct ties to the urban core, while at other rural sites there is a weaker connection to the core. Perhaps Axotlan is typical for sites that had Classic occupations established by the state (although there is cause to question the gap in occupation), while Cerro Portezuelo is an example of sites with histories of previous occupation. In other words, perhaps many sites with pre-Teotihuacan occupation display similar discrepancies, and the differences at Cerro Portezuelo are a result of persistent local preferences and practices that have nothing to do with the power of central administration. Conversely, perhaps these discrepancies are indicative of asymmetric policies of control by the core—the fact that the state seems to have colonized Axotlan (which happens to be on fertile agricultural land), while taking less of an interest in Cerro Portezuelo could indicate the core's differential interest in certain areas of the Basin. Unfortunately, we cannot know until more sites within the Basin are excavated.

Scholars hold similar views of Axotlan and Huixtoco in that both sites were resettled in the Early Classic, following an occupational hiatus after a depopulation event

in the Terminal Formative. The middling to robust Late Formative occupations are believed to be unrelated to the later Early Classic occupation, mostly due to a lack of architecture from intermediate periods, and few Tzacualli ceramics. But as we have seen in the case of Cerro Portezuelo, even during the height of Teotihuacan, sites maintained lateral ties to other settlements in the Basin, and only 12.4% of the ceramic assemblage from Cerro Portezuelo came from the Teotihuacan Valley—the same percentage as ceramics coming from the western Basin (Clayton 2013). If during the Classic period, when Teotihuacan was at its zenith, regional sites were not fully emulating or entirely reliant on goods from Teotihuacan sources, then why should we expect adherence to this style in earlier periods when Teotihuacan was still developing? Why is a paucity of Tzacualli ceramics—a style that originated in the Teotihuacan Valley—an indication of no Terminal Formative occupation in areas outside of the Valley? Similarly, apartment compounds were not widely built in Teotihuacan itself until Tlamimilolpa, and so even in sites where the earliest Teotihuacan style buildings we find are Tlamimilolpa apartment compounds, it is not the same as finding evidence of no Terminal Formative settlement. Terminal Formative structures may have been made of less permanent materials, destroyed by the building of later structures, or excavations of limited scope may not have located them. The ceramic chronology for the greater Basin of Mexico is also a subject of debate.

Millon (1960) summarizes the debate from over half a century ago regarding the origins and and chronology of Tzacualli ceramics, concluding that Tzacualli was a phase in the northeast Basin contemporaneous (and found in small quantities) with late

Ticomán ceramics elsewhere. Sixty years of research since then has pushed the Tzacualli phase later in time, and most recent chronologies place the start date of Tzacualli ceramics around 1 CE, 100-200 years after the end of Ticomán (e.g. García et al. 2015, Cowgill 2015, Clayton 2013). In his Basin ceramic chronology, Carballo (2007a) on the other hand, places Tzacualli immediately after Ticomán. The point that I wish to make here is that the dates for these ceramic phases move over time, they are generalized over a wide territory, and more work remains to be done on establishing the ceramic chronology for the greater Basin of Mexico. It is probably incorrect to assume that ceramic styles changed at a uniform pace over such a broad geographical area populated by small hamlets and villages. This point is important to later discussions in this dissertation, because the figurines tell a different story about occupational histories than do architecture and ceramics alone. In Chapter 6 in fact, I complicate the idea of a Terminal Formative occupational hiatus at Axotlán, based on evidence from the figurine assemblage.

The picture that emerges from ongoing investigations in the Basin of Mexico is one of increasingly complex intersite dynamics and occupational histories, shifting alliances, and asymmetrical economic relations, power structures, and social affiliations. Through my analysis of figurine assemblages at the sites of Teotihuacán, Axotlán, Cerro Portezuelo, and Huixtoco, I help to alternately support, and complicate, current understandings of the development of a Teotihuacán identity, and the effects that an emerging political power had on local and regional notions of cultural identity and ritual practice. By investigating these, I contribute to a large and still-growing body of

scholarship that seeks to refine our understanding of how hinterland sites were affected by changing regional political dynamics. Teotihuacan had an undeniable impact on communities in the Basin of Mexico, however, these effects seem to have been of variable strength, and of varying importance to communities that fell within the expanding reach of the state.

Discussion and Conclusion

By 1 A.D. Teotihuacan had become the dominant power in the Basin. The degree of urbanism present at Teotihuacan had never before been seen in Mesoamerica, and the city only continued to grow. Areas that had high population levels, especially in the southern Basin, are thought to have been depopulated as people were either drawn to or compelled to relocate to the northern city. Areas that had previously been sparsely occupied were settled by new communities, perhaps at the direction of the state. And still other communities survived this transitional phase and persisted from the Late Formative into the Classic.

The general pattern in the Basin between the first centuries B.C. and A.D. was largely one of extreme centralization as perhaps as much as 90 percent of the previously rural population moved into the core (Sanders et al. 1979). Subsequently, some of this population was resettled into small agricultural communities, particularly in regions of the northern Basin such as Zumpango, Temascalapa, and Cuautitlan. In at least the Zumpango region, Parsons and Gorenflo (2008) interpret these settlement changes as a result of an active resettlement program implemented by the state in order to increase

agricultural production in its heartland. Sanders et al. (1979: 128) write that "...most of Teotihuacan's basic subsistence needs were supplied from a zone within some 20km of the capital." García et al. (2015) note that across the Basin of Mexico, following the apparent depopulation in the Terminal Formative there is a dramatic increase in sites during the Early Classic that display typical Teotihuacan architecture and material culture. It is a short-lived phenomenon, however, as many of these smaller sites are again partially or completely abandoned by the end of the Classic. The only sites that seem to avoid this fate are the larger regional centers (García et al. 2015: 424).

Immediately outside of the Basin of Mexico, The Amatzinac region in Morelos (approx. 100km away) experienced a type of population resettlement similar to the Zumpango and Cuautitlan regions within the Basin. Settlement hierarchy and centralization increased, as did the population, and all in fertile agricultural areas. Conversely, in the Coatlan region of Morelos where the geography is less desirable for intensive cultivation the population was dispersed into smaller settlements in more marginal areas (Hirth and Villaseñor, 1981; Hirth, 1978, 1980). The work conducted by Hirth and Villaseñor is especially interesting in light of the demographic changes occurring in the Basin. Their findings of different population dynamics in different areas of the state after contact with Teotihuacan sheds light on different processes that may have been at work in shaping both the inner and outer hinterlands.

Excavations that have been conducted within the Teotihuacan Valley outside of the urban limits have revealed uniformly Teotihuacan-like artifact assemblages. This suggests that the people in rural settlements in this heartland were either ethnic

Teotihuacanos, or were so tightly integrated into the Valley's material culture that there is no evidence to suggest they were anything other than culturally identical to the urban residents of Teotihuacan. The discovery of a full assemblage of both civic and domestic ritual architecture and associated paraphernalia argues against this second possibility, however, and it seems almost certain that Teotihuacan culture was ubiquitous within the Valley (Sanders 1994; Sanders et al. 1975). The presence of foreigners, however, within the city limits has been extensively documented, but this is not incompatible with an ethnically homogeneous rural heartland.

Clayton's (2013) comparison of the sites of Axotlan and Cerro Portezuelo highlights the differences in the artifact assemblages between the two sites, which has important implications for our understanding of how rural populations in the Basin interacted with or were controlled by the core. Garcia et al. (2004, 2015) argue that Axotlan (similar to Huixtoco) was an intentionally created settlement—one of the rural relocations organized by the state—and there is no evidence to dispute the suggestion that they were anything other than culturally (and perhaps ethnically) Teotihuacano. On the other hand, Cerro Portezuelo exhibits marked differences in its ceramic assemblage compared to that of Axotlan and even the core. Additionally, differences in the domestic ritual assemblage—namely the absence of candeleros—also point towards the population of Cerro Portezuelo being different in certain social aspects including religious and ritual practice. The cause of these differences is impossible to know for certain at this time, but it likely has to do with Cerro Portezuelo's history of Formative occupation and the potential endurance of local traditions.

Survey and excavations beyond the Basin of Mexico and the state's immediate territory have revealed a strong Teotihuacan presence in multiple areas, some of which are attributable to contact and trade, but in some areas the state may have had a more direct hand in the functioning of these areas. Chingú, located near Tula in southern Hidalgo (approx. 60km away) is one such example, where survey has revealed what appears to have been a Teotihuacan enclave (Diaz Oyarzabal 1980; 1991). The similarities between the Chingú and Basin of Mexico artifact assemblages are striking, civic-ceremonial and residential architecture is built and oriented in a Teotihuacan manner, and its position near important raw materials all argue for its status as an enclave, or a deliberately positioned group of Teotihuacanos by the state. Similarly, settlement survey in Veracruz shows a reorganization and centralization of the regional population coinciding with the rise of Matacapán (Santley 1989; Santley et al. 1984). Excavations revealed architecture and material culture strongly connected to Teotihuacan, although just as at Chingú, it seems that many Teotihuacan-style wares were in fact local copies of core products. The presence of almost purely Teotihuacan material culture (either by importation or local emulation) at these sites, coupled with the presence of Teotihuacan-like domestic architecture and ritual paraphernalia, points to them being Teotihuacan enclaves positioned by the state for specific yet distinct purposes.

This chapter has highlighted several important aspects of the political agenda of ancient Teotihuacan with respect to its hinterland. First, coinciding with the rise of the capital city and presumably the state, the Basin of Mexico and large areas outside of it

experienced drastic population changes, both in terms of overall numbers and in settlement distribution. Second, work both within and outside of the Basin indicates that many of these changes were connected to and even at the behest of the state. Third, enough evidence has been amassed to show that the state used different policies of exploitation and interference in different areas within its hinterland, and also within the greater Mesoamerican periphery. The picture that is emerging of the Teotihuacan polity is one of highly differentiated organizational and exploitative policies regarding its hinterland and the greater Mesoamerican sphere.

Different regions of the Basin displayed different degrees of similarity to the core, which correlated with the extent of active state interference in those areas. Nearby areas touching on the Basin of Mexico, such as Morelos and Hidalgo, displayed even more disparate reactions to contact with the state. Judging by the settlement pattern evidence, Morelos seems to have been more or less included in the hinterland that was previously thought to have only included the Basin. Chingú in Hidalgo more closely resembles Matapan in Veracruz in that they both appear to have been Teotihuacan enclaves, or following Algaze and Santley, (Algaze 1993; Santley 1989) core outposts. The archaeological evidence does in fact seem to support this model, and it appears that beyond the continuous territory directly under its control, the state was establishing colonies or enclaves in key locations to either dominate resource extraction or to facilitate Teotihuacan's expansive trade networks.

These conclusions are based largely on survey data, supported by some excavations. In order to better understand the socioeconomic functioning of the ancient

Teotihuacan state, more excavation needs to be done, primarily outside of the urban core, and comparisons of extant and future archaeological materials will help clarify the nature of interactions between various regions that fell under the control of the state. More excavations of rural sites in the Basin of Mexico will allow more comparisons to be made in the manner that Clayton (2013) compares Axotlan and Cerro Portezuelo. Comparisons like this reveal a great deal about the similarities and differences between settlements under the control of the state, which greatly clarifies our understanding of how these rural sites related and compared to one another and, ultimately, the state.

Chapter 3 Notes

1) See Cowgill (2015: 141-143) for a detailed discussion of the difficulties in estimating population size within the urban limits of Teotihuacan.

2) Research methods for Sanders' (1965) project included archaeological survey, surface collections, and excavations. Population and site size estimates were based on architectural density (observed both during excavation and by remains visible on the surface) and datable ceramics collected during survey. Basin of Mexico population estimates (Sanders et al. 1979) were based entirely on the results of survey and surface collection data, and were achieved through mixed methods. Population totals were calculated by combining house mound density (when such mounds were visible) multiplied by a mean family size with ceramic sherd density and dispersal patterns when surface architecture was obliterated. For a more detailed description, see the Sanders et al. (1979: 34-40) discussion of their population estimates methodology.

3) Of course, fewer Teotihuacan goods in the Maya region would no doubt also be a result of the extreme distance (i.e. 1000km) between the regions.

4) The total volume of excavated earth was not reported. Based on drawings, photos, and notes in the report by García Chávez et al. (2004), most architecture was quite close to the surface. Approximately 90% of the total excavated area (approx 1,760 square meters) appears to have been within a quarter of a meter of the topsoil, and deeper pits only

account for 10% or less of the total excavated area and were only excavated to an average depth of 1.5m. Based on these figures, I estimate that approximately 650-700 cubic meters of soil were moved during excavation of the area.

5) The volume of excavated soil and the respective numbers of 2x3 and 5x5 trenches is not mentioned in any of the available publications. The site is located on the flanks of a hill and Hicks (2013) mentions that some architectural features were quite close to the surface. We can surmise that the excavated architecture was not deeply buried, but there is insufficient evidence to estimate the amount of soil moved by excavations.

6) Excavation area estimate based on published drawings by Hicks (2013: Figure 3). See Note 5 regarding the difficulty in estimating total volume of excavated area.

7) Several Aztec III period intrusions are mentioned, but it is not clear whether there were any Classic burials in the Formative area of the site.

CHAPTER 4. THEORETICAL APPROACHES TO FIGURINES AND DESIGN OF THE CURRENT STUDY

Mesoamerican figurines have been a subject of curiosity to archaeologists and art historians for over a century, but this curiosity infrequently turns into a rigorous, systematic study of figurines. Yet, as this dissertation (and the work of others) demonstrates, figurines are useful in studying a broad range of topics related to social, economic, political, and religious trends in society, which are of general interest to archaeologists. They are not only windows on the people who made and used them, but also on the societies in which they existed. In spite of the well-known difficulties inherent in the interpretation of figurines, given their potential to inform us on a wide range of social, political, cultural issues, the potential rewards definitely outweigh the drawbacks. The focus of this dissertation is on figurine traditions from the Basin of Mexico leading up to and during the height of Teotihuacan culture, and what these assemblages from across the Basin can tell us about a regional society undergoing a dramatic change.

This chapter considers figurines and the history of scholarly research on them in general, and specifically how this informs a study of Teotihuacan figurines. To that end this chapter is organized into five main sections. The first of which is a discussion of theoretical approaches that are important to the study of figurines, and the historical development of this theoretical work over time. The second section presents several case studies that highlight successful archaeological approaches to figurines from secondary contexts in the Basin of Mexico, chosen for their comparative value to help illustrate possible ways of understanding the roles and uses of figurines in Teotihuacan society.

The third section is a discussion of figurine studies from the Basin of Mexico that are temporally relevant to my own research. The fourth section focuses on Teotihuacan figurines and what previous scholarship has revealed about their uses, meaning, and social importance. This chapter sets a foundation for my own analysis of Teotihuacan figurines, which as I will argue, are reflective of larger sociopolitical processes that are of general interest and relevance to archaeologists and anthropologists. The fifth and final section

Theoretical History of Figurine Studies

Figurines are one of the earliest forms of figurative art in the archaeological record, and have been found all over the world and from virtually every epoch in human history. Indeed, the impulse to create miniature versions of the human forms, while not a universal, is certainly a very widespread behavior across cultures and time. The prevalence of figurines—especially ones that appeared to represent women—from early cultures around the world did not go unnoticed by early archaeologists. In fact, their abundance was interpreted as reflective of some common underlying cross-cultural purpose, typically as an obsession with women and female fertility.

The interpretive tradition that grew around this phenomenon linked such figurines to fertility cults, or cults of a primordial mother goddess. Lesure (2011) cautions against such uncritical cross-cultural comparisons, however, which produced universalist theories such as the "primordial Goddess," and set back figurine studies immeasurably. In his critique, Lesure (2011: 16) writes that the conclusions of analysts who subscribe to this

model generally fall into an interpretive permutation of power and fertility, and in the end they make little progress towards understanding figurines or the societies that produced them. This was in part due to the rise of the New Archaeology (Trigger 1989) and the tendency of archaeologists to naturalize contemporary and culturally-specific views of gender differences, uncritically applying them to ancient societies. As Handsman (1991: 337) eloquently puts it, "...the ideology of gender difference [was] given scientific basis through archaeological theory...thereby transforming a socially constructed inequality into a scientific matter of fact." In addition to naturalizing modern conceptions of gender differences, archaeological theory gave this ideology an unprecedented time depth. The introduction of feminist theory in archaeology, however, expanded the paradigm that many scholars had been working with, which opened up a new range of interpretive possibilities and ushered in a new era of figurine studies.

The rise of feminist archaeology and the move away from androcentric interpretations of the archaeological record was an important turning point for archaeology as a whole, and for figurine studies in particular (Lesure 2011: 14). Feminist scholars led the charge by no longer essentializing women and 'femaleness' across time and space (Conkey and Tringham 1995; Meskell 1995). Specifically, one of their critiques was that "few considerations of the symbolic possibilities ever take into account the striking diversity of female images," and instead of conflating female figurines (or in some cases all figurines), we should be sensitive to differences between them (Conkey and Tringham 1995: 214).

Current Trends in Figurine Studies

There was a dramatic increase in publications concerned with analyzing and interpreting ancient figurines, particularly in Mesoamerica, at the beginning of the 21st Century (e.g. Scott 2001; Goldsmith 2000; Faust and Halperin 2009; Marcus 2009; Conkey and Tringham 1995; Lesure 2011; Montoya 2001; Sullivan 2005; Halperin et al. 2009). Blomster summed up the problems with previous approaches to figurines quite well when he said: "attempts to apply only one interpretation to figurines as an artifact class homogenize the wide variety of objects classified etically by archaeologists as "figurines" and neglect the multivalent emic meanings dependent on the specific audience, temporal, and spatial contexts" (Blomster 2002: 171). Scholarship that took place under universalist models sought to find meaning in patterns of similarity, to the exclusion of much else. Newer studies explore figurines from a variety of theoretical angles contextualized in their proper cultural and social contexts, and investigate differences within and between assemblages. The meanings, uses, and significance of figurines may remain unclear in a number of situations, which had been a limiting factor in earlier studies. But Brumfiel (2001: 305) does not see the uncertainty in function as a large interpretive problem for scholars, writing that "...[in] either case, they should reflect popular priorities and concerns." (Note 1)

A recent volume edited by Faust and Halperin (2009) highlights different theoretical approaches currently used in Mesoamerican figurine studies. Figurines may serve as iconic references of humans, animals, and supernaturals, but they are also understood to be indices of greater social processes in the cultures in which they were

made and used. Figurine studies have in part moved beyond a reliance on discussions of women and fertility, and have opened up to new avenues of inquiry regarding political economy, trade, craft specialization, ritual and religion, social practice, identity formation, and gender. Researchers are also expanding upon iconographical studies as well as exploring new methods of inquiry including functional analysis, distributional comparisons, cultural aesthetics, gender studies, social practice, and semiotic investigations of embodiment (Faust and Halperin 2009: 2), which tie into larger theoretical trends in anthropology.

Art After Aesthetics: Figurines as Social Agents

Historically, a major stumbling block for figurine studies was the absence of relevant anthropological theories concerning art objects—a category that arguably includes figurines. The role of art objects in mediating and structuring social relationships had not been properly theorized until the 1980s and 1990s (e.g. Appadurai 1986, Gell 1998), leaving little in the way of interpretive frameworks for figurine studies. Gell's (1998) revolutionary 'action-centered' anthropological theory of art attempted to bridge the gap between anthropological theory and artifact analysis, and expand such work beyond semiotic, symbolic, or aesthetic approaches. Rather than assuming the presence of and attempting to interpret the symbolic meaning encoded in art objects, Gell's anthropological theory of art objects positioned them as potential agents in social interactions and provided an alternate way of conceptualizing the role of the figurine in daily practice.

Gell's (1998: 7) anthropological theory of art is concerned with "...the social relations in the vicinity of art objects mediating social agency." That is, instead of decoding the art object itself, the aim of this theory is to explain the social relationships between the index (art object) and people, which is facilitated by a "...cognitive operation [which is identified] as the abduction of agency" (Gell 1998: 13). In the Peircean semiotic tradition, an index is considered to be a natural sign and is distinguished from other signs (e.g. icons and symbols) by virtue of it having a physical connection with the object. Gell's (1998: 14-15) theory of abduction builds on this semiotic foundation by drawing a connection between the art object (the index) and a person's ability to make an explanatory or meaningful inference about it (abduction). (Note 2)

The art object serving as an index of human agency collapses the individual agencies of their producers and consumers into one object with agentive properties of its own. In order to side-step the potential paradox of ascribing agency to a non-intentional object, Gell conceives of art objects as secondary agents in relation to primary agents, or people (1998: 19-20). In this framework, figurines have the potential to become powerful agents in the right setting or context. Depending on situational particulars, and most importantly the actions and beliefs of nearby people, figurines are transformative of their users' agency. In this scheme an art object is a potential agent and can be said to exert at least a secondary agency insofar as they elicit some cognitive, emotional, or behavioral response from humans.

This does not deny the possibility of aesthetic or symbolic properties operating in art objects such as figurines, since decoration and aesthetic ornamentations are neither

irrelevant nor epiphenomenal (if decoration has no function then there is no way to explain or account for its existence) (Gell 1998: 74). Instead, it sidesteps these issues in favor of the more anthropologically relevant goal of understanding how people use, perceive, and interact with these objects. The agency of these objects is derived from the social interaction in which they take part, and can change in presence and potency over time. An index, in this case a figurine, does not have to be permanently passive or agentive—an object's agency can be fleeting, permanent, reoccurring, and so on. The object's agentive status is created and maintained by its social context in relation to people and other potentially agentive objects (Gell 1998: 225).

Gell's purpose was to bridge anthropological theory and artifact analysis in order to expand the interpretive possibilities for art objects in non-Western societies beyond stylistic and symbolic analysis. He was highly influenced by Panofsky's (1955) interpretive framework for Renaissance art, which included pre-iconographical description, iconographical analysis, and iconological interpretation. (Note 3) However, Gell never fully solved the interpretive problem, in that his theoretical framework remained unconnected to an interpretive methodology. Nevertheless, his ideas regarding the agentive potential of art objects remain highly influential, and are relevant to figurine studies in that it encourages social analysis, which in turn is more relevant to the goals of archaeology. As miniatures of the human form, figurines were charismatic objects that would have elicited a different range of responses from humans compared to utilitarian ones (Joyce 2009), and deserve to be understood in terms of that privileged status, not in spite of it.

The Process of Analysis and Interpretation

Publications on figurines over the last two decades show the expanding number of interpretive possibilities in figurine studies. Scholars have shown how figurines may reflect different life stages, gender roles, and social identities (Cyphers Guillen 1993, Lesure 1999, Follensbee 2009, Blomster 2009, Cheetham 2009), depict cultural conceptions of beauty, aesthetics, and embodiment (McCafferty and McCafferty 2009, Brumfiel and Overholtzer 2009, Joyce 2003, Taube and Taube 2009), and serve as barometers of cultural heterogeneity within political spaces (Brumfiel 1996, Halperin 2009). The importance of context in the interpretive process has also been shown (Lopiparo and Hendon 2009, Marcus 2009, Brumfiel 1996). Although the multiple interpretive strategies reflect a growing and diversifying field, there is still no unified interpretive strategy for figurine studies.

In discussing the interpretive possibilities for figurines, Lesure (2011: 51) defines two analytical decisions necessary to investigating the significance of figurines, the consequences of which are presented in a matrix (Fig. 4.1). The first decision is whether the significance of images is derived from surface features or a structural phenomenon. The second decision is whether significance derives from subject matter, form, or social context. The decision matrix outlines the resulting six interpretive possibilities in figurine studies created through a consideration of these two questions, and emphasizes the investigative potential of figurines.

		Analytical decision #2: Significance derives from...		
		Subject Matter	Form	Social Context
Analytical decision #1: The significance of images is..	a surface phenomenon	What did the image depict? Iconography	How did the figure's form relate to objects in circulation at its time of manufacture? Synchronic stylistic analysis	What was the image used for? Analysis of use
	a structural phenomenon	What symbolic implications did the subject matter have? Iconology or Symbolic analysis	How was the figure's form determined by its position in a sequence of changing forms? Diachronic stylistic analysis	How did the image express or even constitute social relations? Social analysis

Figure 4.1: Analytical decision map of interpretive possibilities for figurine studies (adapted from Lesure 2011: 51, Fig. 17)

A comparison of forms can be the easiest and best place to start in many cases. Discussions of the concept of style have a long history in the field of archaeology, and definitions of it abound (e.g. Sackett 1977; Plog 1983; Conkey and Hastorf 1990; Hodder 1990; Hegmon 1992; Gell 1998), but most reduce to two common assertions: that style is a method of doing something, and it involves selecting one method from multiple alternative options (Hegmon 1992: 517-518). Sackett's (1977: 370) definition of style closely aligns with this general model, and he writes that "...style (a) concerns a highly specific and characteristic manner of doing something, and (b) that this manner is always peculiar to a specific time and place." Although it is generally agreed that style and stylistic variation have important implications for cultural expression and archaeological investigations of material culture, the cultural importance of style does not serve as an

adequate definition of style itself. Hodder (1990) begins his discussion of style by listing all the things that style is not. In his view, style "...does not consist of [social] functions... [and it] is not a summation of cultural attributes...rules for action...the summation of objective content and rules...[or] the choice made between functional equivalents" (Hodder 1990: 44-45). Hodder defines style as "...the referral of an individual event to a general way of doing" (1990: 45). Similar to Gell's (1998) and Panofsky's (1955) differentiation between iconography and style, Hodder's definition of style relies on its relational property between the specific and the general. There could never be a style of one, because the definition of a style requires there to be multiple referents. In this sense, style exists in the relationship between the particular and the general, and in the acts of creation and interpretation.

Synchronic stylistic analysis involves an investigation of how an object or image relates to similar objects produced at the same time, and a diachronic analysis compares objects over a period of time. To borrow an example from Lesure (2015: 102), which builds on Gell's (1998) and Panofsky's (1955) distinction between iconographic and stylistic analysis, the subject matter of a figurine leg is legs, which it references. The stylistic attributes, however, involve the way in which the leg is made, which references other similar objects—figurine legs to be specific. Style is not superfluous to the meaning of the object. In fact, partial meaning is derived from its stylistic properties, and the extent to which they resonate with those of other objects at the same time or across time (Lesure 2014, 2015).

Style, subject matter, and social context can vary independently of each other, which further complicates the path of interpretation. Subject matter may vary within a style, just as similar subject matter may be referenced across a range of styles, which may or may not inform the social meaning and use of the objects. In the case of anthropomorphic figurines, subject matter may be multifaceted, and the significance of a particular layer of the figurine's subject matter may be dependent on style, which informs social context. Obviously, context is important in the interpretation of an object, but a piece of the puzzle that is frequently overlooked during analysis is the stylistic context of the object, which is no less important than subject matter and social context, and cannot be reasonably divorced from these other analytical categories.

Regarding the analytical category of subject matter, Gell's (1998: 26, 97) comments on prototypes are especially relevant to a discussion of figurines. Since so many figurines take human form, an important question to consider in figurine studies is whether figurines resembling humans have specific or general prototypes informing the forms they take, and what exactly those prototypes might have been. Do figurines index specific persons, are they general representations of people, or are they indexing other figurines? These options are not necessarily mutually exclusive, nor should we expect that any given figurine tradition would subscribe to only one of these possibilities, however the answer is relevant to the investigation of subject matter and even social context. It is easy to imagine how the use and meaning of a figurine would differ considerably depending on whether it was understood to represent a specific person, or the general category of person.

Social context is perhaps the most difficult category of significance to investigate, which is why it often receives little more than cursory or speculative treatment. With figurines in particular, scholars frequently make overtures to their importance in domestic ritual, without being able to describe with any certainty how they were in fact involved in said rituals. Some discomfort with this claim is warranted, especially in cases with suboptimal context. Some scholars are indeed specific in the ways in which they believe figurines to have been used in domestic ritual (i.e. Marcus 1998, 2009, Cyphers Guillen 1993), while others posit non-ritual uses for the figurines. Alternate suggestions to the use or social role of figurines range from non-ritual cultural items to toys to even party favors (Taube and Taube 2009, Goldsmith 2000, Lesure 2011). The fact that there is no agreed upon answer to the question of social meaning indicates there was possibly a multitude of social meanings for objects we call figurines ranging from sacred to profane, both across different cultural traditions and even within the same culture. Yet even if figurines within a particular tradition were not directly linked to domestic ritual, an investigation of their significance can still reveal important aspects of salient societal values and practices (Brumfiel 2001: 305). Gell (1998), Appadurai (1986), and Miller (2005) would not argue that an object must be sacred to have social value and construct social relationships. In fact, repeated profane behaviors may be just as socially significant to the people practicing them as sacred rituals, and therefore just as worthy of anthropological investigation.

The following section builds on the interpretive theoretical work discussed above and presents several case studies from the literature that have been influential in

developing the current project. The different interpretive and analytical approaches they take demonstrate the flexibility of figurine studies as well as their potential contributions to broader archaeological investigations of ancient cultures.

Case Studies of Mesoamerican Figurines

Figurine histories represent a complex behavioral sequence that starts with the selection and working of the clay, firing the figurines, and them being used, stored, reused, and eventually (intentionally or not) being broken and finally discarded (Marcus 2009: 25). Archaeologists typically find them only in the end stage of this behavioral sequence after they have been broken and discarded.

Evidence derived from primary contexts contributes to a fuller picture of ancient figurine use and significance. Marcus's (2009) examples of intentionally cached figurines in both domestic and religious spaces highlights similar recurring figurine practices across the Mesoamerican sphere over time. (Note 4) In addition to caching, the inclusion of figurines in human mortuary contexts facilitates consideration of their uses in society, and on the level of the individual. Mortuary data from Tlatilco and Chupícuaro, for example, show how figurines may have been the purview of certain individuals in society, and that figurine use may have varied along age grades and gender lines. Comparatively, evidence from these sites also demonstrates that figurine use (or the association of figurines with different types of people) was by no means static, but was observed to vary across time and space. (Note 5) Intra- and inter-societal variation in

figurine use reinforces the importance of primary contexts for interpreting figurines, however, primary contexts constitute a minority of finds.

All of the figurines considered in this dissertation come from secondary contexts, which puts limitations on functional analysis, but in the aggregate, they can be used to explore social trends and differences across space and time. Elizabeth Brumfiel and Richard Lesure make use of figurine assemblages facing similar problems with context, and their work serves as an excellent example of what can be done with figurines from secondary contexts, and has been helpful in guiding my own project.

In her analysis of gender ideology and ideological domination under the Aztec state, Brumfiel (1996) compares the ceramic figurine assemblages of three Postclassic sites—Huexotla, Xico, and Xaltocan—that experienced Aztec occupation. Her paper explores whether definitions of gender changed in peripheral communities after they were incorporated into a highly stratified regional state, and in what directions and forms these changes manifested. Specifically, she uses changing gender ideologies witnessed in figurine assemblages as a proxy for studying the extent of the penetration of imperial ideology into the state's hinterland, and the effect of that imperial ideology on local ritual practice.

This study is a particularly useful example for a number of reasons, not least of which are the multiple parallels to Teotihuacan. The study takes place in the same geographical area, and figurines were almost always found in household debris and connected to domestic ritual activity. Brumfiel (1996: 149) posits:

...the frequencies of different types of figurines in hinterland communities before and during the period of Aztec dominance should provide a valid

gauge of the extent to which popular consciousness was affected by state ideology...[and] whether the response to the elite ideology was one of acceptance or resistance is indicated by the degree of similarity between popular images of men and women as seen in the figurines from hinterland communities and elite images of men and women as presented in the official arts of the Aztec state, such as manuscript painting and monumental sculpture.

Brumfiel finds that there was no chronological change in male and female figurine frequencies at the site of Xico, but she notices that at both Huexotla and Xaltocan the proportion of female to male figurines increased during the Middle and Late Postclassic periods and female figurines came to outnumber male ones by three to one (Brumfiel 1996: 152). This observation leads Brumfiel to conclude that the populations at these two sites experienced a change in gender ideology during the period of Aztec influence and control. Contrary to what one might expect, instead of adopting the patriarchal state-dominated ideology, these rural populations appear to have adopted an ideological position that stood in opposition to it. In response to the penetration of state influence into the hinterland, the sites of Huexotla and Xaltocan experienced an "ideological reformation" where they rejected elements of official state imagery and produced their own, in effect constituting what Brumfiel refers to as "...a kind of popular ideology of resistance" (Brumfiel 1996: 160, 155). This study is exemplary of the types of work that can be done on figurines from secondary contexts. Brumfiel's methodology and findings demonstrate that one does not fully need to understand the use and social significance of the figurines themselves in order to use them to study larger social processes; figurines can be used by archaeologists as a 'window on society', revealing specifically the ideological and perhaps even political views of their owners. In this case,

gender ideologies are interpreted to be significantly different in the Aztec periphery compared to the core.

Lesure (2015) also utilizes figurines from secondary contexts to work towards a social interpretation of these objects and their roles in the lives of their makers and users. Lesure compares figurines from two Formative sites in the Basin of Mexico—Zacatenco and Ticoman, which were excavated by Vaillant—to an assemblage of figurines excavated from four contemporary sites in Tlaxcala: La Laguna, Amomoloc, Tetel, and Las Mesitas (Lesure 2015: 100). The majority of the figurines were either found broken and discarded in domestic contexts or trash pits. On the figurines themselves, certain patterns of attribute association emerged that corresponded to schematized representations of sex, but there was little else in terms of promising associations. Depicting gender differences did not seem to be an important concern in these figurines since additional stylistic attributes such as jewelry and hairstyles did not seem to vary according to sexual characteristics. The lack of associations frustrated initial attempts at a social analysis of the figurines.

The majority of Tlaxcalan figurines had earspools, which did not appear in the actual archaeological record of the site until some 300 years later (Lesure 2015: 103). This finding suggests that figurines were not reflecting social categories or roles, but in fact were referencing contemporary figurines from the Basin of Mexico. In addition, the recombination of different stylistic attributes, specifically facial features, within and across figurine types suggests an intentional and active juxtaposition of styles in these figurines. Lesure considers the explanation "...that stylistic juxtapositions might have

enhanced references to subject matter" (Lesure 2015: 105), which led to a consideration of the role fashion systems may have played in figurine styles across a large region.

Lesure's (2015: 110) goal in this article is to move towards an interpretation of differences and variabilities in figurine styles:

To interpret stylistic variability, we need to set aside our interests, as social scientists, in quick references to gender, age or inequality — the sort of references that iconic variability may more readily provide. We need to start instead at the beginning of the indexical chain, with that in which original users and makers were themselves concretely interested: the specific stylistic contrasts of different eras. A consideration of synchronic stylistic juxtapositions is a necessary route towards a richer understanding of the agency of Formative villagers within their fashion systems.

Jumping to social analysis would in fact have missed the more important roles of fashion and style in shaping figurine assemblages, which in turn informed the social significance of figurines. In the Tlaxcalan assemblages, Lesure notices periods of stylistic conformity where strikingly similar types are common across the region, followed by periods of stylistic juxtaposition and variability, where multiple local styles emanated from a single type. In this case, fashion systems operating within and between figurine assemblages are interpreted as providing a sense of stability and social cohesion in a society undergoing rapid changes (Lesure 2015: 116).

Both Brumfiel's and Lesure's studies utilize figurines from secondary contexts in order to explore the ancient societies that gave rise to them. Figurines are notoriously difficult objects to work with, but both of these studies demonstrate that figurines from secondary contexts still have an important context of sorts, and they can be used to great effect in archaeological studies. Brumfiel and Lesure take similar approaches to their

projects in that both use a diachronic analysis of figurine assemblages in a regional perspective. When the comparison takes place between sites in a region (or between two regions in Lesure's case), secondary depositional contexts are not a setback; the relevant context in studies such as these is the site. It is a broader view to take, and this approach may be unsuitable to answering questions regarding individualized practices and figurine use, but it may be able to answer other questions that are just as important. Regional comparisons of community-level practices reveal similarities or differences that may reflect important regional or interregional exchanges, differences in identity, and the strength of cultural affiliation on the level of the group.

Research on Figurines from the Basin of Mexico

Figurines were made and used in the Basin of Mexico for three millennia prior to the arrival of the Spanish, and there is a long history of research on the various figurine traditions from the Formative, Classic, and Postclassic societies in this region. Some of the most influential work on figurine traditions from the Formative periods was conducted by Clarence L. Hay and George Vaillant during the first half of the 20th Century, resulting in the Hay-Vaillant typology that is still used. The current study uses the typology created by Hay and Vaillant for the Middle and Late Formative figurines from the rural assemblages.

As a Harvard Fellow, Hay worked in several areas of the Basin under the supervision of Alfred Tozzer and with the International School of American Archeology and Ethnology (Boas 1915), and was particularly interested in the *tipo archaico* figurines

that were appearing in excavations all over the Basin. Vaillant excavated a number of sites along the western lake shore in the Basin of Mexico including Zacatenco, Ticomán, and El Arbolillo (Vaillant 1930, 1931, 1935), and conducted test-pitting in areas of San Juan Teotihuacan and San Francisco Mazapan—both adjacent to Teotihuacan (Vaillant 1932). His primary goal was to establish a culture sequence for the Basin by investigating the Formative cultures that preceded Teotihuacan civilization. Hay and Vaillant were the two foremost contributors to the initial development of a figurine typology and chronology for the area.

The Hay-Vaillant classification system is largely stylistic in nature and is made more robust by incorporating data from a number of sites. The figurines recovered from the excavations of these sites were divided into types designated by letters, and further into subtypes, denoted by roman numerals (e.g. Type C_i, D_{ii}, and so on). The division of the figurines into types was based on both stratigraphic data and stylistic comparisons with figurines from other levels of the same excavation as well as from different sites. Although largely stylistic in nature, this system also incorporates a chronological aspect in the division between types. In descriptions of various types and subtypes, the dominant features of the figurines are meticulously explained in addition to the reasoning for when and where lines are drawn between types. Unlike many earlier and contemporary studies of figurines, Hay and Vaillant (Vaillant 1930, 1931, 1935) incorporated both the heads and torsos (whenever possible) of figurines into the classification system.

In his work at Zacatenco, Vaillant was concerned with creating a basal typology for the early figurines and pottery from the entire Basin of Mexico. His excavations

uncovered three time periods and two cultures that he referred to as Early-Middle and Late Zacatenco (Vaillant 1930, 1935). In his publication of the excavations conducted at Zacatenco (approx. 1000-500 BCE) he listed 12 types (Types A-L), all with a varying number of subtypes. In the following season at the site of Ticoman (approx. 600-200 BCE) he uncovered material that corresponded to the two latest phases of Zacatenco, the last of which he was able to further subdivide into three phases. Work at El Arbolillo was undertaken in order to further clarify and subdivide the time periods he uncovered at Zacatenco, which was partially successful in terms of the figurine chronology (Vaillant 1935: 296). His multi-year project culminated in the definition of three different cultural groups and a Formative cultural sequence (if not a precise chronology) for the Basin of Mexico.

Vaillant defined two culture groups in the Basin (Zacatenco-Copilco and Ticoman-Cuicuilco), and a third in Morelos called Gualupita (Vaillant 1935: 297). Zacatenco-Copilco culture was found at El Arbolillo, San Juanico, Azcapotzalco, Tetelpan, and in other parts of the Valley, and Vaillant distinguished two main time periods with a transitional stage between them. The early stage was prolonged and was represented by the periods Early Zacatenco and El Arbolillo I in which the figurines evolved through the stages Early, Intermediate, and Late El Arbolillo I. Transitional stages occurred at both sites, and the late stage (Middle Zacatenco and El Arbolillo II) was also found at Copilco. Figurines of the first phase (Early Zacatenco-El Arbolillo I) were divisible into five chief types: C1, C2, C3, D1, F. Early El Arbolillo I types included C3a, C3b, C1-2, C2, Intermediate El Arbolillo I included C1-2, C2, and the Late

El Arbolillo I types were C1a, C1b, C3c, C3d, and probably D1 and early F. Vaillant noted a correspondence between changes in figurines and other ceramic types.

Zacatenco-Copilco culture was succeeded by the Ticoman-Cuicuilco complex. Ticoman-Cuicuilco was first defined at Zacatenco in the Late Zacatenco period, and later excavations at Ticoman revealed three time phases: Early, Intermediate and Late. This cultural complex is found at the sites of Ticoman, Azcapotzalco, Tetelpan, Cerro de la Estrella, Chalco district, Puebla, and as an intrusive element at Gualupita in Morelos. The Ticoman-Cuicuilco figurines were divided into three phases (Early, Intermediate, and Late) and are as follows: Early Ticoman phase types are E1, E2, E3, and I3; Intermediate period types are G1-2, I1-2, and L, which showed a degree of experimentation in form and use of a polished slip. Rare Intermediate types are E4, J, M, N; Late period types are H1, H2, H3, H4, H5, and are frequently slipped in white (Vaillant 1935: 299).

Previous Studies on Teotihuacan Figurines

Many different individuals have written about Teotihuacan figurines over the years and have significantly contributed to their interpretation and chronology. The first serious attempt at a scientific analysis of the figurines was a two-part publication by Zelia Nuttall in 1886 who found a number of the terracotta figurine heads on her property near Mexico City (Nuttall 1886). Nuttall divided the figurine heads into three separate classes based on a descriptive stylistic analysis, although she concludes that it was impossible for her to tell whether these three classes were separated merely by the skill of their producers, or whether there was a chronological component (1886: 178). Edward Seler

also took an interest in the figurines and described some of them in lengthy detail, but in the end they did not make up a large part of his work (Scott 2001: 16-19). The contributions made by Hay and Vaillant, Noguera, and Barbour are principally concerned with categorization, the creation of typologies and chronologies, and studying the cultural history of the Teotihuacan area. In the work of later scholars such as Scott (1994, 2001), Goldsmith (2000), and Sullivan (2005, 2007), even though they express the need for refinement of local chronologies and typologies, one can see an increasing concern for social interpretations that explore functionalism, population dynamics, production and consumption, and market exchange.

Eduardo Noguera

Noguera is best known for his volume on Mesoamerican ceramics, which incorporated his figurine classification system. His analysis of Classic period figurines revolves largely around Teotihuacan figurines, but his discussion of Formative typologies incorporates figurines from different areas around the Basin as well, building on the Hay-Vaillant system. Significantly, even though he writes that the best use of figurines is as a tool to help archaeologists to distinguish between cultures and cultural horizons, he adds that they also reveal information about ancient religion and ritual, and the lives of their ancient owners. Most of his work, however, concentrates on refining the typology and chronology, and he does not spend much more time in interpreting them (Noguera 1965; Cowgill 2015).

Noguera (1965: 72) bases much of his figurine typology on the Hay-Vaillant system, and he grouped figurines together based on stylistic attributes, attempting to

correlate them with the ceramic chronology through stratigraphic association with datable ceramics. For the Formative scheme, he designated the 15 major types by letters (A-O), and for the Classic period typology he divided Teotihuacan into four phases: Teotihuacan I (Tzacualli); Teotihuacan II (Miccaotli); Teotihuacan III (Tlamimilolpa-Xolalpan); and Teotihuacan IV (Metepc—or as he calls it, Ahuitzotla Amantla) (Noguera 1965: 87-91).

Noguera divided figurines from the Teotihuacan I phase into eight types (Types 1-8), and writes that "these figurines are distinguished by their extreme crudeness, flat backs, and rudimentary parts" (1965: 88, translation mine). The second phase (Types 9-11) was characterized by handmade figurines whose facial features were executed by fine incised lines, and occasionally retain traces of red, white, or yellow pigment. The beginning of Teotihuacan III was defined by the introduction of the mold, and two additional types were added to the typology (Types 12 and 13). Type 12 were warrior figurines, also commonly known as a "portrait figurines" or *retratos*. Their naturalistic appearance caused them to be given the name "portraits," since early scholars thought them to be the likenesses of ancient rulers of the site. More recent studies (e.g. Scott 2001; Goldsmith 2000) have shown, however, that this type is probably the least individualistic. Noguera added that they were probably dressed in miniature outfits made of paper or some other material, and hypothesizes that they were meant to represent deities. For Teotihuacan IV, Noguera identified 19 new Types (Types 14-32), some of which he tried to connect to known deities such as Xipe or Tlaloc, and others were simply described and grouped together based on their stylistic similarities.

Laurette Sejourne

Sejourne's (1966) volume on Teotihuacan figurines involved the classification and interpretation of the figurines from her 1930s excavations at the residential compounds of Yayahuala and Tetitla. Her sample included over 22,400 figurine fragments from inside the compounds and adjacent trash pits. She mentions that exceedingly few were found in burials, and her interpretations revolve around making sense of them in their social context given the likelihood that they were not integral to any sort of cult of the dead. Using a combination of sources ranging from Sahagun to Aztec codices to Terminal Classic Maya art, Sejourne categorizes, describes, and interprets the wide range of types and functional classes discovered during her excavations. While mostly in fragmented form, some of the figurines from her excavations remained whole, and her classification, especially matching heads with bodies, benefits from this. The pages of drawings and photographs, as well as her commentary, are very useful in clarifying stylistic types, but not as helpful in attempting to clarify ranges of dates for the different types and styles. She makes mention of stratigraphy and levels, but they do not seem to inform her analysis of the figurines themselves.

Warren Barbour

Barbour's (1975) goals in his dissertation were twofold: to refine the chronology of the different types of figurines from Teotihuacan, and also to evaluate the system of production in the ancient city. He states that trouble has arisen in the past when people have tried to tie the figurine chronology too closely to the general ceramic chronology,

and attempts to separate the two through the use of stratigraphic data from test pits at the site.

Barbour elaborates on Noguera's (1965) chronology and coordinates them with material recovered from stratigraphic excavations carried out by the TMP. In his analysis of the figurine types, he devotes much of his discussion to "portrait" (warriors) and "puppet" figurines (now referred to as articulated figurines), and a "new" type that he descriptively terms "round heads." Barbour only reports to have found five specimens of the "round head" type, however. In addition to these three types, Barbour includes a brief discussion of other types such as pregnant, throned, half-conical, and so on. The discussion of figurine workshops similarly derives from his analysis of surface material from the TMP (Barbour 1975: 7).

Unlike previous scholars, Barbour roughly divides the figurine corpus into two main groups based on the production and style of the torso (flat or cylindrical) rather than the head (Barbour 1975: 15). He posits that these two broadly-defined types "...may very well have served complementary functions for the different sexes," and also that "both seem to represent humans rather than deities or other supernatural beings" (Barbour 1975: 22). Many of Barbour's conclusions have received criticism, however, from Scott (2001) and Goldsmith (2000) who argue that his discussion lacks sufficient supporting evidence.

Kim Goldsmith

Goldsmith's dissertation analyzes figurines from the La Ventilla area of Teotihuacan (to the south of the civic-ceremonial core), which were excavated by Rubén

Cabrera Castro, and from Group 5' in Grid square N5W1, excavated by Eduardo Matos Moctezuma (Goldsmith 2000: 20). From the La Ventilla area she chooses the figurine assemblages from three different contexts for comparison: F1 was a civic-religious architectural compound; F2 was a residential area; and F3 was an artisan residential area. Her choice to compare the figurine assemblages from different contexts (civic-ceremonial and residential) illustrates her attention to the problems of context and the possibility for variation in use between contexts. Her goals for the dissertation were for it "1) to serve as a manual for the identification of Teotihuacan figurines, and; 2) to provide tentative ideas for their possible meanings, thereby serving as an iconographic stepping-stone for future interpretations" (Goldsmith 2000: 19). To that end, much of her work is a discussion of stylistic attributes, including the occurrence and concurrence of certain attributes, how these appear, change, and disappear over time, and how certain "types" can be recognized through the study of these various stylistic factors. She also speculates as to the purposes certain types might have served in the lives of their producers and owners.

Her study is one of the first to consider the function of Teotihuacan figurines, and she considers a number of possible uses for figurines. Goldsmith considers that they may have been idols used in domestic rituals, children's toys, amulets, and perhaps even "knick-knacks" that were handed out as party favors, as is the custom at modern weddings and parties in Mexico (Goldsmith 2000: 27), but she does not conclude one way or another which of these possibilities was more likely.

Sue Scott

Scott wrote a dissertation on Teotihuacan figurines in 1994 and published a book in 2001 (Scott 1994; Scott 2001). In both of these works she utilizes the previously excavated figurine assemblages from Sigvald Linné's excavations at Las Palmas, Xolalpan, and Tlamimilolpa in the 1930s. Scott (1994) focuses on 254 Teotihuacan figurines and one ceramic statue dating from Mazapan (1000-1150) that were found in 1932 by Linné. In her book (Scott 2001) she analyzes a database comprised of approximately 2,000 figurine fragments from Linné's excavations, and another 2,000 fragments from Sanders's excavations at Maquixco Bajo (in the Teotihuacan Valley but outside of the urban limits of the city) in the 1960s (Scott 2001: 25). Scott's book is an excellent contribution to Teotihuacan figurine studies, for not only does she thoroughly analyze a large collection of figurines from different areas of Teotihuacan, she also—and perhaps more importantly—includes high-quality pictures of over 1,400 items from her study.

Scott (2001) begins her analysis by separating the zoomorphs out from the anthropomorphs, and then organizes them into rough chronological order, based on previously established chronologies. These groups are then broken down by stylistic traits, subject matter, and when applicable by method of manufacture (i.e. handmade versus mold made). One of her important observations is that there are much fewer types of bodies and torsos than there are heads and headgear, meaning that one type of body could have been paired with a number of different styles of head (Scott 2001: 24). Scott's

book is the most comprehensive source on Teotihuacan figurines to date and represents an invaluable contribution to the field.

Kristen Sullivan

Sullivan's dissertation (2007) studies market activity at Teotihuacan including craft production and commercial exchange, and the extent to which it can be considered a commercialized economy. She does this by examining "...the organization of craft production, and the exchange and consumption of craft goods throughout the city," specifically ceramic figurines, *adornos*, and composite censers produced at two very different production sites in the ancient city (2007: 14). The first of these production sites is a workshop attached to the northern face of the Ciudadela structure (CDD), excavated by Ruben Cabrera Castro and other members of the Teotihuacán Archaeological Project (TAP) 1980-82. Given the location of this workshop, it is believed that this was a workshop of "sponsored" craft specialists employed by elite state actors. The second area is an apartment compound in the northwest of the city, referred to as Cosotlan 23 (C23), which was interpreted to be a community of independent craft specialists, and which Sullivan and her team resurveyed.

Sullivan finds that in at least some cases, sponsored and independent craft specialists at Teotihuacan were making similar products. Adorno types overlapped the most, and even though each workshop produced mostly different figurine types, they did both produce flat figurines. In addition to theater censers and *adornos*, the CDD workshop appears to have produced half-conical, fat god, bound, female, and warrior figurines, and flat and conical figurines, many of which had Tlaloc themes (Sugiyama

2002). The C23 workshop seems to have mostly produced articulated, conical, and flat figurines. Although fragments of warrior and enthroned figurines were found by Sullivan's resurvey, they occurred in such small numbers that it is not clear that they were being produced in the workshop instead of being consumed by the residents of the compound.

The pattern of distribution of figurine and adorno types across the city (as seen in the TMP collection) is interpreted by Sullivan (2007: 205) as indicative of general availability and market exchange of figurines, rather than controlled distribution or redistribution. Sullivan notes that although distribution patterns were relatively homogeneous, there was also evidence that suggests differences in preference or taste shaping the consumption decisions in some areas of the city. While all types of adornos were available to all socioeconomic segments of society—indicating commercial exchange—not all figurines were equally distributed it seems. Sullivan concludes that certain figurine types may have been in lower or higher demand by certain residents or social groups in the city, which would account for their uneven distribution, although she notes that higher status residences did not seem to have preferential access to any one type of figurine (Sullivan 2007: 206).

The prevalence of articulated figurines (a C23 product) in intermediate and lower status residences and in domestic settings may reflect the importance of this figurine type in household ritual and activities. Likewise the prevalence of "portrait" figurines (a CDD workshop product) in higher status residences may mirror the relative importance of predisposing young men in these households to join the military.

Sullivan's research is important in both figurine and Teotihuacan studies as it sheds light on the way that the small objects moved around the ancient city. Sullivan never argues

the common assumption that figurines may have served ritual purposes, but understanding their economic value does not destroy their ritual value, nor does it undermine attempts to interpret their social significance. In fact, Sullivan briefly attempts such an analysis and echoes the work of Brumfiel (1996) when she suggests that warrior figurines may have been more commonly used in elite households—people the state may have had an active interest in recruiting into the military.

Teotihuacan Figurines: Production, Use, Significance, and Style

Most ceramic figurines are found broken and in secondary contexts such as in refuse piles, middens, and architectural fill, or scattered in courtyards and other semi-private domestic spaces (Goldsmith 2000; Barbour 1975; Scott 2001), which presents an obstacle for those trying to reconstruct their uses. Although figurines are most commonly associated with domestic spaces, discussions of figurines from public and monumental contexts can be found in the works of Montoya (2001) and Barbour (1975), who discuss figurine fragments recovered by excavations at the Pyramid of the Moon, and the Pyramid of the Sun and the Ciudadela respectively. Not only were figurines found in these areas, but the Ciudadela is known to have had an active ceramic workshop (CDD) that produced figurines, among other ritually important ceramics (Sugiyama 2002; Sullivan 2007).

Ceramic figurines at Teotihuacan can be separated into two general types with relation to the method of production: handmade and mold made. These modes of production loosely correspond to time period, but are not always a reliable indicator of

when they were produced. Making figurines by hand was the oldest of the two methods, and dates back to at least the Early Formative period in Mexico. Mold technology was developed or introduced to the Basin of Mexico at some point during the latter half of the Tlamimilolpa period at Teotihuacan (approx. 250-350 CE), therefore it is reasonable to assume any mold made figurine dated to after the invention of this new technology. Handmade figurines, however, were produced all the way from the Formative to Postclassic periods, and so being handmade is not sufficient information on which to date a figurine. To further confuse the situation, some mold made heads were paired with handmade bodies, as is the case with warrior figurines (Noguera 1965; Scott 2001; Goldsmith 2000).

Stylistic attributes are the most reliable method to date figurines from secondary contexts, but it is still no easy task. In the Formative period, when only handmade figurines were produced, certain attributes such as the shape and style of the face and eyes, headdresses, and arms are enough to place the figurines in tentative categories (Scott 2001: 21). Goldsmith (2000) also notes general paste properties for figurines from each ceramic phase—a practice common in Teotihuacan ceramic identification (Rattray 2001). Paste color and texture can be used to support chronological placement of a figurine, but there is enough variation as to not make it an entirely reliable method on its own. Changes in paste color and texture between the Classic and Epiclassic, or the Classic and Postclassic are quite distinct, and although there were changes between Tzacualli and Miccaotli-phase ceramic vessel pastes, the change in figurine pastes was more subtle.

Handmade figurines were shaped and decorated variously by attaching pieces or coils of clay (appliques) or incising decorations and facial features into the still wet clay, or a combination of techniques. Many if not all figurines were painted, but only very infrequently do we find examples with more than the slightest trace of pigment. Formative figurine torsos could alternately be blank or have additional attributes such as sexual characteristics or clothing. Later figurines from the Miccaotli phase on frequently had appliqued clothing, with the exception of articulated and warrior figurines. The later mold made figurines had increasingly complex headdresses and attire. Diachronic and spatial patterns in paste properties, sexual attributes, and clothing styles are addressed in Chapters 6, 7, and 8.

By the Classic period, several discrete functional classes of figurines had developed, each with their own set of specific attributes and characteristics. These Classic types, which are discussed more fully in the next chapter, include articulated, bound, fat god, enthroned, half-conical, and warrior figurines, in addition to other molded (or flat) and handmade (conical) figurines that display a range of subjects, but have not yet been assigned to specific types. Barbour (1975) estimates that millions of figurines were produced during the Classic occupation of the city, and they are the single most common representation of the human form from Teotihuacan material culture (Scott 1994).

Scott (1994) believes that beyond the two commonly recognized deity forms of Tlaloc and Huehuetotl, most figurines typically did not depict gods. Goldsmith (2000: 28) disagrees with this point, however, saying that our knowledge of Teotihuacan culture and ideology is so scarce that we cannot possibly know what types depict deities and

what types do not. One figurine type, known as 'fat gods' are a prime example of this debate. There is no evidence to suggest that they were deities, however the name has stuck in the literature. Cowgill (2013: 143), among others, has begun to refer to the figurines formerly known as *retratos* (or 'portraits') as 'warriors'—which I adopt in this dissertation—given the perceived likelihood that they represent Teotihuacano soldiers. Half-conicals and enthroned figurines have been interpreted by Headrick (2007) as depictions of deceased elite persons, or mummy bundles. I do not subscribe to this interpretation, although their elaborate costumes do suggest that they were representations of important figures (see Chapters 5, 6, and 8).

Teotihuacan figurines are rarely self-explanatory, meaning that they are rarely engaged in any activity that is readily identifiable to us. The exceptions to this rule are the few examples we have from Teotihuacan where a group of figurines have been preserved in an intentionally arranged scene. At the Teotihuacan site museum, there is an arrangement of figurines that appears to represent a birthing scene. The figures are permanently attached to a flat clay base, and Goldsmith (2000: 4) makes the point that when arranged together as they are it is more clear what the meaning of the scene is, but if they were to be broken apart—as the majority of the figurines we encounter are—their meaning would be completely indecipherable. Perhaps they would have still been recognizable by ancient Teotihuacanos, but without their original context and their positions relative to the other figurines, we have no way of understanding them. This example, however, only refers to one of many different functional classes of figurines,

and many others were designed to specifically be free-moving or free-standing, and therefore would not have been fixed in a permanent arrangement.



Figure 4.2: Possible birthing scene from the Teotihuacan Site Museum (photos by author)

Caching does not appear to have been the primary use for Teotihuacan figurines given the paucity of examples. A notable example of caching behavior, however, was found in the eastern sector of the city by salvage excavations of a Miccaotli and Tlamimilolpa phase platform. Excavations revealed a series of caches containing in total 35 feminine figurines and seven infant figurines (Rodriguez and Delgado 1997, Fernandez and Jimenez 1997). (Note 6) These cached scenes were remarkable in their similarity even though they were likely deposited during multiple events, and even more so in that this is the only reported example of deliberate figurine caching at Teotihuacan. It is conceivable that other examples have been found and the data has gone unpublished, but until more examples are uncovered, the intentional interment of arranged figurine scenes should be considered exceptional.

Whether figurines were a standard component of mortuary offerings is still a subject for debate. Figurines are generally thought of as having been uncommon in mortuary contexts, but a more complex picture has emerged in light of increasing

excavations. Citing a personal communication with the excavator of parts of the La Ventilla compound, Barbour writes that "...of the 180 Teotihuacan burials that Juan Vidarte excavated...not more than ten had figurines associated with them" (Barbour 1975: 7). Excavations at other apartment compounds conducted by Linné and Séjourné revealed high figurine density but a similarly low incidence in mortuary contexts (Barbour 1975: 7). Results from Clayton's (2009, 2011) comparison of a sample of burials from three different apartment compounds within the site of Teotihuacan (Tlajinga 33, La Ventilla, and Tlailotlacan 6), however, demonstrate that figurines are found to highly varying degrees in burials. In her sample from La Ventilla, 4.5% of 22 female burials contained at least one figurine, compared to 24% of 25 male burials. In the Tlajinga 33 sample, none of the 20 female burials contained figurines, while 3.7% of the 27 male burials contained one or more figurines. Only one child's burial from Tlailotlacan contained a figurine (Clayton 2009: 282-284). Although the specific figurine types were not reported, this data suggests that figurine use and meaning may not have been uniform between different households and compounds across the site, or between different genders.

Evidence from other excavations demonstrates that figurines occurred in mortuary contexts in other apartment compounds as well, and suggests that certain figurine types may have been more common in such contexts. Articulated figurines have been found in adult male and female burials at the compounds of Oztoyahualco, Xolalpan, Zacuala, La Ventilla B, and Tetitla (Manzanilla 1993b:157, Linné 1934:139, Séjourné 1959:58, Sempowski 1994:65, 68, 86). Their apparent absence from juvenile burials argues against the common suggestion that articulated figurines served as toys for young children

(Cabrera Cortés 2011: 275). And while Sullivan (2007) has argued that articulated figurines were more common in lower and intermediate status households, Cabrera Cortés (2011: 276-277) argues that excavation data suggests that the opposite may have been true, and that articulated figurines were in fact more common in compounds of higher status. Warrior figurines have also been found in several mortuary contexts at La Ventilla B and Oztoyahualco (Sempowski 1994:86; Manzanilla 1993:157). In both cases the individuals buried with a warrior figurine were males. Surface data suggests that warrior figurines were fairly evenly distributed across areas of varying social status (Sullivan 2007), yet excavation data from compounds such as San Jose 520 suggest that they may have been less common in households of low socioeconomic status (Cabrera Cortés 2011: 277-278).

Although the varied meanings and uses of the Teotihuacan figurine assemblage are still not entirely clear, there is ample evidence linking them to domestic ritual. Domestic ritual at Teotihuacan was centered in the patios of apartment compounds across the city, and these patios typically held alters and a range of material objects such as theater censers, talud-tablero temple models, Huehueteotl statuettes, candeleros, effigy vessels, and figurines that have been interpreted as integral to Teotihuacan domestic ritual through their common association with these spaces (Manzanilla 2002). The disappearance of many of these classes of artifacts after the collapse of Teotihuacan suggests that domestic ritual was strongly aligned with the dominant state religion (Cowgill 1997). Excavation of the Oztoyahualco compound, for example, revealed warrior and articulated figurines in association with other domestic ritual paraphernalia

within two of the ritually important courtyards, and additional articulated figurine fragments in an adjacent space (Manzanilla 2002: 46). Articulated figurines in particular have a strong association with ritually significant contexts such as termination and abandonment rituals, and are found near apartment compound altars (Cabrera Cortés 2011: 275).

Evidence from excavations at Teotihuacan indicate that while there is evidence for both figurine caching as well as their inclusion in burials, numerically speaking, these practices pale in comparison to the numbers of figurines found in household and midden contexts, and in architectural fill. The majority of figurines, therefore, seem to have been intended for living residents of the city and may have been used as an integral part of the greater assemblage of domestic ritual artifacts. As more projects report their figurines, we are able to develop a clearer picture of figurine use in the ancient city.

The Evolution of the Teotihuacan Style

The stylistic and thematic roots of the Teotihuacan figurine tradition date to the Tzacualli phase during the Terminal Formative period, when elements of Teotihuacan figurine ornamentation and dress began to appear. Although we know that there was a high degree of interaction and contact between Formative communities in the Basin of Mexico—evidenced by shared pottery and figurine styles—the Teotihuacan figurine tradition seems to have grown in isolation from other Formative figurine traditions in the Basin of Mexico. This is not to say that there was no contact or influence from other communities in the Basin, only that early Teotihuacan figurines do not have even weak

stylistic ties to surrounding and predating figurine traditions. In addition, many of the features that become hallmarks of Teotihuacan figurines were being experimented with from a very early time at the site. This section details some of these features, which were unique to the Teotihuacan tradition, to provide a foundation for the following discussions of Teotihuacan cultural intrusions in rural figurine assemblages. These features include certain types of head shapes, headdresses, clothing, and jewelry.

By the Tzacualli phase, Teotihuacan figurine makers were already experimenting with head shapes that would persist in the Teotihuacan figurine cannon for the next five centuries. Tzacualli phase figurines had the most diverse range of head shapes compared to any other Teotihuacan period—some of these would persist, but many did not. The shapes that persisted include heart-shaped, round, and elongated. Heart-shaped heads were frequently found on articulated figurines during the Classic period, but it was a common head shape during Miccaotli, and found on conical figurines as well (Fig. 4.3). Barbour (1975:16) has suggested that the handmade round heads may be the predecessors of the molded warrior figurines (Fig. 4.4). It is unclear what the elongated heads were intended to represent (Fig. 4.5). Some were curved forward, and have been interpreted as monkeys by some scholars, while others look more human.



Figure 4.3: Heart-shaped heads in chronological order from Tzacualli (left) to Miccaotli (middle two) and Classic (two on right)



Figure 4.4: Possible evolution of rounded heads from Tzacualli (left), Miccaotli (second from left), Tlamimilolpa (middle) and culminating in warrior heads (two right)



Figure 4.5: Elongated heads from Tzacualli (left two), Miccaotli (middle), Tlamimilolpa (second from right), and Classic (right). Further Classic period examples can be found in Scott (2001: Plates 93 and 95)

There are several headdresses that were common in the Early Classic and Classic, such as wide-band headdresses (Fig. 4.6) and turbans (Fig. 4.7). The wide-bands changed very little between the Terminal Formative and Classic periods. The style of turban shown below is embellished with punctilation, giving it a woven appearance. Most of the examples for both of these types dated to the Miccaotli phase, but these headdresses, and others (Figs. 4.8-4.10) continued to be used for potentially as long as 500 to 600 years.



Figure 4.6: Wide-band headdresses on Tzacualli (left), Late Tzacualli, Miccaotli (two), and Classic molded (right) figurines



Figure 4.7: Tzacualli, Late Tzacualli/Early Miccaotli, Miccaotli, and Classic period heads with a patterned turban



Figure 4.8: Rectangular caps with circular ornamentation from Miccaotli and the Classic period



Figure 4.9: Wrapped turbans from Tzacualli, Miccaotli, and Classic



Figure 4.10: Cap (with chin strap) and mask. Late Tzacualli with chin strap but no mask (left), Miccaotli with both chin strap and mask (middle), and Classic with cap and mask, but no chin strap (right)

Clothing and jewelry also emerge during the Terminal Formative period, and likely during the Tzacualli phase, if not earlier in the case of jewelry. Instances of both increased dramatically over time. *Quechquemitls* and *huipils* (Fig. 4.11), *maxlatls* or loin cloths (Fig. 4.12), belts, and sashes (Fig. 4.13) were the first clothing types to appear in this assemblage. Jewelry began as a simple affair, with the appearance of single coil collars (Fig. 4.14) and beaded collars (Fig. 4.15). The number of collars on any given figurine increased over time, and new types of ornamentation were introduced in the Early Classic and Classic periods.



Figure 4.11: Torsos with *Quechquemitls* (and some with *huipils*) from Tzacualli (left), Miccaotli (middle two), and Classic (right two)



Figure 4.12: Torsos with simple loincloths from Tzacualli/Miccaotli (left, middle), and the Classic (right)



Figure 4.13: Two torsos with sashes from Tzacualli or Miccaotli. The sash does not appear to be common in later periods



Figure 4.14: Simple collars from Tzacualli (left), Miccaotli (middle), and the Classic period (right)



Figure 4.15: Beaded collars from Tzacualli (likely, left), Miccaotli (middle), and Classic (right)

Goldsmith (2000) notes that most of the "types" she describes were in continuous use over the 900 years of the Teotihuacan period. My own research suggests the opposite. Although a few types do seem to have a long history of production and use, many of the standard Teotihuacan types were not introduced until the end of the Early Classic or even the Classic period, at which point there was a proliferation of different functional classes. These forms were in use until the end of Teotihuacan, but that is between 300 to 400 years of use at the very most.

Methodology: Data Collection and Analysis

Data was collected for this project in 2014-2015. From January to June of 2014 I collected data on the figurine assemblages from the sites of Teotihuacan, Axotlan, and Huixtoco in the Basin of Mexico. The TMP collection of figurines is housed at the Arizona State University managed Teotihuacan Research Laboratory in the town of San Juan Teotihuacan, Estado de Mexico, Mexico. The assemblages from Axotlan and Huixtoco are held in the Casa de Morelos facility in the municipality of Ecatepec, Estado de Mexico, Mexico. I collected data on 8,335 figurine fragments from the site of Teotihuacan, 540 fragments from Axotlan, and 263 fragments from Huixtoco. In the Spring of 2015 I analyzed 169 fragments from Cerro Portezuelo, which is held in Los Angeles at the Fowler Museum at UCLA. A total of 9,307 figurine fragments from these four sites were analyzed and recorded for the current project.

Sampling Strategy

The TMP collection contains over 20,000 figurine fragments, yet the questions explored in this project were amenable to testing through a reduced sampling of the total collection. A stratified sample of the total assemblage allowed for the collection of more detailed recordings and observations on a smaller subgroup of the total population. The Teotihuacan Mapping Project divided the urban zone into 147 500x500m grid squares (and an additional 2 250x500m half squares in the extreme south of the map)(Millon 1973). I selected 40 grid squares, which sampled approximately 25% of the total area of the TMP map.

The grid squares included in this study were selected through stratified random sampling. The city was divided into quadrants based on the Avenue of the Dead as the north-south axis, and an east-west axis running immediately to the south of the Ciudadela. For each quadrant, I used a random number generator to create two sets of numbers, which were paired with cardinal directions, turning them into grid square locations. This method of selection assured that no one area of the city would be disproportionately sampled, and provided a representative sample of the city.

For the assemblages from the three rural sites, since the assemblages were much smaller than the TMP collection, the entirety of the assemblages were analyzed, excluding Epiclassic and Postclassic figurines.

Data Collection

Once grid squares were chosen, all recovered figurine fragments from each selected square were analyzed according to the methods described below. Three of the

grid squares from the southwest quadrant did not yield any figurine fragments (S3W4, S3W5, S5W5). A database and data entry form were created using Filemaker, and all collected data was recorded directly into the database using the automated entry form. Each figurine fragment was given a unique numerical Case ID, and I recorded relevant contextual data in addition to qualitative and quantitative metrics for each fragment. Contextual data included the date of analysis, site name, excavating or collecting project's name, grid square number (applicable to Teotihuacan assemblage only), excavation unit or collection track number (when present), the context of its discovery (excavation or surface collection), and the number of the box and bag the piece is currently stored in.

Quantitative data collection included recording the method of manufacture (mold made, handmade, or a combination of both), whether it was hollow, the overall form (anthropomorphic, zoomorphic, mold, etc), the part of the body, and when applicable, the position of the body and the limbs, and the presence of a support or handle. Measurements (cm) were taken in three dimensions (length, width, and thickness) using digital calipers and were recorded rounding up to the nearest millimeter. I recorded the presence, location, and color of paint, and the location of any burnishing. I also documented paste characteristics that were visible from the surface and any breaks, including the color of the paste (based on Munsell categories), the overall texture of the clay, and the size and color of visible temper.

Qualitative data included the estimation of completeness based on the measurements of the piece and the location of the break (estimations were for the body part itself and not the figurine as a whole). When possible, I assigned the figurine

fragment a type based on the typologies put together by other scholars (e.g. Goldsmith, Scott, Barbour, Noguera, Vaillant). For zoomorphs, I recorded the probable type of animal when possible.

For heads, I recorded the shape of the head and the degree of prognathism. Eye type is commonly used in established typologies to date figurines, and both the type and the orientation/shape of the eye were recorded. Similarly, mouth type and shape vary, and I created stylistic categories for mouths. I also noted the presence of ears and wrinkles, when present. Other important features for heads include hair and headdresses. Since most headdresses were broken or incomplete I used a dual system of recording the headdress type and the degree of extravagance when possible, and in all cases I recorded all preserved decorative features and elements.

For all applicable body parts I recorded the presence, type, and amount of jewelry, and the presence and type of clothing. I also noted the presence of any perforation, suggesting that the figurine was either articulated or would have been suspended. Articulated torsos have a distinct style and different set of decorative elements than other figurine types, so I included a special section of stylistic metrics for this type. For torsos, I also recorded the presence and type of sexual characteristics or any obvious pathologies.

Finally, I recorded the figurine's original project specific ID when present, and included a section for special notes and the photo number when applicable. I took over 2,000 photos of figurines during this project, some of which included multiple fragments of the same type. Photos were taken of figurines that were diagnostic, unusual, relatively

complete, or in cases where I felt that the recorded data would be insufficient in conveying the likeness of the piece. Virtually all heads were photographed, along with decorated or relatively complete torsos, and occasionally limbs.

To the best of my abilities, I assigned each fragment to its likely phase of manufacture during data collection. Assigning phases ranged in difficulty depending on the part of the figurine, the completeness, and the condition of the piece. Heads are relatively easy to date stylistically (and technologically), and many bodies are also relatively simple to assign dates to. Certain types of bodies (unornamented cylindrical handmade) and many limbs are more difficult to date, especially when incomplete. Tentative phases were recorded whenever possible, but many were listed as "Unknown-fragment" indicating that dating was not possible due to the size and condition of the piece. Given that the TMP assemblage was collected through surface collection, many pieces were unfortunately put into this category.

A second issue that must be mentioned in regards to surface collection is that the TMP project was predated by several centuries of semi-intensive curating practices by local and visiting people. Many of the interesting pieces, including heads, have been picked up and carried away by visitors to the site. This has unfortunate implications for the results of any figurine study utilizing surface collections from a site with such high traffic. Nevertheless, the TMP figurine assemblage is able to yield important results through detailed and methodical study, which is why I recorded such detailed information on every piece. Even broken fragments and limbs—pieces that would not be as tempting to pick up and carry away—can reveal information about their makers and users, and in

large numbers inform us about variation in production and consumption practices within the ancient city.

Data collection for the remaining three sites (Axotlan, Cerro Portezuelo, and Huixtoco) proceeded in the same way. Analysis was aided by the fact that these assemblages were recovered through excavations, and because of that, many of the pieces were in better shape than the TMP figurines. A higher rate of figurines from the three rural assemblages were dated.

Data Analysis

Data analysis began upon completion of data collection, and started with the generation of basic descriptive statistics to characterize the dataset, which is presented in Chapters 5 and 6. Basic patterns recognized from the descriptive statistics were followed up with further statistical testing. All statistics were run in Excel, using a combination of the included Excel Analysis ToolPak, and an add-in from Real Statistics (www.real-statistics.com), which provides Excel-compatible statistics kits. These were sufficient for the statistical tests utilized in this dissertation.

The statistical tests most frequently used were Pearson's Chi-square test, ANOVA (Analysis of Variance), and Student's t-test. A Pearson's Chi-square test is a non-parametric test that determines how likely it is that an observed distribution of data is due to chance, or how well the observed distribution compares to an expected pattern of distribution if the variables are independent. The formula is shown below (O=observed, E=expected):

$$\chi^2 = \sum_{i=1}^k \frac{(O_i - E_i)^2}{E_i}$$

An ANOVA tests for statistically significant differences between the means of three or more independent groups, which essentially means that it compares intra-group variation around the mean to inter-group variation around the mean, testing whether the means of the groups are different to a statistically significant degree given the levels of variance in the sample. An ANOVA is an omnibus test, meaning that it reveals the existence of significant differences, but not the source or direction of the significance. Significant ANOVA results were therefore followed up with a series of post-hoc t-tests, which compare the means between two groups. The formula for a t-test is shown below:

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\frac{S_1^2}{N_1} + \frac{S_2^2}{N_2}}}$$

The post-hoc tests allows one to locate the groups that are significantly different from each other. T-tests were performed using a Bonferroni correction, which reduces the chances of a Type I error (i.e. incorrectly rejecting the null hypothesis) by adjusting the p value threshold for significance based on the number of comparisons being made. Significance is reported in the text in terms of the degree of significance of the results; tests with p values between 0.05-0.01 are termed significant, and tests with $p < 0.01$ are termed highly significant. Precise p values are reported in the appendices.

Important results from these tests are discussed in the chapters themselves, and proofs can be found in the appendices. Chapters 5 through 8 detail the analysis and partial interpretation of the data, focusing on different problems and aspects of the dataset.

Chapter 4 Notes

1) An interpretive trend that has been gaining recognition recently in figurine studies is to suggest that figurines could have served a variety of purposes, both secular and religious. In recent years more scholars have suggested that while some figurines might have served religious or spiritual uses as talismans, idols, and amulets, others might have served more mundane purposes—but which in fact promote complex processes of socialization— such as being children's toys (see Lesure 2002: 590). Some scholars (e.g. Joyce 2000; Goldsmith 2000) have recently argued that figurines could have been used as children's toys, but with the added benefit of having socialized them into expected gender and societal roles.

2) Gell uses the experience of seeing a person (or a photo of a person) smile as an example of abductive inference. "Very much part of the theory I am proposing is the idea that we approach art objects...as if they had physiognomies' like people. When we see a picture of a smiling person, we attribute an attitude of friendliness to 'the person in the picture'...We respond to the picture in this way because the appearance of smiling triggers a (hedged) inference that...this person is friendly, just as a real person's smile would trigger the same inference" (Gell 1998: 15).

3) Table 4.1: Synoptic table from Panofsky (1955: 40-41).

Object of Interpretation	Act of Interpretation	Equipment for Interpretation	Corrective Principle of Interpretation
<i>Primary or natural</i> subject matter--(A) factual, (B) expressional--constituting the world of artistic motifs.	<i>Pre-iconographical description</i> (and pseudo-formal analysis).	<i>Practical experience</i> (familiarity with <i>objects</i> and <i>events</i>).	History of <i>style</i> (insight into the manner in which, under varying historical conditions, <i>objects</i> and <i>events</i> were expressed by <i>forms</i>).
<i>Secondary or conventional</i> subject matter, constituting the world of <i>images</i> , <i>stories</i> , and <i>allegories</i> .	<i>Iconographical analysis</i> .	<i>Knowledge of literary sources</i> (familiarity with specific <i>themes</i> and <i>concepts</i>).	History of <i>types</i> (insight into the manner in which, under varying historical conditions, specific <i>themes</i> or <i>concepts</i> were expressed by <i>objects</i> and <i>events</i>).
<i>Intrinsic meaning or content</i> , constituting the world of "symbolical" <i>values</i> .	<i>Iconological interpretation</i> .	<i>Synthetic intuition</i> (familiarity with the <i>essential tendencies of the human mind</i>), conditioned by personal psychology and "Weltanschauung".	History of <i>cultural symptoms</i> or "symbols" in general (insight into the manner in which, under varying historical conditions, <i>essential tendencies of the human mind</i> were expressed by specific <i>themes</i> and <i>concepts</i>).

4) Marcus (2009) presents useful Mesoamerican case studies where figurines have been found in primary contexts, many of which were specifically arranged and left in scenes by their owners. These examples are usually found in a cache or ritual deposit, and they provide an astounding amount of information regarding the possible significance and uses of ancient Mesoamerican figurines. The examples range from the famous Offering 4 from La Venta—a buried scene of 16 stone figurines and six stone celts positioned in concentric semi-circles—to findings from her own work at San José Mogote in Oaxaca. Excavations at Structure 35, a two-room colonnaded temple, revealed masonry boxes containing offerings buried beneath the temple floor. One of the boxes in the inner room—Feature 94—contained a jade statuette, a jade figurine, and several jade beads, all atop a layer of red pigment. Feature 96 was found in the same room, and contained seven ceramic figures arranged in a scene, and at the center of which there was a miniature adobe tomb (Marcus 2009: 33). Excavations of domestic structures at San José Mogote revealed a Formative period scene comprised of four figurines buried beneath the floor of a house—an area that Marcus designates as a women's work-space. In the scene, three

larger figures were supine with their arms crossed across their chests, while a fourth smaller figure sat cross-legged, resting at the feet of the middle figure.

5) One of the earliest and better discussed case studies comes from the Early-Middle Formative site of Tlatilco in the Basin of Mexico. Approximately a quarter of the 220 burials from this site included figurines (Joyce 1999, Marcus 2009, Lesure 2011). Children were slightly more likely to be buried with figurines than adults, but figurines are found in graves of both children and adults, and males and females. Age was an important factor in deciding who had figurines buried with them; younger adult (15-30 years) burials were just as likely to contain figurines as the burials of children, but older adults (30+ years) were significantly less likely to contain any figurines (Lesure 2011: 128). Adult female burials were no more likely to contain figurines than adult men, unless associated grave wealth was controlled for, in which case the richer female burials did indeed contain more figurines than those of men. Figurines at Tlatilco, therefore, seem to have not been the exclusive domain of any age or sex, but children's burials are more likely to contain figurines, as are the burials of high-ranking women (Lesure 2011: 128).

The case of Late Formative Chupícuaro in Guanajuato shares some traits with the Tlatilco burials, but diverges in other respects, showing differences in figurine mortuary use across time and space, which is in turn possibly indicative of difference in figurine use by the living. A smaller percentage of burials at Chupícuaro contain figurines than at Tlatilco, however they are present in the graves of both children and adults. The key

point of difference seems to be in the type of burial under consideration. Both articulated skeletons and single heads (no postcranial) were buried at Chupícuaro, but children are more likely to be represented by skulls alone, and these burials are far more likely to contain figurines than articulated burials. Few of the adult burials had been sexed, but among those that were, there was a much higher rate of figurines in adult female burials compared to those of males (Lesure 2011: 128-129). Contrary to the Tlatilco example, there does not seem to be a correlation with the status of the buried individual.

6) These figurines were in the typical Miccaotli style, and the women were fully clothed in *quechquemits*, *huipils*, and headdresses, and had traces of yellow, white, red, and black pigment on their bodies and faces. In the first level, the figurines were arranged in a horseshoe pattern around a figurine of an infant in a crib. In the next level, a jar was found with two female figurines placed inside, one of which had an infant in a crib placed in her lap. This offering was accompanied by other ceramics (an olla with an additional infant figurine inside) and shell offerings. The third level contained thirteen female figurines, one of which was seated with an infant in a crib on her lap. The fourth level had an additional eleven female figurines arranged in a scene. Five were arranged around a central figure, while nearby there was another seated women holding an infant in a crib (Rodriguez and Delgado 1997: 19-21).

CHAPTER 5. SOCIO.SPATIAL VARIATION IN FIGURINE PRODUCTION AND CONSUMPTION IN URBAN TEOTIHUACAN

This chapter investigates figurines in the urban context of Teotihuacan, and sociospatial variation related to figurine production and consumption practices within the urban landscape. Research by other scholars has demonstrated a high degree of socioeconomic and ethnic variation in the city at the neighborhood level (e.g. Robertson 2015, Nichols 2016, Gomez Chavez 2012, Widmer and Storey 2012, Clayton 2011, White et al. 2004). Research on figurines, however, has not yet contributed sufficiently to this important area of scholarship, and it remains unknown how figurine culture articulated with other elements of quotidian behavior and practice, and to what extent there was variation across the city in terms of figurine practices.

Personal choice and differences in consumption practices between households, communities, and neighborhoods with regards to figurines is a topic that merits further exploration. This chapter addresses this issue through a multi-phased investigation of sociospatial variation in figurines across the city. Here, I consider the evidence for sociospatial variation in figurine practices as they relate to production and consumption. My quantitative analysis of figurine type distributions and qualitative variation within figurine types in the urban context provides a basis for comparison with other settlements in the Basin of Mexico, and clarifies trends in figurine use within the complex sociopolitical environment of the Teotihuacan capital. My analysis includes a consideration of the complicating factors of distance from the center of the city and class as they pertain to potential differences in figurine production and consumption patterns.

Compelling evidence exists for the presence of market exchange in the urban center, and figurines produced by both attached and independent artisans were likely part of this market. Sullivan (2007: 98) reports the types and relative quantities of figurines that were produced by an independent workshop located in an apartment compound (Cosotlan 23), and a workshop attached—literally and figuratively—to the Ciudadela (CDD). (Note 1) Based on the number of figurine fragments and molds found at each locale, the primary product of C23 seems to have been articulated figurines, followed by cylindrical and flat figurines (Sullivan 2007: 139). Sullivan suggests that given the low number of enthroned, half-conical, and warrior figurines, and the lack of production errors or partial figurines from these types, they may have been acquired by the residents of C23 for their own personal use, and were produced in workshops elsewhere. Sullivan concludes that C23 is best understood as an independent residential workshop, with no indication of direct government oversight, whereas the Ciudadela workshop was probably a retainer workshop, the products of which went to the workshop's elite sponsors (2007: 155). She goes on to suggest that the figurines and adornos, which were probably low value because of the inherent ease and speed of making molded figurines, may have then been redistributed by the elite sponsors to promote state ideology.

Figurines are not the only ritually-charged ceramic goods that were produced by both attached and independent craft specialists. (Note 2) Given their ubiquity throughout the city, figurines were likely not a sumptuary good, and evidence for production by independent as well as attached craft specialists suggests a complicated and perhaps even competitive system of production, with an as yet undetermined level of state

involvement. The spatial analysis of figurine distribution in this chapter also speaks to and draws upon the growing interest in neighborhoods as important loci of archaeological study.

The neighborhood is a level of social and spatial organization larger than the apartment compound, but smaller than the district, in which meaningful social and economic relationships may have been organized. This chapter has two main goals: to test the feasibility of defining neighborhoods through a figurine assemblage generated by surface collection, and to explore variation in figurine production and style in the urban context of Teotihuacan. The first of these objectives explores differences in distribution of figurine types across the city, drawing on the work of Robertson (2001; 2015) and Sullivan (2007), to test whether there are discernible differences in the way figurines were distributed and used in Teotihuacan society. The second goal is to explore the topic of production, in an attempt to quantify the degree of variation present in figurine types, which has important implications for our understanding of the roles of figurines in Teotihuacan ritual practice, and how their production was organized on a community and society level. Both of these topics contribute directly to the interpretation of figurines, and their meaning, value, and purpose in society.

Given the research that has been done on Teotihuacan society, it is reasonable to surmise that different areas of the city would have had different household practices, visible on the community or neighborhood level, and figurine production may vary according to the demands of consumers. I begin with a brief discussion of archaeological research into neighborhoods, especially at Teotihuacan, and then move into basic

characterization of the data, and detail the results and implications of my analysis regarding the main goals of this chapter.

The Neighborhood as a Locus of Archaeological Investigations

The internal composition and spatial organization of neighborhoods in early urban centers is a growing area of research in archaeology (Arnauld, Manzanilla, Smith 2012; Smith and Novic 2012; Lemonnier 2012). A general definition of a neighborhood is "...a residential zone that has both considerable face-to-face interaction and distinctive physical or social characteristics" (Smith and Novic 2012: 4). Scholars tend to apply this term to diverse situations, though, and many authors designate different arrangements of family, corporate production, and architectural groups as neighborhoods. Nevertheless, the spatial and social configuration that the term 'neighborhood' attempts to describe does seem to be a fact of urban life, even if meanings and configurations are diverse. (Note 3)

If the household is the most basic unit of social organization in ancient and modern society, then neighborhoods are the next level up in the social organization in cities, and variations between neighborhoods may be visible in the archaeological record. Any study of sociospatial variation within an urban center or city must consider the role that neighborhoods played in structuring social, economic, and religious interactions, and considerable effort has been expended trying to understand neighborhood dynamics in Teotihuacan.

Manzanilla (2012:59) and Gómez-Chávez (2012) propose that there may be at least three configurations of neighborhoods at Teotihuacan, which differentially organize

domestic, craft, administrative, and religious activities. The first is a "three-temple plaza" group, surrounded by apartment compounds that share in a common craft or economic occupation. The second type are elite neighborhoods, which have separate architectural spaces or functional sectors designated for different types of activities (such as La Ventilla). The third are multiethnic neighborhoods that fall in the periphery of the city, and may be controlled by "noble houses" such as Teopancazco (Manzanilla 2012). Intermediate elites may have served as administrators or overseers of larger neighborhoods that functioned as corporate groups, similar to an *oikos* economy, as described by Pollock (2002; Manzanilla 2012). Manzanilla suggests that the different neighborhoods may have been organized not only along the lines of shared craft production, but also by a shared identity as an independent corporate group. If these neighborhoods were run by elite households, then this system may have allowed for independent, yet closely monitored craft production in line with the needs of Teotihuacan.

In his discussion of La Ventilla as a neighborhood, Gómez-Chávez (2012) describes the unique features of the La Ventilla area at Teotihuacan, considering architectural/spatial configurations and artifact distribution. Similar to Manzanilla's (2012) formulation, a neighborhood in Gómez-Chávez's usage is a subunit of a larger urban system whose members recognize a common social affinity, and are organized along shared economic relationships. Kinship may have been important initially in organizing apartment compounds and neighborhoods in Teotihuacan's early days, but the bonds of economic production quickly overshadowed the importance of kinship in

neighborhood composition. There were common features of neighborhoods (Manzanilla 2012) shared by La Ventilla, such as public buildings and open spaces, residential compounds, and shared common use areas. Some of the public buildings, such as neighborhood temples, may have served administrative purposes, by serving as loci of delegated authority.

Teotihuacan officials may have taken a direct role in the oversight of craft production and in the organization of neighborhoods within the city. Gómez- Chávez (2012) and Widmer and Storey (2012) have similar views on the roles served by public buildings in neighborhoods and districts. Tlajinga is a district in the southern margins of the city, whose occupants were involved in the manufacture of a specific class of ceramics, known as San Martin Orange. Widmer and Storey (2012) refer to Tlajinga as a district, which was composed of several smaller neighborhoods united by both proximity and a shared craft specialization. Available evidence indicates that ceramic production was organized on a level above the individual apartment compound, suggesting the presence of some administrative body, possibly a guild, that oversaw production and distribution. They suggest that this may have been done by an agent of the state, perhaps in residence in the public temples or administrative buildings.

Robertson's (2001; 2015) study of sociospatial variation in neighborhood status at Teotihuacan indicates that there is a changing relationship between proximity to the core and status. In Miccaotli and Tlamimilolpa, households of any given status tended to cluster near households of similar socioeconomic status (2001: 10). Neighborhoods were not homogeneous, but they had a disproportionate number of households belonging to the

same socioeconomic level, a pattern which strengthened over time. One of the most striking features of internal neighborhood composition in Teotihuacan was the degree of intra-neighborhood socioeconomic diversity during Miccaotli. In the Tlamimilolpa phase, however, the intra-neighborhood socioeconomic diversity decreased, and differences between neighborhoods became more marked. This is interpreted as a stronger desire for individuals in different classes to associate more intensively with people of a similar class to themselves (Robertson 2015: 173). He connects this change to the widespread building of apartment compounds during the Tlamimilolpa phase, which would have allowed for social reorganization (2001: 13), and facilitated the move of elite households that wanted to be closer to the civic-ceremonial core of the city.

Although the degree of class self-association increased over time, in all phases there was a strong association between class and different locales within the city. High-status neighborhoods (which had a high number of elite households) were more likely to cluster around the civic-ceremonial core, while lower-status households clustered into poorer neighborhoods in the outskirts of the city. Intermediate-status households were most common in areas of an intermediate distance from the core, and distance from the Street of the Dead was a general indicator of social status at Teotihuacan (Robertson 2001: 221). This pattern was present during the Miccaotli phase, and strengthened over time as intra-neighborhood socioeconomic diversity decreased. Robertson emphasizes that this is only a general pattern, however, and not an absolute rule. Neighborhoods were not organized around the core in concentric rings of uniform social statuses, although his results closely align with this configuration in the Tlamimilolpa phase.

Characterization of the Teotihuacan Data Set and Figurine Assemblage

Forty grid squares were selected for analysis through stratified random sampling, creating a representative sample of approximately 25% of the total number of grid squares. Figure 5.1 shows the selected grid squares highlighted in blue. Figure 5.2 gives the figurine fragment densities for each square in increasing opaqueness (Table 5.1). The densities in Figure 5.3 reflect the amount of datable figurine fragments from each square, after all of the undated figurines were removed from the count. Three grid squares from the Southwest quadrant (S3W4, S3W5, S5W5) were excluded from the second and third maps since no figurine fragments were found in the collection from those squares.

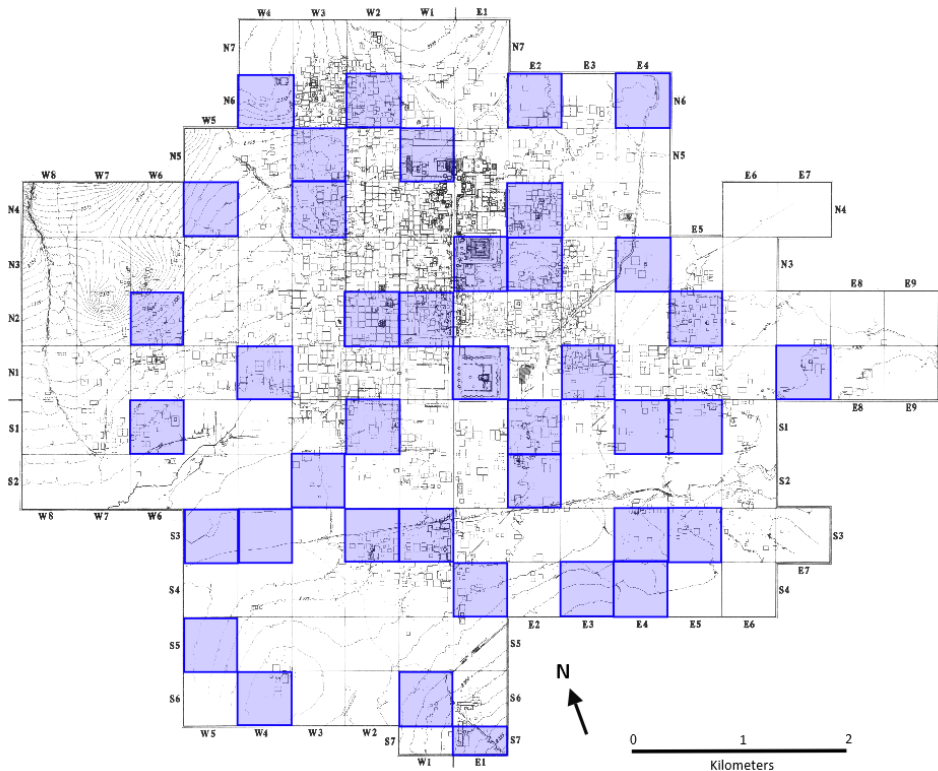


Figure 5.1: TMP map showing analyzed grid squares

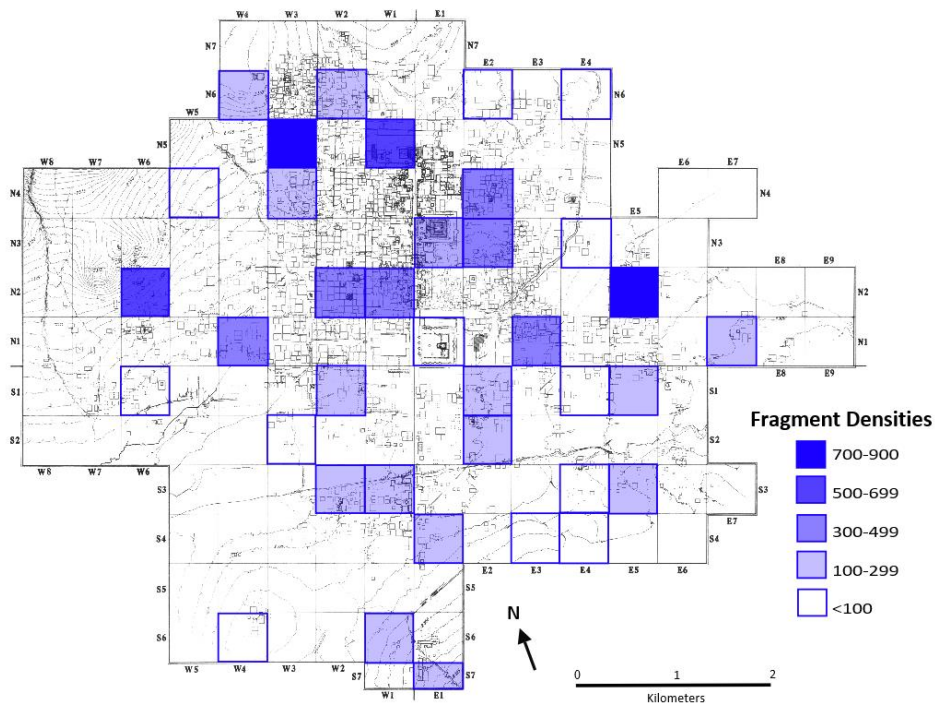


Figure 5.2: TMAP map showing the density of all figurine fragments by grid square

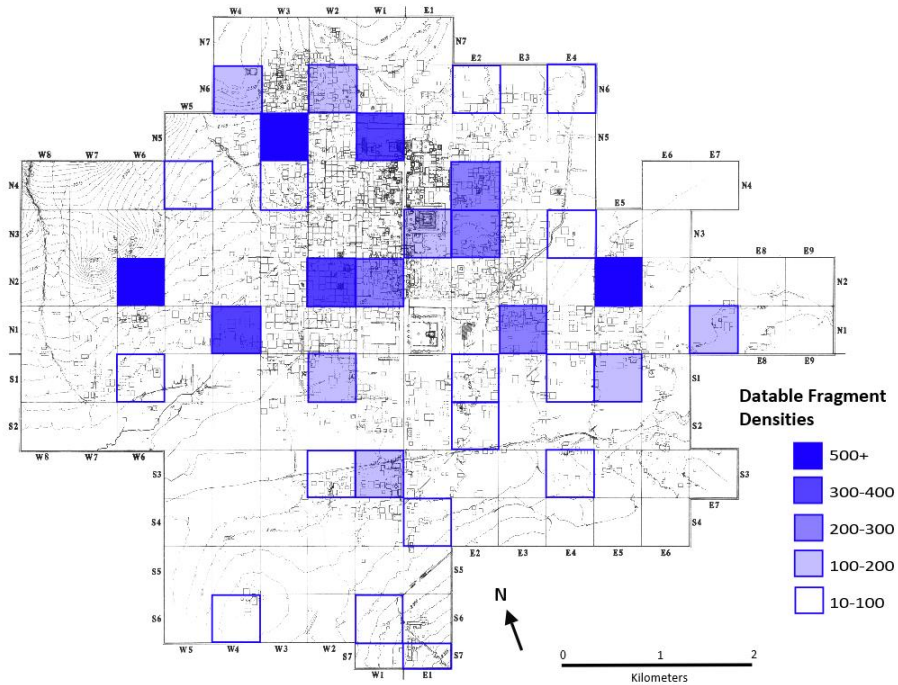


Figure 5.3: TMAP map showing the density of all datable figurine fragments by grid square

Table 5.1: Counts of Figurines in Teotihuacan Grid Squares Under Investigation

N1E1	N1E3	N1E7	N1W4	N2E5	N2W1	N2W2	N2W6	N3E1	N3E2
20	328	140	381	900	355	489	614	428	366
N3E4	N4E2	N4W3	N4W5	N5W1	N5W3	N6E2	N6E4	N6W2	N6W4
93	458	156	99	646	730	50	66	213	202
S1E2	S1E4	S1E5	S1W2	S1W6	S2E2	S2W3	S3E4	S3E5	S3W1
258	42	231	195	68	112	1	95	108	235
S3W2	S3W4	S3W5	S4E1	S4E3	S4E4	S5W5	S6W1	S6W4	S7E1
113	0	0	144	15	5	0	118	24	114

Table 5.2: Teotihuacan Grid Squares by Quadrant

NW	NE	SW	SE
N1W4	N1E1	S1W2	S1E2
N2W1	N1E3	S1W6	S1E4
N2W2	N1E7	S2W3	S1E5
N2W6	N2E5	S3W1	S2E2
N4W3	N3E1	S3W2	S3E4
N4W5	N3E2	S6W1	S3E5
N5W1	N3E4	S6W4	S4E1
N5W3	N4E2	S3W4	S4E3
N6W2	N6E2	S3W5	S4E4
N6W4	N6E4	S5W5	S7E1

Many of the grid squares under investigation in this dissertation include notable sites and architectural features (Table 5.2, Fig. 5.4). In the northwest quadrant of the city, selected grid squares include a number of the well-known excavated barrios and apartment compounds such as Tetitla and Zacuala (N2W2), the Oaxaca barrio (or Tlailotlacan) and the Michoacan enclave (N2W6), the Cosotlan compound, which is a known location of figurine production (Sullivan 2007) (N5W3), and the outskirts of the Oztoyahualco barrio, which is centered in N6W3 (N6W2, N6W4). The Moon pyramid also falls on the eastern limit of this quadrant, in N5W1. In the northeastern quadrant,

notable features include the Ciudadela (N1E1), the Sun pyramid and adosada (N3E1), the Merchants barrio (N3E4), and the Tepantitla and Xolalpan barrios (N4E2). In the southwest quadrant, the southeastern portion of the La Ventilla district falls in S1W2, and the Tlajinga 33 compound falls in S3W1. And in the southeastern quadrant, the Teopancazco barrio falls in S2E2.

NW	Features	NE	Features	SW	Features	SE	Features
N1W4		N1E1	Ciudadela	S1W2	part of La Ventilla district	S1E2	
N2W1		N1E3		S1W6		S1E4	
N2W2	Tetitla and Zacuala barrios	N1E7		S2W3		S1E5	
N2W6	Oaxaca, Michoacan enclaves	N2E5		S3W1	Tlajinga district (Tlajinga 33)	S2E2	Teopancazco barrio
N4W3		N3E1	Sun Pyramid and adosada	S3W2	Tlajinga district	S3E4	
N4W5		N3E2		S6W1		S3E5	
N5W1	Moon Pyramid	N3E4	Merchants barrio	S6W4		S4E1	
N5W3	Cosotlan barrio	N4E2	Tepantitla, Xolalpan barrios	S3W4		S4E3	
N6W2	near Oztoyahualco (N6W3)	N6E2		S3W5		S4E4	
N6W4	near Oztoyahualco (N6W3)	N6E4		S5W5		S7E1	

Figure 5.4: Notable Features of Grid Squares Under Investigation

Descriptives

Tables 5.3 through 5.5 give the numerical data on the number of figurine types and body parts found, as well as the types and frequencies of figurines found across the city. All counts of types and body parts refer to anthropomorphic figurines, although Table 5.3 reports the counts of zoomorphs in the assemblage. (Note 4)

Table 5.3: Counts of Forms (dated fragments only)

Site	Anthropomorphs	Zoomorphs	Total
TEO	5507	176	5683
%	97%	3%	100%

Table 5.4: Counts of Teotihuacan Figurine Fragments by Period and Body Part

Period	Head/					Total	
	Limbs	Headdress	Torsos	Whole	Unknown		
Late Formative		7	3			10	
	%	70%	30%			100%	
Terminal Formative	706	245	743	6	28	1728	
	%	41%	14%	43%	0.3%	2%	100%
Early Classic	290	376	335	4	12	1017	
	%	29%	37%	33%	0.4%	1%	100%
Classic	1838	329	538	13	26	2744	
	%	67%	12%	20%	0%	1%	100%
Unknown (frag)	2244	43	251		64	2602	
	%	86%	2%	10%		2%	100%
Total	5078	1000	1870	23	130	8101	

Graph 5.1: Proportion of Different Body Parts in the TMP assemblage (all periods)

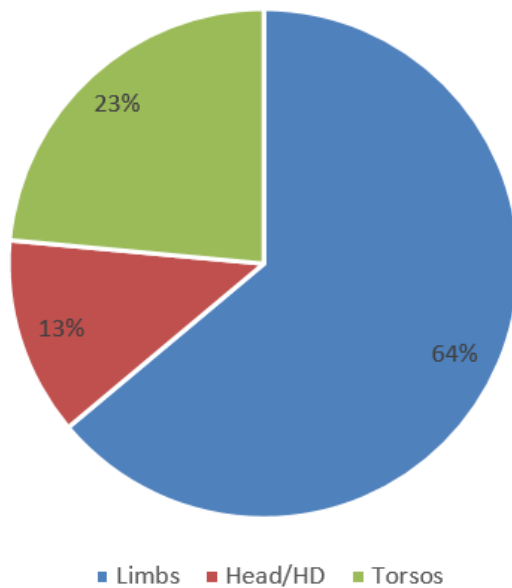


Table 5.5: Totals of Figurine Types by Period (all fragments)

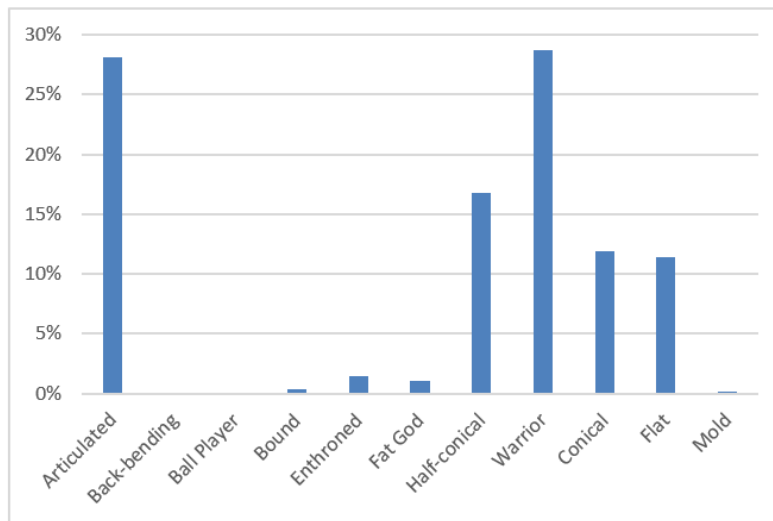
Period	Articulated	Back-bending	Ball Player	Bound	Enthroned	Fat God	Half-conical	Warrior	Conical	Flat	Mold	Total
Late Formative									3	7		10
Terminal Formative	9	11	2	1		1	3	1	1344	520		1892
Early Classic	35	3	1	3				32	370	592		1036
Classic	1393			4	8	6	97	305	598	353	4	2768
Total	1437	14	3	8	8	7	100	338	2315	1472	4	5706
%	25.2%	0.2%	0.1%	0.1%	0.1%	0.1%	1.8%	5.9%	40.6%	25.8%	0.1%	100%

There were several different contemporaneous types of figurines at Teotihuacan, many with their own stylistic properties and attributes. The seven well-defined types listed in Table 5.5 (i.e. articulated, back-bending, ball player, bound enthroned, "fat god", half-conical) were identified based almost entirely on their torsos and limbs. Heads were separated from their bodies in nearly all cases, and it is still not entirely clear which heads belonged to which bodies or types. Therefore, the above type counts are based almost exclusively on bodies and limbs, with the notable exception of warrior figurines. The counts above for warriors are somewhat inflated compared to the other types since their heads are so distinctive, and the count therefore includes both head and body fragments.

In the tabulations of figurine types, the categories of conical and flat are somewhat problematic in that they are not clearly delineated styles so much as catch-all categories for figurines that do not readily fit into other more narrowly defined types. There is an important distinction between the two in that conical figurines were modeled in three dimensions whereas the flat varieties, whether molded or handmade, only pay attention to or decorate one surface, and the verso is frequently without detail, decoration, or finishing. The problem with these categories is that there was significant overlap between them and the defined types, since a molded bound figurine for example could also be considered a flat figurine by virtue of the absence of ornamentation or treatment to its verso. Similarly, a warrior figurine torso or limb, if sufficiently fragmented, could be unrecognizable as a warrior, and would be placed in the conical category. In fact, many fragments were too small or eroded to determine an actual type, and were therefore placed in the conical or flat category since that was possible to determine at least. Conical

and flat figurines should be thought of as informative on trends of manufacturing, function, or use, but are not to be interpreted as types based on style or subject matter. The molds are also not separated by type due to their low rate of occurrence and fragmented state.

Graph 5.2: Rates of Figurine Types in Classic Period Teotihuacan (torsos and whole only)



Sociospatial Variation at Teotihuacan

My investigation of social and ritual variation began with an attempt at testing whether distance from or proximity to the civic-ceremonial core was an important factor in the experienced lives of Teotihuacanos, and whether it could explain differences in the figurine assemblage. Proximity to the core could have been understood as a marker of social status, prestige, wealth, or group identity. I hypothesized that proximity to the core would have been an indicator of salient social differences between households, and that these differences may have extended to different ritual practices that would be visible in

the frequency of different figurine types. I partitioned the city into different sectors in order to study whether there were significant differences between the figurine assemblages recovered from these different areas of the city, and whether distance from the core was a predictor of figurine distributions.

Second, I directly implemented Robertson's (2001, 2015) model of neighborhood status within the urban zone in order to test whether status was a better predictor of figurine use than distance from the core. Robertson's studies indicate that to some extent, proximity to the core was associated with higher status and it was a relationship that strengthened over time. But this is best understood as a trend rather than an absolute rule, and Robertson's analysis was based on ceramics and did not include figurines.

Proximity Zones

I divided the city into three zones based on the proximity of grid squares to the civic-ceremonial core, and used these zones to investigate differences in patterns of figurine use across the city (Figure 5.5, Table 5.6). The center of the map was placed in front of the adosada and Sun Pyramid along the central east-west axis (West 1 and East 1), and between rows North 3 and North 4 on the TMP grid, or the northwest corner of grid unit N3E1. The Inner Zone was delineated by creating a circle with a radius of 1km around the center point described above, and included not only most of the city's major monuments, but also much of the most densely populated areas of the city close to the civic-ceremonial core. The grid squares included in Zone 1 were N5W1, N4E2, N3E2,

N3E1, N2W1, N2W2. These squares strongly overlap with many of the high-status neighborhoods defined by Robertson (2001: 163-190) during the Early Classic.

The Middle Zone (Zone 2) began directly outside of the inner zone and extended for an additional kilometer in all directions, creating a concentric ring around the Inner Zone with a radius of 1km, or a distance falling between 1-2km from the center point. The Middle Zone included the Ciudadela and Great Compound, as well as some relatively densely populated neighborhoods. The included grid squares are N6E2, N6W2, N5W3, N4W3, N3W4, N1E3, N1E1 (Ciudadela), S1E2, and S1W2. Again, there was significant overlap between this zone and intermediate-status neighborhoods, although several of the squares were interpreted as high-status by Robertson (2001: 163-190).

The Outer Zone (Zone 3) included all grid squares falling outside of the inner two zones with distances from the core ranging from 2km to as much as 4.5km in the extreme south of the map. Population density in this zone was variable. Some squares, such as N2W6 and N2E5 were quite densely populated, and returned some of the highest figurine counts in this study. Many others, however, appear to have had lower levels of population density judging by the TMP survey results, and significantly lower numbers of figurines. Many of the squares overlap with Robertson's (2001: 163) low-status neighborhoods, but some were probably at least intermediate status, and others received no status classification at all.

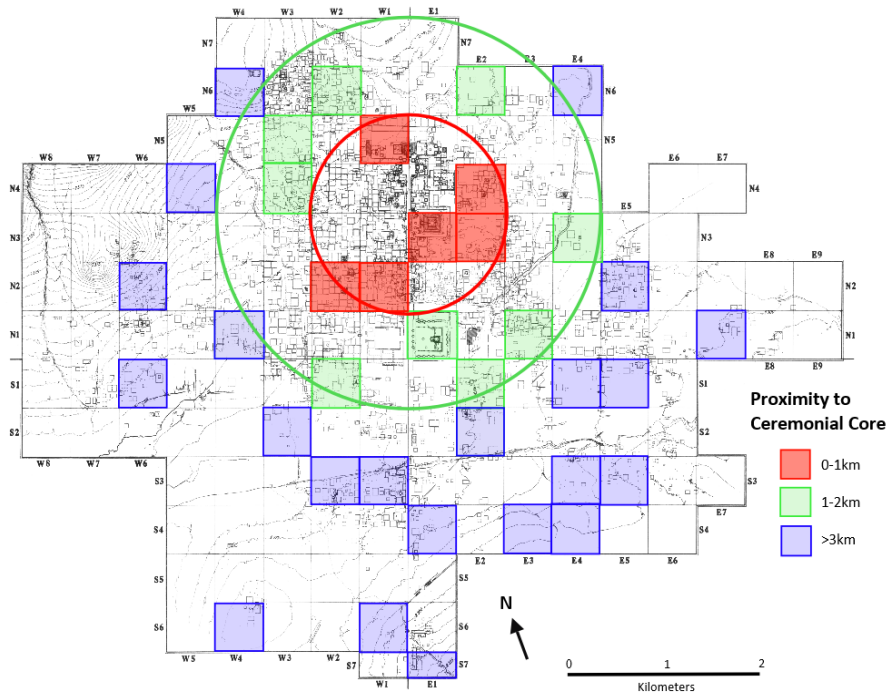


Figure 5.5: TMAP map showing the radius of the three proximity groups to the civic-ceremonial core and included grid squares

Table 5.6: Grid Squares by Zone at TEO

Zone 1 <1km	Zone 2 1-2km	Zone 3 >2km	
N5W1	N6E2	N1E7	S2W3
N4E2	N6W2	N1W4	S3E4
N3E2	N5W3	N2E5	S3E5
N3E1	N4W3	N2W6	S3W1
N2W1	N3E4	N4W5	S3W2
N2W2	N1E1	N6E4	S4E1
	N1E3	N6W4	S4E3
	S1E2	S1E4	S4E4
	S1W2	S1E5	S6W1
		S1W6	S6W4
		S2E2	S7E1

Analysis in this section focuses on figurines reliably dated to the Early Classic and Classic, and the vast majority of them date to the Classic. Table 5.7 lists these

figurine fragments by zone, grid square, and type. The grid squares are organized by zone, and listed in descending order of total number of figurines. The Inner Zone had the highest mean figurine density per square (453), which is likely a reflection of the population density in the core of the site. The Middle Zone had a wide range from 720 to 20 fragments per square, with a mean of 200 figurine fragments per square. The Outer Zone had an extreme range (886 to 1), but a fairly normal distribution, with a mean of 161 figurines per square.

Table 5.7: Counts of Figurine Types by Proximity to the Civic-Ceremonial Core at Teotihuacan

Zone	Grid Sqr	Articulated	Back-bending	Ball Player	Bound	Enthroned	Fat God	Half-conical	Warrior	Conical	Flat	Mold	Total
Inner	N5W1	52	3						14	472	102		643
	N2W2	85	1		1		2	14	38	262	85		488
	N4E2	111	1		2		1	12	20	223	82	1	453
	N3E1	20							13	315	80		428
	N2W1	63	1					7	33	205	45		354
	N3E2	76	3	1			1	2	10	205	51	1	350
Middle	N5W3	141						8	10	371	190		720
	N1E3	78	1		1	2		3	10	149	73		317
	S1E2	60			2			1	4	127	52	1	247
	N6W2	47				1		2	6	102	49		207
	S1W2	29	1					2	14	117	28		191
	N4W3	23								95	36		154
	N3E4	25						1	3	50	14		93
	N6E2	6							4	28	8		46
	N1E1	2								12	6		20
Outer	N2E5	245		1				6	19	451	164		886
	N2W6	63	1		1			13	33	330	165	1	607
	N1W4	51	1					9	29	188	100		378
	S3W1	35					1	7	12	113	61		229
	S1E5	47	1					1	9	112	58		228
	N6W4	31			1	1		2	3	116	41		195
	S4E1	15					1		7	85	32		140
	N1E7	26						2	8	52	44		132
	S7E1	25		1				1	2	56	22		107
	S3W2	17				1		2	11	55	20		106
	S2E2	14				1		2	6	56	26		105
	S6W1	7						1	4	58	29		99
	S3E5	8							2	55	32		97
	S3E4	8	1						1	50	28		90
	N4W5	5							3	58	33		99
	N6E4	11							3	35	17		66
	S1W6	6						1	4	35	18		64
	S1E4	3							2	23	14		42
	S6W4	1				1	1			9	10		22
	S4E3									11	4		15
	S4E4	1								3	1		5
	S2W3									1			1

Table 5.8: Relative Rates of Figurine Types by Zone

Zone (Distance from Core)	Articulated	Back-bending	Ball Player	Bound	Enthroned	Fat God	Half-conical	Warrior	Conical	Flat	Mold
1 Inner (<1km)	407	9	1	3	1	3	35	128	1682	445	2
2 Middle (1-2km)	411	2		3	3		17	51	1051	456	1
3 Outer (>2km)	619	4	2	2	4	4	47	159	1952	919	1
Total	1437	15	3	8	8	7	99	338	4685	1820	4
1 Inner (<1km)	28%	60%	33%	38%	13%	43%	35%	38%	36%	24%	50%
2 Middle (1-2km)	29%	13%		38%	38%		17%	15%	22%	25%	25%
3 Outer (>2km)	43%	27%	67%	25%	50%	57%	47%	47%	42%	50%	25%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Table 5.8 gives the totals of each type by zone and the percentage of a type's total count by zone. Table 5.9 shows the proportion of each figurine type in the assemblage of each zone. Back-bending, ball player, bound, enthroned, and fat gods all consistently made up less than 1% of the total assemblage in each zone (seen in Table 5.9). Even though there were fluctuations in their rates of occurrence between zones, the overall rates were so minuscule that it is difficult to draw any meaningful conclusions beyond the fact that they occurred at very low rates across the city. For the most part, these types were found in low numbers in each zone of the city.

Articulated figurines were the most frequent of the figurine types and made up 15-20% of the total figurine assemblage for each zone. The inner core of the city had the lowest number and rate (n=407, 15%), followed by the outer zone which had the second highest rate (n=619, 16.7%), and then the middle zone (n=411, 20.6%). In other words, articulated figurines were found in high frequencies across the city, but they were most concentrated in neighborhoods immediately outside the inner zone of the city, or an average distance of 1.5km away from the Sun Pyramid.

Table 5.9: Totals of Figurine Types by Zone at Teotihuacan

Zone (Distance from Core)	Articulated	Back-bending	Ball Player	Bound	Enthroned	Fat God	Half-conical	Warrior	Conical	Flat	Mold	Total
1 Inner (<1km)	407	9	1	3	1	3	35	128	1682	445	2	2716
%	14.99%	0.33%	0.04%	0.11%	0.04%	0.11%	1.29%	4.71%	61.93%	16.38%	0.07%	100%
2 Middle (1-2km)	411	2	—	3	3	—	17	51	1051	456	1	1995
%	20.60%	0.10%	—	0.15%	0.15%	—	0.85%	2.56%	52.68%	22.86%	0.05%	100%
3 Outer (>2km)	619	4	2	2	4	4	47	159	1952	919	1	3713
%	16.67%	0.11%	0.05%	0.05%	0.11%	0.11%	1.27%	4.28%	52.57%	24.75%	0.03%	100%

Warrior figurines were the next most common of the recognizable figurine types across the city, but were far less frequent than articulated figurines. Warrior figurines made up nearly 5% (n=128, 4.7%) of the Inner Zone assemblage, and were found slightly less frequently in the Middle (n=51, 2.6%) and Outer Zones (n=159, 4.3%). The rates of occurrence for half-conical figurines were even lower than warrior figurines, and they never accounted for more than 2% of a zone's total assemblage.

Analysis of Relationships

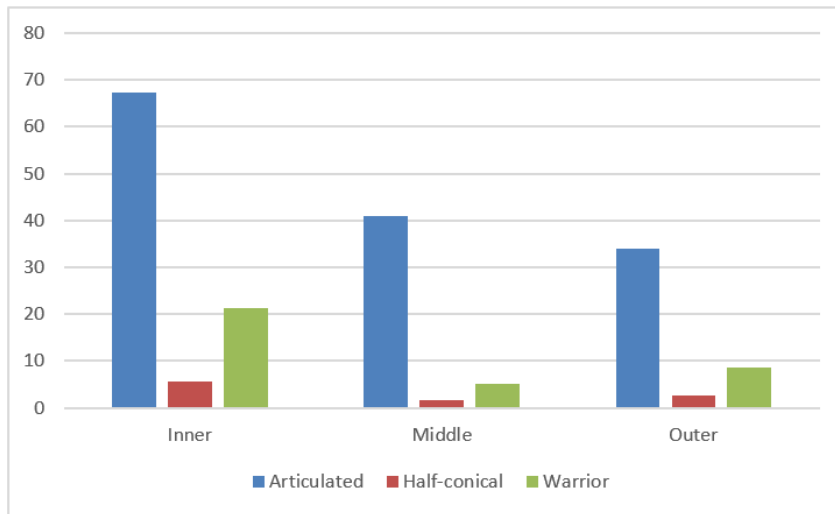
The correlation between different figurine types was measured both across the city as a whole, and within different zones of the city in order to explore the distribution of types that could be linked to meaningful differences in practice. Articulated, half-conicals, and warriors were the most common types and had the strongest correlations between them. Articulated figurines had a moderate positive correlation with warrior figurines, and a strong correlation with half-conicals. Half-conicals and warriors also had a strong positive correlation with each other—the strongest correlation coefficient overall was in fact between these two types. The correlations between all other types were quite weak due to the low total counts of the other types in the assemblage (Appendix A).

A series of Pearson's Correlations were performed that tested whether the significant positive correlations were being driven by a site-wide pattern, or whether the correlations were stronger in certain parts of the city. The data from individual grid squares was grouped by Inner, Middle, and Outer Zones for a series of pairwise Pearson's correlations, which test the strength of a linear relationship between two variables. In the

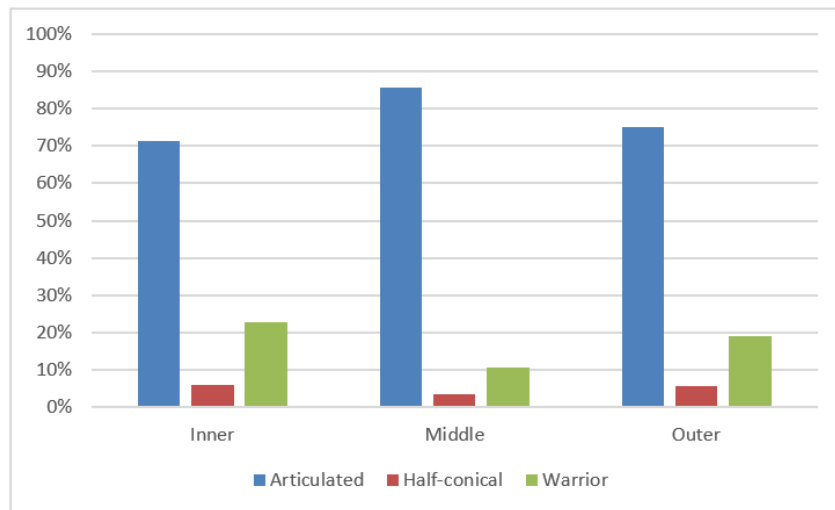
Inner Zone, there was not a significant correlation between any of the three types. In the Middle Zone, articulated and half-conical figurines were strongly and significantly correlated, and half-conicals and warriors were correlated to a lesser yet still significant degree, but articulated figurines were not strongly correlated to the amount of warriors. In the Outer Zone, all three types were significantly correlated to each other, but the strongest relationship was between half-conicals and warriors (Appendix B). I followed up on the significant results from above with a series of Kendall's tau tests, which is a non-parametric test of ranked correlations. All of the tests confirmed the significance of the correlations, and the robusticity of Kendall's tau compared to the Pearson's coefficient increases the confidence in the results.

Graphs 5.3 and 5.4 show the relationship between articulated, half-conical, and warrior figurine types across the three zones of the city. On average, articulated figurines were always more numerous than warrior figurines, which in turn were consistently more numerous than half-conicals. But each graph reveals a slightly different relationship between the figurine types within and between zones. Total counts were higher in the outer zone, which had more than three times the area of the inner zone and more than twice the area of the middle zone. However, mean grid square counts for all figurine types were highest in the inner zone (Graph 5.3), where the population was densest. When the relative rates of the three types (taken as percentages of their subtotal within each zone) were compared (Graph 5.4), articulated figurines proved to be slightly more common in the middle zone, and warrior figurines were slightly more common in the inner and outer zones.

Graph 5.3: Mean Counts of Figurine Types per Grid Square by Zone



Graph 5.4: Relative Rates of Classic Figurine Types by Zone



The differences in relative distributions across zones of the city proved to be statistically significant using a Chi-square test, suggesting that the distribution of the three most common figurine types was not independent of distance to the civic-ceremonial core. Post-hoc calculation of residuals indicated that the largest relative

discrepancies between observed and expected values appeared among half-conical and warrior figurines, and articulated to a lesser extent, and occurred in the Inner and Middle zones. Half-conicals and warriors were more common in the Inner Zone and less common in the Middle Zone, while the inverse was true for articulated figurines (Appendix C). It could be that in some ways proximity to the core was a meaningful factor in determining aspects of status or identity that is in turn reflected in figurine type distributions.

Although there were statistically significant differences in the ways these figurines were distributed across the city, that does not necessarily translate to a meaningful difference in practice, especially given the limitations of survey data. Grouping grid squares together into larger zones likely obscures differences in local neighborhood-level practices of production and consumption, therefore partitioning the city into large swaths may be painting with too broad a brush. It is necessary to look at the individual grid squares themselves, and the patterns of figurine distribution therein. Table 5.10 presents the totals and relative rates of occurrence for articulated, half-conical, and warrior figurines by individual grid squares within zones. (Note 5) When the grid squares are considered individually, a large range of variation is visible between the grid squares within zones. In many cases, more variation can be seen within zones than between them.

Table 5.10: Counts and Frequencies of Articulated, Half-Conical, and Warrior Figurine Fragments by Proximity to the Core at Teotihuacan

Zone (distance)	Grid Square	Articulated	%	Half-conical	%	Warrior	%	Subtotal of 3 Types	Total of All Figurines
1. Inner (<1km)	N4E2	111	52%	12	6%	20	9%	143	214
	N2W2	84	42%	13	7%	38	19%	135	198
	N5W1	52	30%			14	8%	66	172
	N3E2	75	50%	1	1%	10	7%	86	150
	N2W1	62	42%	7	5%	33	22%	102	148
	N3E1	20	33%			13	21%	33	61
2. Middle (1-2km)	N5W3	141	32%	8	2%	10	2%	159	440
	N1E3	77	47%	3	2%	10	6%	90	163
	N6W2	47	37%	2	2%	6	5%	55	126
	S1E2	59	58%	1	1%	4	4%	64	101
	S1W2	29	40%	2	3%	14	19%	45	73
	N3E4	25	68%	1	3%	3	8%	29	37
	N4W3	23	53%					23	43
	N6E2	6	33%			4	22%	10	18
	N1E1	2	33%					2	6
	3. Outer (>2km)	N2E5	245	50%	6	1%	18	4%	269
N2W6		63	15%	13	3%	33	8%	109	423
N1W4		49	25%	9	5%	29	15%	87	196
S3W1		35	32%	7	6%	12	11%	54	111
N1E7		26	29%	2	2%	8	9%	36	91
S1E5		47	53%	1	1%	9	10%	57	89
N6W4		30	54%	2	4%	3	5%	35	56
S4E1		15	27%			7	13%	22	55
S3W2		16	31%	2	4%	11	21%	29	52
S7E1		25	51%	1	2%	2	4%	28	49
S2E2		14	30%	1	2%	6	13%	21	47
S3E5		8	23%			2	6%	10	35
S6W1		7	21%			4	12%	11	34
S3E4		8	27%	1	3%	2	7%	11	30
N6E4		11	48%			3	13%	14	23
N4W5		5	19%			3	11%	8	27
S1W6		6	32%	1	5%	4	21%	11	19
S1E4		3	21%			2	14%	5	14
S6W4		1	13%					1	8
S4E3								0	2
S2W3								0	1
S4E4	1	100%					1	1	

Of the three most common types, the rate of occurrence for half-conicals was relatively low and stable, and they were the least variable in terms of distribution both within and between zones. The highest proportion and count (7%, n=13) was in square N2W2 in the Inner Zone, but the Middle and Outer Zones also had several squares with high counts of half-conicals. I used an ANOVA to test whether there was a significant difference in the mean counts of half-conicals between the three zones. This test would

reveal whether grid squares in any of the zones were more uniform or variable on average in terms of the distribution of half-conicals. The ANOVA returned insignificant results, indicating that there was not a statistically significant amount of variation between the mean counts of half-conicals of the three zones, or in other words, inter-zone variation was not higher than intra-zone variation (Appendix D).

Warriors were found in all but six of the sampled grid squares and there was a high amount of variation in rates of occurrence throughout the city. Variation around the mean was highest within the Inner Zone, followed by the Outer and Middle Zones, but the range was highest in the Middle Zone. Interestingly, the lowest rate of occurrence (discounting those with zeros, and low overall counts) in the Middle Zone occurred in N5W3, which had the highest total count in that zone (2%, total n=440). All other squares had much lower figurine totals and significantly higher rates of warrior figurines, suggesting that N5W3 was an outlier. In the Outer Zone, the rates remained just as spread as in the other two zones, and as was the case in the Middle Zone, the lowest rate of occurrence of warriors (4%, discounting those with zeros, and low total counts) in the Outer Zone was in the square with the highest total count, N2E5. Perhaps the residents of these two neighborhoods were not enthusiastic consumers or producers of warriors figurines. An ANOVA of the mean counts of warrior figurines in each zone of the city returned significant results, indicating that there was a statistically significant difference between the means of the three zones, and that there was greater variation between groups than within groups. A series of Bonferroni adjusted post-hoc t-tests confirmed that the Inner Zone's mean was significantly different from both the Middle and Outer Zones

(Appendix E). Warrior figurines, on average, seem to have occurred in higher rates in grid squares within the civic-ceremonial core of the site.

Articulated figurines were by far the most common figurine type during the Classic period at Teotihuacan, regularly making up a quarter to half of a grid square's total count, yet the rates of occurrence of articulated figurines between grid squares were highly variable. In the Inner Zone, rates ranged from 30% to 52% of the total assemblage by grid square. In the Middle Zone, the rates of articulated fragments ranged from 32% to 68%. In the Outer Zone, the variation was even more extreme with rates ranging from 13% to 54% (with the exception of N5W5, S4E3, S2W3, and S4E4, which all had total counts of 5 or fewer). An ANOVA comparing the mean counts of articulated figurines between the three zones did not return significant results, however, indicating that the means of the three zones were not significantly different from one another and variation was high city-wide (Appendix F).

Obviously, there was a high level of variability in the rates at which different figurine types occurred throughout the city, which has important implications for our investigation of the consumption patterns of residents within the city. The squares N2E5 and N2W6 from the Outer Zone provide an excellent case study for intrasite variability. Both squares are nearly equidistant from the monumental core, and both had figurine fragment totals in excess of 400 (N2E5 n=494 and N2W6 n=423). The rates of occurrence for half-conicals and warriors were similar (1% and 3%, and 4% and 8% respectively) but the relative rates of occurrence for articulated figurines were remarkably different. Half of the N2E5 assemblage for this period was made up of articulated

figurines, while in N2W6 they only counted for 15% of the total assemblage. I am inclined to think that there is a meaningful difference represented in these figures, given the high figurine totals overall, and the presence of all three types. Perhaps N2E5 was a location of production, or a neighborhood of independent artisans and ceramic producers. Or maybe the residents in this sector of the city preferred articulated figurines over other figurine types. I believe the evidence is highly suggestive of a meaningful difference in practice, but whether it is a reflection of production or consumption practices is difficult to test without further study and excavations.

Analysis of Articulated, Half-Conical, and Warrior Figurines—Torsos Only

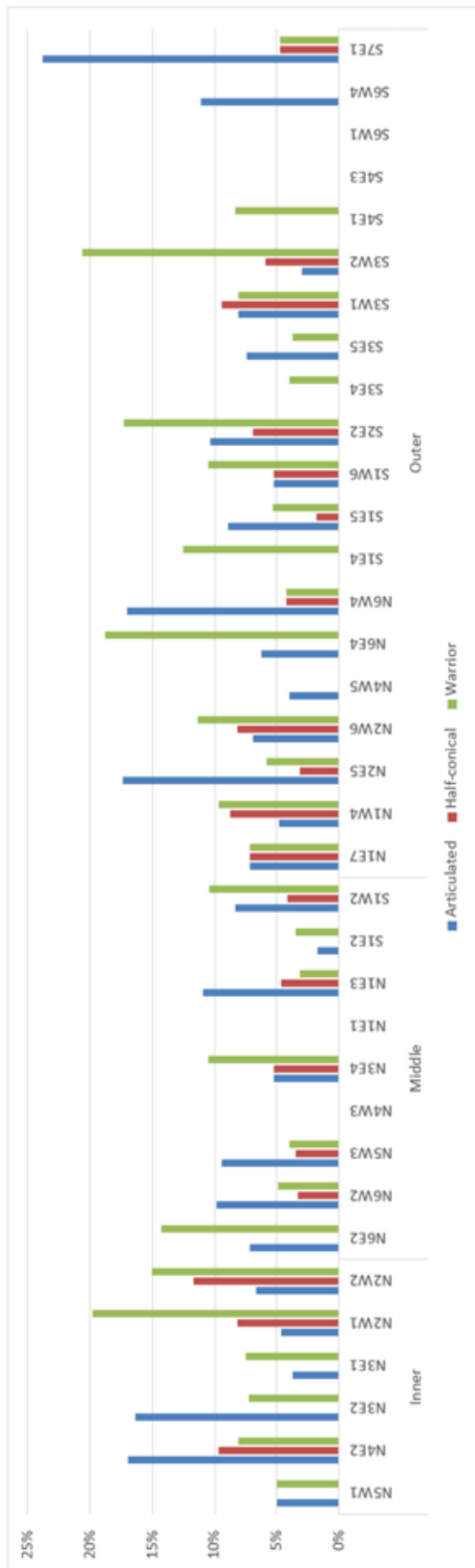
In Graph 5.5, which only includes torsos in order to eliminate the over-representation of articulated and warrior figurines created by counting limbs, a vast range of difference can be seen in the ratios of figurine types by grid square, both within and between zones. Removing limbs and heads reduced the numbers of figurines under investigation, thereby lowering the power of the analysis. The loss was acceptable, however, given that it reduced the over-representation of certain types with both easily detachable and readily identifiable limbs, allowing for a more reliable consideration of inter-site variation. In some grid squares, articulated figurines continued to be the most common of the three types. In others, however, warrior figurines occurred at double or even triple the rate of articulated figurines. Half-conicals were also better represented when only torsos were counted, and occasionally occurred in frequencies equal to or higher than the other types. Graph 5.6 shows the relative frequencies for the three types

of figurines, counting only torsos, for grid squares that had a total count of at least 50 figurines. This was done in order to increase the certainty that we were observing actual patterns of occurrence rather than anomalies created by chance and low counts.

When analysis only included counts of torsos, the strengths and directions of correlations changed between the figurine types. In the Inner zone, articulated and warrior figurines in fact had a very weak negative correlation with each other, but stronger positive correlations in the Middle and Outer zones. The correlation between half-conicals and warriors was strong in the Inner zone and only increased in strength in the Middle and Outer zones. There was a moderate positive correlation between articulated and half-conical figurines in the Inner zone, and a strong correlation between the two in the Middle and Outer zones (Appendix G).

There was an observed tendency for the assemblages of nearby grid squares to be similar in at least one way, and more often than not, to be similar along multiple axes of comparison. In the Inner Zone, the strongest patterns of similarity in the distribution of the three figurine types were between adjacent grid squares, but there was not a consistent zone-wide pattern. In the Middle and Outer Zones, even nonadjacent squares seem to show similar frequencies with other squares in the same zone. This was suggestive of a pattern of self-association, perhaps informing commonalities in practice between neighboring communities. Subsequent analysis, however, did not sufficiently prove that the observed similarities were indicative of a site-wide pattern.

Graph 5.5: Frequencies of Three Figurine Types by Grid Square and Zone (Torsos Only)



Graph 5.6: Frequencies of Three Figurine Types by Grid Square and Zone (Torsos only, Total>50)

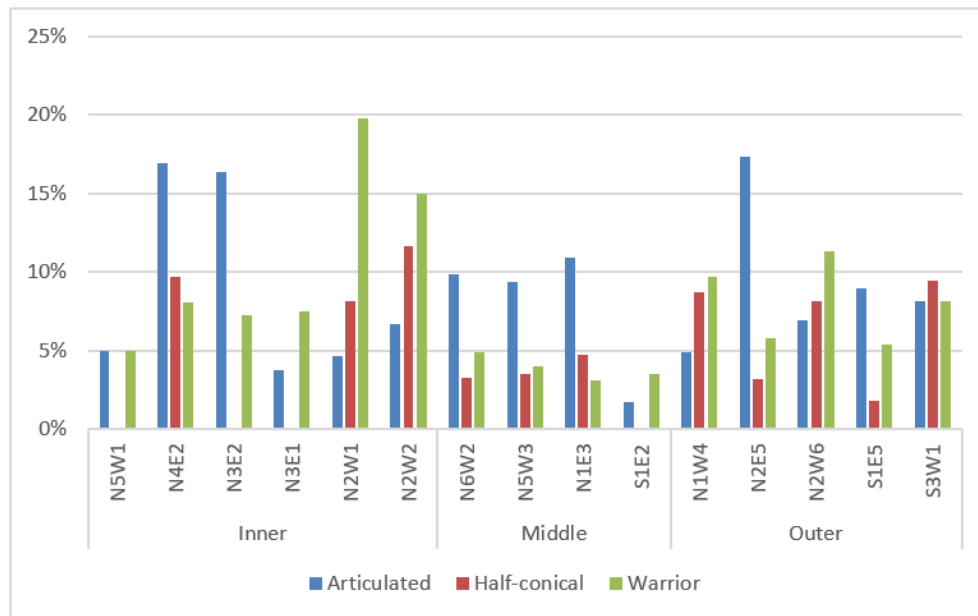


Figure 5.6 shows the distribution of grid squares that had either higher counts of articulated than warrior figurines (blue), or higher warrior counts than articulated (pink). Half-conicals were eliminated due to generally low counts. Squares with both distributional patterns appear within the civic-ceremonial core, the urban semi-periphery, and peripheral zones of the city. A larger number of squares exhibit a preference for warriors (59%) than the A>W pattern (41%), and although there was a tendency for similar squares to cluster, it was not a certainty. One feature of interest, however, is that a large swath of the southwestern and southern portions of the city was dominated by the W>A pattern. With the exception of one grid square in the extreme southern margin of the TMP map, the whole southwestern quadrant displays higher ratios of warrior to articulated figurines. This could be an indication of preference on the part of the communities in this area for warrior figurines over articulated figurines.

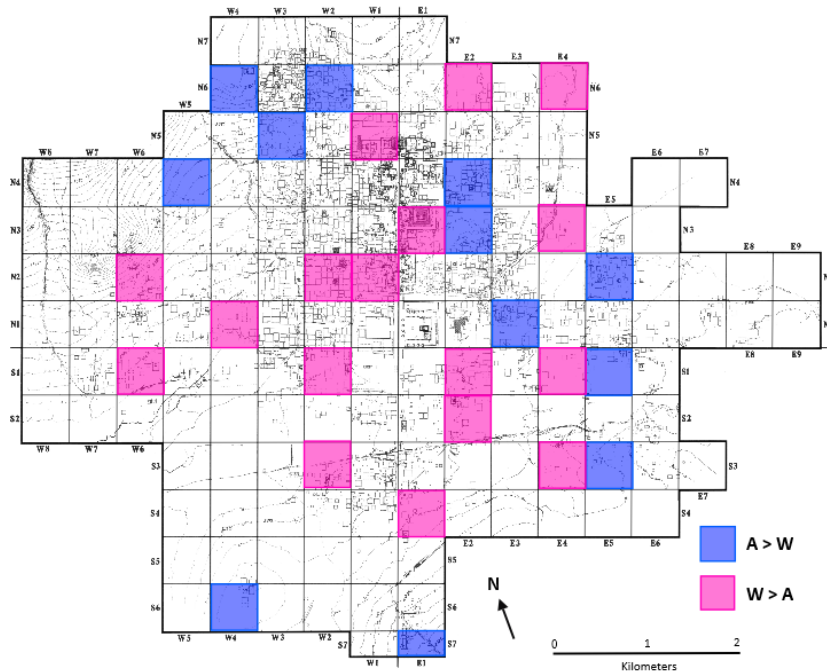


Figure 5.6: Grid Squares with Differing Frequencies of Articulated and Warrior Figurines

Intriguing patterns emerged from comparing the the three most common Classic period figurine types across different neighborhoods and zones of the city. Although there were differences in the variable distribution of different figurine types across the city, whether this translates to meaningful differences in practice remains to be ascertained. The results of tests of correlation indicated that certain types such as half-conicals and warriors were consistently strongly correlated, whereas other types, such as warriors and articulated had much weaker correlations, especially near the civic-ceremonial core. There was also a tendency for neighborhoods with similar figurine distribution patterns to cluster together, although one can also find neighboring grid squares with unique patterns. When the level of comparison was between individual grid squares, it was possible to observe a much greater degree of variation between squares

even within the same zone, but when considered on the level of the zone, the differences evened out, giving each zone a similar profile. In other words, a neighborhood's proximity to the core may only be a weak predictor of the nature of the figurine assemblage from that area, and there was clearly a much higher degree of variation in the distribution of figurines types than can be explain by distance to the monumental core of the site alone. If we try to find similarities between squares in any given area of the city, we certainly can, but the most striking result from this portion of analysis is the variation in the proportions of different figurine types from one grid square to the next. There appears to have been a range of variation in local figurine assemblages that is not explained solely by distance from the core.

Testing Figurine Distributions by Neighborhood Status

Given the mixed results of testing figurine distribution based on proximity to the core and the high degree of intra-square variation, I decided to directly implement Robertson's (2001) model of neighborhood status at Teotihuacan to test the relationship between status and figurine distribution. Sullivan (2007: 156-163) conducted a similar analysis of figurine distribution based on neighborhood status, which indicated that articulated figurines were more common in lower and intermediate status neighborhoods than in those of high status, whereas conical (or cylindrical) figurines were more common in high status neighborhoods. Table 5.11 shows figurine counts for grid squares sampled in the current study, organized according to the dominant neighborhood status of that grid square, based on Robertson's (2001; 2015) findings. (Note 6)

Table 5.11: Counts and Frequencies of Common Figurine Types by Neighborhood Status at Teotihuacan (Torsos Only--Early Classic and Classic)

Status	Grid Square	Articulated	Back-bending	Bound	Enthroned	Fat God	Half-conical	Warrior	Conical	Flat	Total
High	N1E1								2		2
	N2W1	4	1				7	17	43	14	86
	N3E1	3						6	45	26	80
	N4E2	21	1	1		1	12	10	48	30	124
	N5W1	9	3					9	120	41	182
	N6E2	1						2	8	3	14
	S1W2	4	1				2	5	25	11	48
	Total	42	6	1		1	21	49	291	125	536
%	8%	1%	0.2%		0.2%	4%	9%	54%	23%	100%	
Intermediate High	N1E3	7	1	1	2		3	2	30	18	64
	N1W4	5	1				9	10	42	36	103
	N1E7	2					2	2	14	8	28
	N5W3	19					7	8	84	84	202
	N6W2	6			1		2	3	28	21	61
	N6W4	8			1		2	2	18	16	47
	S1E4							1	4	3	8
	S1E5	5	1				1	3	26	20	56
	Total	52	3	1	4		26	31	246	206	569
	%	9%	1%	0.2%	1%		5%	5%	43%	36%	100%
Intermediate Low	N3E2	9	3					4	26	13	55
	N3E4	1					1	2	9	6	19
	S1E2	1		2				2	30	22	57
	S1W6	1					1	2	8	7	19
	S2E2	3			1		2	5	15	3	29
	S3W1	6				1	7	6	35	19	74
	S3W2	1					2	7	18	6	34
	S6W1					1			12	7	20
	S6W4	1			1	1			1	5	9
	Total	23	3	2	2	3	13	28	154	88	316
%	7%	1%	1%	1%	1%	4%	9%	49%	28%	100%	
Low	N2E5	33					6	11	91	49	190
	N2W6	11	1	1			13	18	69	46	159
	N4W3								17	11	28
	N4W5	1							14	10	25
	S3E4		1					1	11	12	25
	S3E5	2						1	17	7	27
	Total	47	2	1			19	31	219	135	454
%	10%	0.4%	0.2%			4%	7%	48%	30%	100%	

Some interesting patterns emerged when the figurine counts were organized by the status of the area in which they were recovered, particularly for the figurine types with low counts, however their low numbers make it difficult to draw definitive conclusions. Back-bending torsos were generally infrequent, and found in all status areas, but they were slightly more numerous in areas of high and intermediate status. Enthroned figurines were confined to the two intermediate status groups. The counts for these types

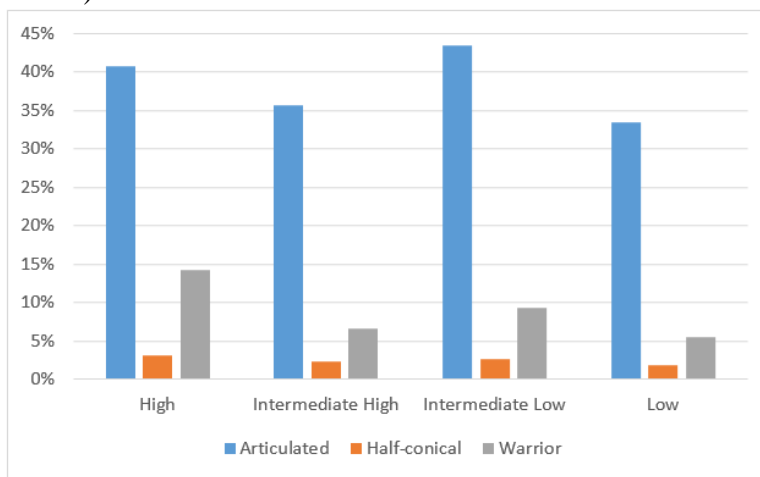
are too small, however it is possible that they were used preferentially by different status groups, and it is an idea that should be tested with additional survey or excavation data.

Stronger patterns emerged with the articulated, half-conical, and warrior figurine types (Graph 5.7). A Chi-square of the totals for each figurine type (both torsos and limbs) grouped by the four levels of neighborhood status showed that the distribution of these three figurine types was not independent of neighborhood status, although the effect size was small to moderate (Appendix H). Calculation of the residuals showed that articulated figurines were indeed less common in high status areas of the site and slightly more common in intermediate and low status areas, agreeing with Sullivan's (2007) findings, whereas warrior figurines were much more common in high status areas and less common in intermediate and low status areas (Appendix I). It is worth noting that the Chi-square tests only returned significant results when both torsos and limbs were included. Additional Chi-squares of only the torsos of articulated and warrior figurines did not return significant results. Half-conicals, however, did not appear to be disproportionately associated with any status group, and post-hoc tests confirmed this finding.

Although the Chi-square results suggested that the distributions of certain types of figurines were not independent of the status of the grid squares in which they were found, it was unclear whether this difference extended to all grid squares within the status groups. A ran a series of ANOVA tests of the counts of the three figurine types by status group, including separate conditions for torsos only and torsos and limbs together, but none of them returned significant results. The variation between grid squares within each

status group was so high that one cannot draw a distinction between the status groups. In effect, when the grid squares are considered together, there are general differences in the patterns of distribution of articulated, half-conical, and warrior figurines, but local variation between grid squares was so high that we cannot conclude that there were uniform differences between status groups, or uniform similarities between grid squares within status groups. The fact of the matter seems to be that status only accounts for some of the variation observed between squares, but not all or even most of it (Graph 5.8).

Graph 5.7 Frequencies of Figurine Types by Status Group at Teotihuacan (Torsos and Limbs)

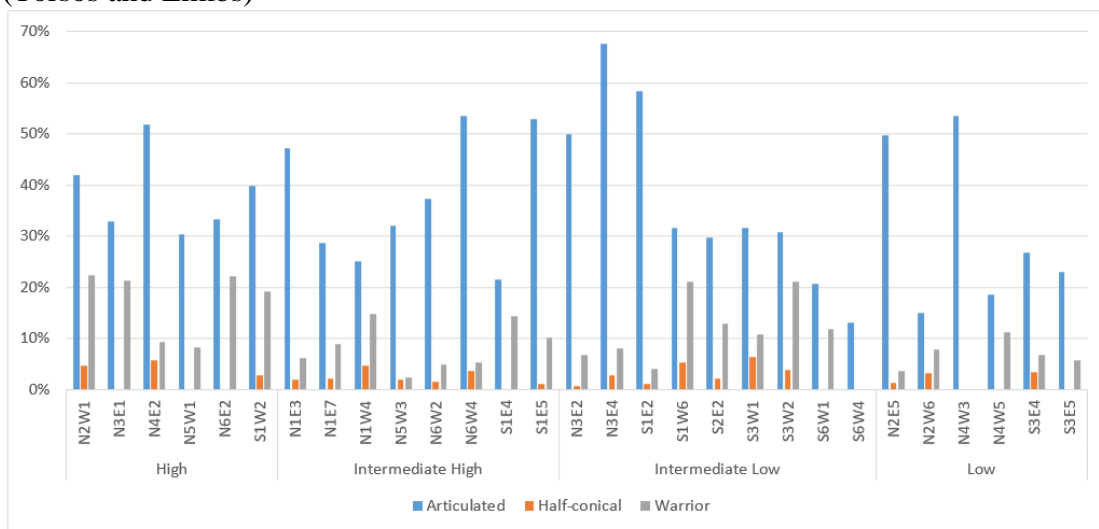


Teotihuacan residents were clearly able to access all of the different figurine types considered here. With a few exceptions, most of the common types were represented in every square. However, there are also strong indications that preference at the local level played a role in shaping these figurine assemblages. Chi-square tests revealed uneven distributions of articulated and warrior figurines between the status groups, yet they also revealed significant differential distribution of those same types between grid squares in

the same supposed status group. Some of these differences may be due to the presence of production areas, which elevated the counts of certain figurine types in specific areas.

Much of the variation, however, is likely shaped by the practices of the ancient inhabitants of the city. Unfortunately, it is also likely that the size of a grid square is too wide a focus to make sense of the variation. If there are such large differences between grid squares, there is no reason to assume that these differences did not extend to the sub-square or neighborhood level.

Graph 5.8: Frequencies of Figurine Types by Neighborhood Status at Teotihuacan (Torsos and Limbs)



Diversity Within Types: Quantitative and Qualitative Variation Within Articulated, Half-Conical, and Warrior Figurines

This section discusses the presence and nature of variation within figurine types. A stylistic analysis is facilitated by considering the ways in which individual figurines relate to other figurines within the same type, and the extent of variation or conformity to

a common standard within the type as a whole. This analysis involves both a quantitative and qualitative consideration of the figurine types.

I concentrate on the three most common types—articulated, half-conical, and warrior figurines—in order to strengthen the results of this analysis. Many of the other Classic period figurine types are too few and infrequent to use for spatial stylistic analysis, and the majority of the flat and conical figurines as of yet do not belong to a defined type. The first section includes a comparison of the size of each type, and the degree of variation in size within the type and across different areas of the city. The second section involves a comparison of stylistic treatment within types. A comparison of the degree and nature of variation within each type highlights possible differences in the meaning, value, and system of production of these three figurine types.

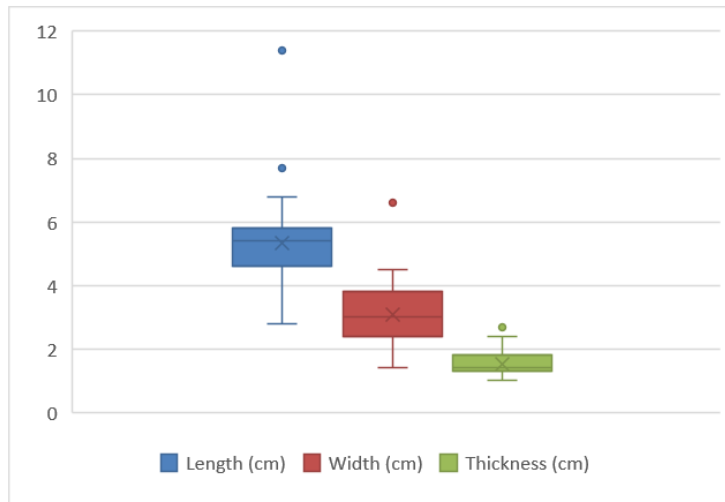
Spatial Variation in Figurine Size

Articulated Figurines

There was a high degree of variation in the size of articulated figurines, particularly in their length and width. Here I compare the width (measurement taken at the shoulders) and thickness (measurement taken at thickest part, usually the abdomen) of articulated figurine torsos, with the goal of clarifying aspects of variation in this figurine type. Graph 5.9 shows the distribution of torso measurements in all three dimensions for complete torsos (length mean=5.3, SD=2.3; width mean=3.1, SD=0.9, thickness mean=1.5, SD=0.2; n=36), but further analysis focuses on only the width and thickness dimensions in order to include broken torsos and increase the sample size (n=178). Width

and length are positively correlated, but many torsos were broken, making their length measurements unhelpful (Appendix J).

Graph 5.9: Distribution of Complete Articulated Figurine Torso Sizes (cm) at Teotihuacan



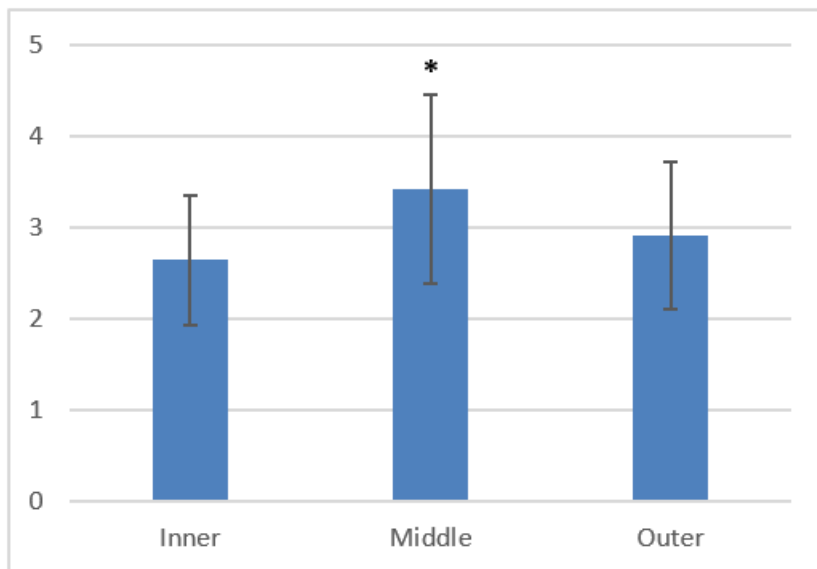
An ANOVA of torso width by zone of the city returned significant results, and post-hoc t-tests using a Bonferroni correction indicated that the mean torso width present in the Middle Zone was significantly larger than both the Inner and Outer Zones (Graph 5.10) (Appendix K). A second ANOVA that grouped the data by status (high, intermediate, and low) did not return significant results. This indicates that physical location in the city may have influenced figurine availability, and residents in the Middle Zone outside the center of the city had access to on average slightly larger articulated figurines than residents in the core and outskirts of the city.

The third and final ANOVA compared individual grid squares that had articulated torso counts of five or more, regardless of status or location in the city (Graph 5.11).

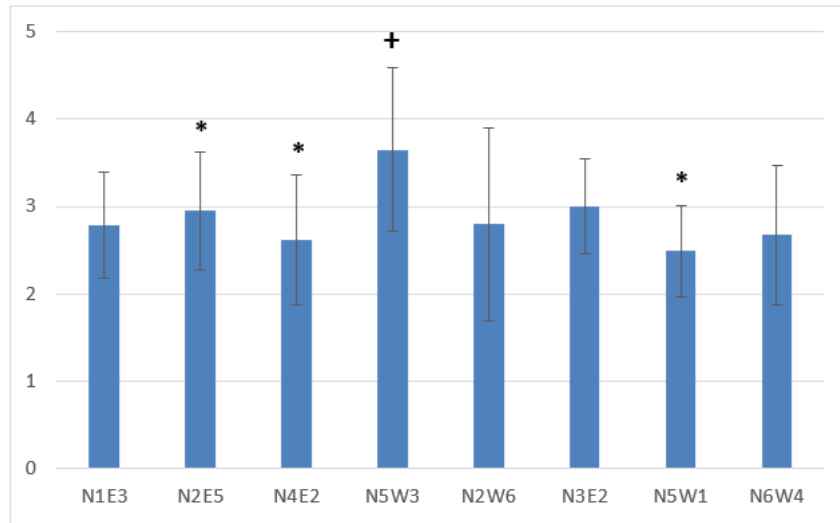
ANOVA and post-hoc t-tests determined that there were significant differences between

the means of the squares. The difference was driven by N5W3, which was significantly different from several other grid squares (significance after a Bonferroni correction indicated by an asterisk (*)), while the comparisons between other grid squares were insignificant (Appendix L). This indicates that something unusual was occurring in N5W3. Perhaps residents of N5W3 did not have access to the same sources (e.g. markets, producers, etc.) of articulated figurines as did residents in other sectors of the city. Equally likely is that residents in N5W3 were producing their own articulated figurines locally and had different preferences or less oversight.

Graph 5.10: Mean Articulated Torso Width by Zone



Graph 5.11: Mean Articulated Torso Width by Grid Square

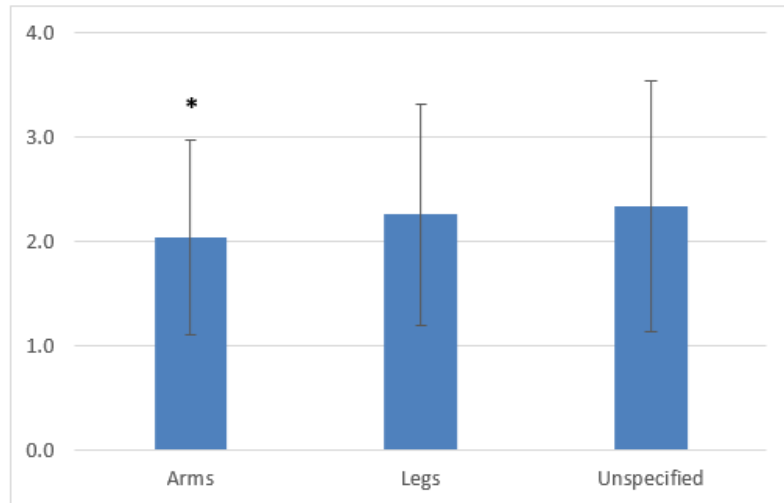


In addition to torso size, limb sizes for articulated figurines were also compared. Limbs are a good category to work with since they occur in large numbers (n=1248), and are not as exciting as heads, so they are left behind by would-be collectors. Articulated limbs are easily recognized since the proximal ends are always perforated, the distal ends of arms and legs look extremely similar to other examples within the type, and the overall shape does not vary much. The cross-sectional area of the articulated figurine limbs was calculated with the formula $A=\pi \times \frac{1}{2}\text{Width} \times \frac{1}{2}\text{Thickness}$ ($A=\pi \times r \times r$), and used as a proxy for size. Measurements were taken at the widest point, so the calculation gives a cross-sectional area of the limb's widest point. A t-test revealed that there was a significant difference ($p=0.015$) in the mean size of articulated arms and legs (Graph 5.12), however, the differences were so small, and there was so much overlap between arms and legs in terms of size that it would be nearly impossible to operationalize this

difference into a method of distinguishing arms from legs when the ends are broken off.

(Note 7)

Graph 5.12: Variation in the Cross-Sectional Area of Articulated Limbs (cm²)



The few outliers among the limbs and torsos were remarkably large, suggesting that even though they resembled their smaller counterparts in form, the larger versions may have served a different purpose. Examples of unusually large articulated body parts were recovered from several grid squares throughout the city (e.g. N5W3, N2E5, N1E3, S3W2) that fell within the intermediate or low status areas and in the Middle and Outer Zones. There is an example of one such outlier at the Museo Nacional de Antropología in Mexico City (Fig. 5.7). The articulated figurine hanging on the wall is four to five times the size of an average articulated figurine. Stylistically speaking, it is similar to the smaller versions, and the major difference between this example and the majority of figurines within the type is sheer size.

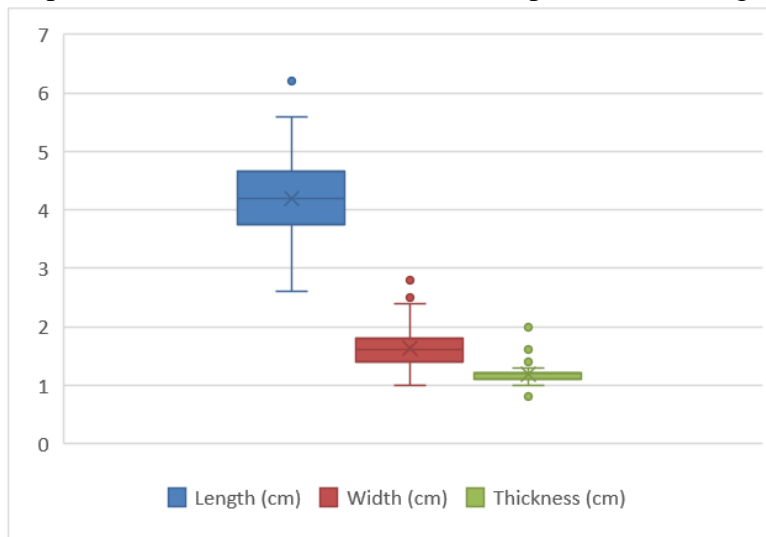


Figure 5.7: Oversized articulated figurine in the Museo Nacional de Antropología (left) and from the TMP (middle) compared to an average sized torso from the TMP (right)

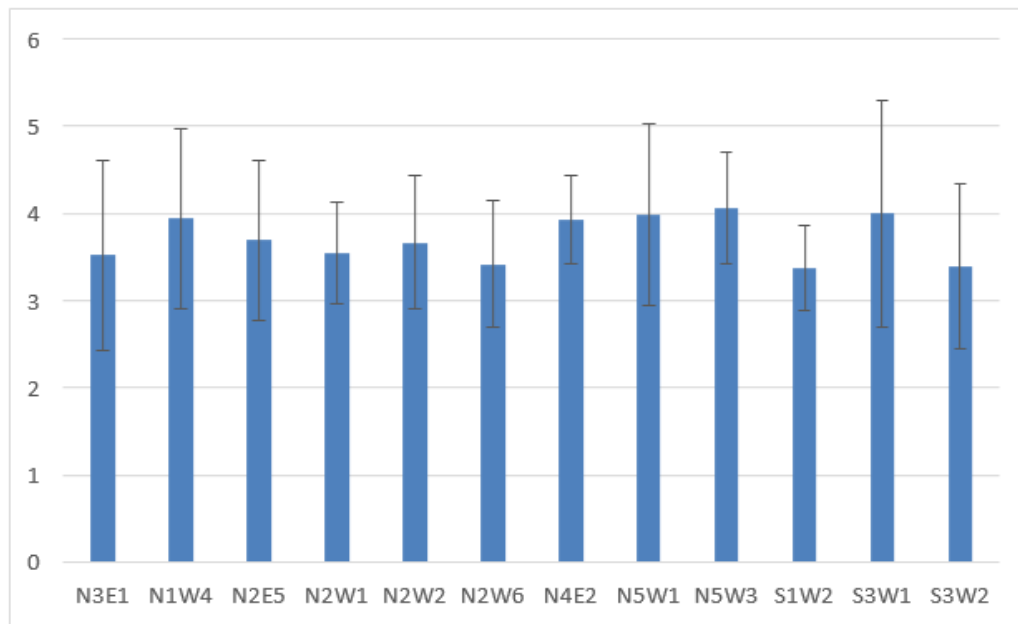
Warrior Figurines

Warrior figurines were the most standardized of the three types in terms of size. Torso length was normally distributed, whereas torso width and thickness had slight to moderate positive skews, respectively (Graph 5.13; Appendix N).

Graph 5.13: Distribution of Sizes of Complete Warrior Figurine Torsos



Graph 5.14: Mean Torso Length (cm) of Complete Warrior Figurines by Grid Square



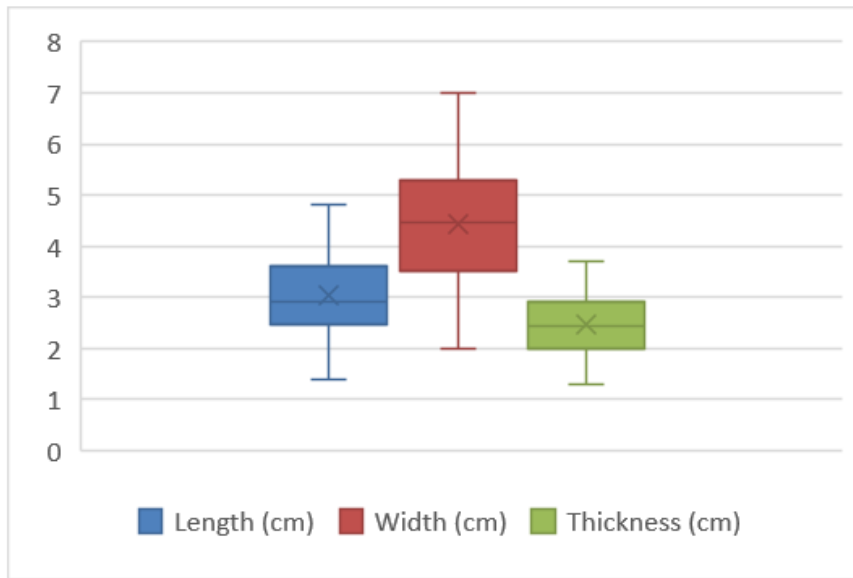
The small observed variation in the overall warrior torso length was further examined in order to ascertain whether there was consistent variation across the city, or pockets of higher variation that would suggest possible differences in production or consumption practices. Graph 5.14 presents the means and standard deviations for torso length for every grid square where there were five or more complete warrior torsos. An ANOVA on the group failed to return significant results. Similarly, when the individual grid squares were variously grouped into their respective quadrants, inner through outer zones of the city, or status groups, the pattern remains, and no significant differences emerged in any of these configurations. When examined on any number of scales, warrior figurines appear to have been remarkably standardized throughout the city, and the variation that did exist in terms of torso size is not explained by a number of location or status-based factors.

The standardization extended to the size of warrior figurine heads as well, which is not surprising since they were mold made. An approximation of the volume of warrior heads was calculated using their respective measurements ($V=(1/2 \times \text{Length} \times \text{Width}) \times \text{Thickness}$), and the distribution of this data was normal (mean= 4.9, SD= 1.1). ANOVA tests of their lengths, widths, and volumes by zone, status group, quadrant of the city, and individual grid squares failed to return significant results. The variation that did exist was just as likely to occur within various groups as between them.

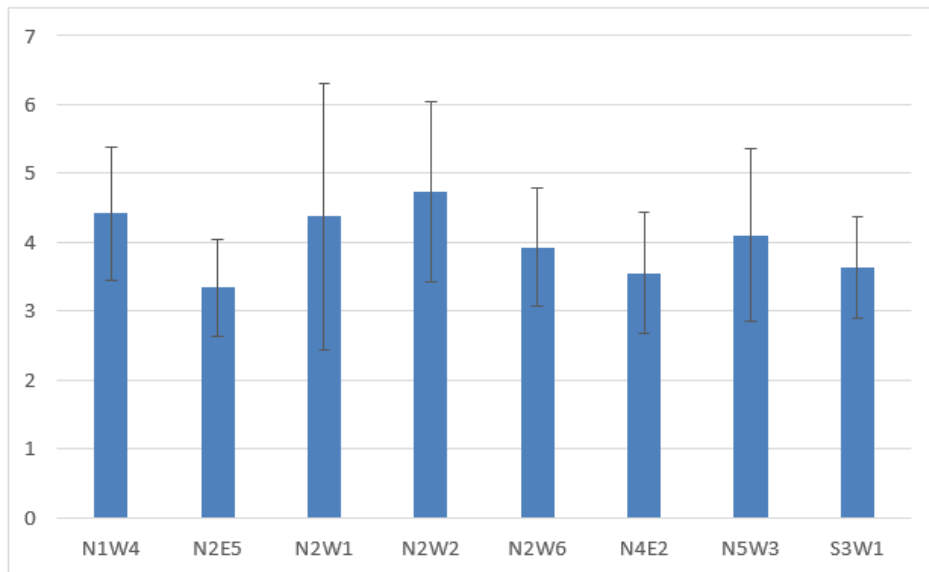
Half-Conical Figurines

The half-conical figurines were perhaps the most variable of the three common types considered in terms of sizing (Graph 5.15), and the variation could not be linked to any of the predictive factors considered here. (Note 8) Torso heights appeared to vary, both within and between squares, but a series of ANOVAs of half-conical heights by grid squares with sufficient numbers ($n > 5$), by zone, and by quadrant of the city all returned insignificant results (Graph 5.16). Variation between half-conicals within these groups, therefore, was sufficiently high to obscure any potential inter-group variation. Similarly, when grouped by neighborhood status, an ANOVA also did not return a significant result.

Graph 5.15: Distribution of Complete Half-Conical Figurine Torso Sizes (cm) at Teotihuacan



Graph 5.16: Mean Half-Conical Torso Thickness (cm) by Grid Square



Half-conical torso thickness and width were also highly variable, but variation could not be explained by grid square, location in the city, or neighborhood status. Of the three measurement variables, variance was highest for width, but ANOVAs of width by

grid square, quadrant, zone, and status group did not return significant results. Similarly, I ran a series of ANOVAs on estimated volumes (based on length, width, and height measurements) of all the torsos that were at least 75% complete, and this too did not result in any indication of significant differences between various groupings.

Summary

Of the three types of figurines considered in this section, warrior figurines were the most standardized in terms of size, and this perhaps points to more tightly controlled production of this figurine type. The results of earlier analysis showing that they were more common in areas of high social status and in areas closer to the civic-ceremonial core potentially support the conclusion that they were produced and preferentially consumed by a particular segment of Teotihuacan society.

Half-conicals exhibited more variation in size as a population, and it was distributed rather evenly across the city. The even distribution of half-conical variation could lend support to Sullivan's (2007) argument for the presence of market exchange operating in the city. Even if production was not tightly regulated or controlled, the access to different products through a market system would result in near-even levels of distribution of variation across the city.

Articulated figurines were seemingly the most variable in terms of size. Although sources of localized variation were present in certain areas of the city, in many ways the variation in articulated figurine sizes was more or less evenly distributed.

Variation in Figurine Decoration and Surface Treatment

Articulated Figurines

Articulated figurine torsos had a unique and internally consistent decorative scheme. The defining characteristics of an articulated torso included its shape, which was triangular and mostly flat, and two lateral perforations through the torso at the shoulders and hips, allowing for a cord to run through the torso and connect free-moving limbs after firing. The types of decorative elements that could appear were relatively standardized, but there was variation within these elements. Torsos were invariably nude, but many wore jewelry of varying amounts and styles, and additional decoration or modeling occurred in the form of incised bands around the waist and definition in the chest (Fig. 5.8).

The decoration on the chest involved definition in the pectoral area, which I interpret as indications of musculature. Occasionally there were two indentations or pricks on the chest, no doubt meant to indicate nipples. Additionally, there could be diagonally incised or molded lines below the pectoral definition, which resembled protruding ribs, giving the articulated figurines with these marks a gaunt appearance. Jewelry could be either applied and incised, or molded. The jewelry ranged from simple to ornate, and could take the form of a single applied collar (n=17), two collars (n=16), or three or more collars (n=48), with diagonal slash marks, and occasionally suspended pendants (n=4) and beaded collars (n=3). The incised horizontal bands across the bottom half of the torso occurred in a minority of cases (15%), and took the form of one (n=8), two (n=14), or three (n=3) horizontal lines. A series of Chi-square tests were used to

explore the distribution of these different methods of torso decoration and ornamentation and whether there was a relationship between any of the variables.



Figure 5.8: Articulated figurine torsos from the TMP

There were variations in the degree of ornamentation and attention to detail present in each torso, in addition to the variation in size discussed above. Difficulty arose in comparing the presence of waist bands to other torso features simply because there were too few examples. When grouped together, and compared to degree of chest definition or amount of jewelry using a Chi-square test, there was no significant result, indicating that we cannot reject the independence of these two variables. There were more reliable relationships between chest definition, ribs, and jewelry.

Chi-square tests between the degree of chest definition and the presence of jewelry indicated a highly significant relationship between the variables, and post-hoc calculation of residuals indicated that torsos with little to no chest definition were less likely to wear jewelry, and torsos with moderate to extreme definition were more likely to wear jewelry. The tests of degree of chest definition and the presence of ribs, and the comparison of jewelry and the presence of ribs were also highly significant (Appendix O). The picture that emerges from this analysis is that most decorative features on articulated torsos were positively correlated with each other, with the possible exception of waist bands.

The method of manufacture had a variable influence on the individual decorative traits. Neither the presence nor number of waist bands seem to be dependent on whether a torso was handmade or molded. The presence and amount of jewelry, however, was strongly related to the method of production, as was the presence and degree of chest definition (Appendix P). Handmade figurines more commonly had simple and smaller amounts of jewelry compared to mold made figurines, which almost invariably had three or more collars, occasionally with additional embellishments or decoration.

These relationships seem to be consistent throughout the city, and location in the city (by quadrant or zone) was not a good predictor of which decorative elements were present. A Chi-square test of number of collars by zone of the city was not significant, and indeed, figurines with one, two, or three or more collars were evenly distributed across the city. When the distribution of different decorative features were analyzed by the status of their grid square of provenience, again, none of the features appeared to be

non-randomly distributed. In other words, the status of the grid square, and the distribution of types of jewelry, chest definition, and ribs seem to be independent of one another.

In summary, with the possible exception of waist bands, all other decorative features of articulated figurine torsos had significant relationships with each other and seem to be good predictors of the presence and degree of other traits. Simple torsos were generally plain, whereas torsos with any decoration were likely to show evidence of more than one decorative element, be it additional jewelry, definition in the chest, or the presence of ribs. Furthermore, these traits were strongly related to method of production. Handmade torsos were on average more simple whereas mold made torsos had at least one of these decorative elements, and frequently many or all of them. If method of production can be used as a somewhat reliable predictor of when the figurine was made, then it seems that articulated figurines became more decorated and elaborate over time.



Figure 5.9: Articulated figurines in the Museo Nacional de Antropología (left) and the Teotihuacan site museum (center, right)

Warrior Figurines

Warrior figurines were by far the most standardized of all the figurine types considered in this study. There was recognizable variation in the heads, but the bodies were standardized not only in size—which was discussed in the previous section—but in surface treatment and limb position. Some seem to have received a greater amount of attention during production, because the surface of the clay and the joins between limbs and torso have been carefully smoothed, whereas others were left in a rougher state, and while certain examples had more naturalistic proportions, others were almost caricatures of warrior figurines (Fig. 5.10). Beyond differences such as these, which are likely related to the conditions of production—such as the quality of the artisan or workshop—warrior figurine bodies were strikingly uniform. Most had both of their arms outstretched, and a tell-tale rotation of the torso at the waist. Hands were modeled in a grasping gesture, indicating that they may have been intended to hold objects after firing, such as weapons. Post-firing ornamentation may have taken the form of painting and perishable clothing as well, which would account for their plain torsos in a figurine tradition that was prone to increasingly extravagant levels of ornamentation.



Figure 5.10: Warrior figurine torsos from the TMP

The warrior figurines in the Museo Nacional de Antropología in Mexico City shown in Figure 5.11 (left) depict complete versions of these figurines. Their stances, gestures, and grasping hands are consistent with the fragmented torsos and limbs from Teotihuacan. Although these figurines display different gestures and stances, note that the individuals in pairs are nearly identical to each other. This suggests that there may have been a limited number of acceptable positions for warrior figurines to take.



Figure 5.11: Complete warrior figurines in the Museo Nacional de Antropología (left two) and Teotihuacan site museum (right two)

A persistent problem is the difficulty of recognizing figurines of a certain type when the figurines are largely fragmented. The possible warrior figurine (Fig. 5.12) on display in the Teotihuacan site museum poses a problem. If found by itself, the head would clearly fit with other warrior heads. The body is well within the range of standard sizes for warrior figurine bodies, but it is positioned in an unusual seated position. This is the only example that I am aware of of a warrior figurine in a seated position. This raises the possibility that a significant portion of warrior figurine bodies were misidentified as simple conical figurines, deflating the overall number of warrior figurines in use at Teotihuacan. The other possibility is that this was a very unusual pose for a warrior

figurine, and was the result of either experimentation on the part of the artisan, or was an accepted yet infrequent warrior subtype.



Figure 5.12: Warrior figurine in an unusual seated position from the Teotihuacan site museum

Warrior heads were quite similar to each other in size and facial features, and the overall impression when looking at them is remarkable uniformity. Closer inspection, however, reveals a range of subtle variation in the execution of facial features and head shapes. There were ninety warrior heads found in the TMP assemblage, and three common head shapes were coded for—round (14%), elongated (20%), and triangular (50%)—in addition to broken examples where head shape could not be determined (27%). Round heads had less pronounced length to width ratios and wider chins, and were the least common shape. Elongated heads were oblong with only a slightly angular crown of the head. The triangular head shape had a narrower, pointed chin, and an angular crown of the head, which roughly resembles an inverted triangle. The differences between these head shapes were not extreme (Fig. 5.13).



Figure 5.13: Examples of Round, Elongated, and Triangular Warrior heads from the TMP

Warrior figurines exhibited variation in their facial features as well. Several of the early handmade examples had simple incised slits for eyes and mouths (4%), but later mold made examples were more detailed and naturalistic. Faces had defined lips, which could either be together (23%), or parted (46%), giving the impression of a slightly open mouth. Mouths were rendered most often in a straight position (59%), but were sometimes more obviously open (10%), or in a down-turned frown (4%). The eyes and brows were very similar in their basic features, varying only slightly in execution. Eyes were recessed to varying depths, and frequently had raised lines around the edge of the orbits and along the brow, adding to the definition of the eyes, and sometimes producing a scowling expression. Many of the faces lacking the definition around the eyes and brow were heavily eroded, and so it is difficult to tell whether they originally had these features. A few examples had puffy, heavily hooded eyelids, which seems to have been an increasingly common stylistic feature in late Teotihuacan figurines.

There was no correlation between head shapes and mouth types. Chi-square tests of the two variables did not indicate that they were dependent on one another. The mouth type where the lips are formed and slightly parted is slightly more common in every

warrior head shape, which is not unexpected given its higher numbers overall. Similarly, neither head shape nor mouth shape appeared connected to zone or status group. Many grid squares had multiple warrior figurine heads, and there were no cases of 'twins', or heads made in the same mold, within the same grid square. Three of the figurines in this sample did likely come from the same or similar molds, but they were all found at least a kilometer from each other, and the rest were unique.

The variations in features and expressions on warrior heads were so slight that I am inclined to think of them as the result of production by different makers—at the very least many different molds were in use, and multiple workshops may have been manufacturing them—rather than purposeful variation. But in light of the relative standardization of this type, the minute differences are intriguing. The fact that many were from different molds suggests that minute differences were at least acceptable, and potentially even desirable. Stylistic analysis of warrior figurines reveals a strong internal coherence between members of the type. They were so similar to each other in terms of size, position, and facial features that they clearly referenced each other. While variation existed, it is not clear that it was encouraged, and it seems that uniformity was the more important quality.

An analogous example is the terracotta army of the first emperor of China, but not for the presumed similarity of the subject matter. Teotihuacan warrior figurines were originally called *retratos* or "portraits" due to the perceived individuality of each face. When the Chinese terracotta warriors were discovered, each appeared to have a unique face executed in naturalistic detail, yet individuality was not necessarily the point.

Writing on the widely perceived "individuality" of the terracotta warriors, Kesner (1995) argues that although certain figures appear like individuals, when taken as a whole they are best understood as "stereotypes" of a generalized terracotta warrior type, and neither portraits nor individuals in the strictest sense. There was in fact a very limited range of possibilities for face shapes, features, and expressions among the soldiers. Individual faces appeared unique, but they were composed by combining a small number of individual component features, and therefore "embody both generality and individuality" (Kesner 1995: 120). Their range of bodily positions was also fairly circumscribed, again suggesting that naturalism was not the main objective in representation. Kesner (1995) could just as easily have been talking about Teotihuacan warrior figurines—even setting aside the current popular interpretation of them being warriors. The figurines' faces appear somewhat individualized due to slight variations in execution, but when considered together, all the individual facial features and expressions were more similar than they were different. The same can be said of their bodily positions. They were neither portraits of individuals nor were they indexing a specific person. Each warrior figurine was a synecdoche, referencing all of the other figurines within this type produced and used in the city, in spite of the minute stylistic differences. Just as the terracotta soldiers indexed the category of "soldier," so too might have Teotihuacan warrior figurines. As for whether they were in fact images of warriors, it might never be proven with absolute certainty, but the high degree of importance placed on militaristic themes in Teotihuacan iconography would lend support to this conclusion.

Half-Conical Figurines

Of the three types, half-conical figurines were the most visually interesting in terms of ornamentation. Even the least decorated among them still had multiple elements of clothing and jewelry. Nearly complete examples included elaborate headdresses with many decorative elements, but most examples in this study were unfortunately missing most or all of the head and headdress (Fig. 5.14). Half-conical figurines were invariably fully clothed, most often in a plain belted tunic underneath a cape (73%), but multiple examples were found with tunics bearing additional tassels along the hemline (10%), or wearing feathered garments (8%), or textured garments resembling a woven pattern (3%). Six percent of the sample were too weathered to discern individual elements of clothing.



Figure 5.14: Half-conical figurines from the TMP displaying the belt and cape style (left three) and the feathered garment (right two)

Half-conicals wore several different elements of jewelry (Table 5.12) that could be combined to different effects (Table 5.13). There were no strong indications for specific clothing and jewelry styles consistently aligning with each other that would point to the presence of easily distinguished subtypes within the larger half-conical type. To take the 'belt and cape' clothing style as an example, this outfit could be paired with a range of different jewelry styles, which in turn were also found paired with different

outfits on other half-conicals. Half-conicals with the 'belt and cape' outfit were observed to wear all the different jewelry styles involving three or more collars, and several of the two-collar designs. Some figurines had additional beaded collars and pendants. The half-conicals in feathered garments mostly had three collars, but differed on the addition of other pieces of jewelry such as pendants and beaded collars. If subtypes were present, they do not appear to be defined by the consistent combination of clothing and jewelry styles. The different clothing styles may have defined subtypes, while jewelry was a variable feature that could have relayed other meanings.

Table 5.12: Counts of Individual Jewelry Elements on Half-Conical Figurines

Jewelry	Count	Frequency
2 Collars	19	21%
3+ Collars	50	56%
Beaded Collar	30	33%
Pendant	24	27%
Sm. Earspools	2	2%
Lg. Earspools	5	6%
Nose bar	1	1%

Table 5.13: Counts of Jewelry Styles on Half-Conical Figurines

Torsos Only		Torsos with Heads		Total of Style	Frequency
1 Beaded Collar	1			1	1%
2 Collars	5	2 collars	1	6	7%
		Sm. earspools			
2 collars	4	2 collars	2	6	7%
Beaded collar		Beaded collar			
Pendant		Pendant			
		Lg. earspools			
2 collars	1			1	1%
Incised ptrn					
Beaded collar					
2 collars	5	2 collars	1	6	7%
Incised ptrn		Incised ptrn			
Pendant		Pendant			
		Lg. earspools			
		Nose Bar			
3+ collars	9	3+ collars	1	10	11%
Beaded collar		Sm. earspools			
3+ collars	6	3+ collars	1	7	8%
Beaded collar		Beaded collar			
Pendant		Pendant			
		Lg. earspools			
3+ collars	20			20	22%
Incised ptrn					
3+ collars	3	3+ collars	3	6	7%
Incised ptrn		Incised ptrn			
Beaded collar		Beaded collar			
		Lg. earspools			
3+ collars	7			7	8%
Incised ptrn					
Pendant					
Total	61		9	70	78%

For instance, the pendants worn by half-conical figurines likely conveyed important information about the intended function of the half-conical or the identity of the subject. It was observed that there were a limited number of design motifs for the pendants worn by half-conicals, and these repeated and were shared between sites (Figs. 5.15-16). A total of four design motifs were found on half-conical pendants at Teotihuacan (Fig. 5.16), all of which were found on multiple examples. The first design was a simple, flat pendant without additional ornamentation. The second motif was

laterally symmetrical, and had two raised, circular projections on the outer edge of the pendant, centered on the midline. The third motif had a singular circular projection in the middle of the pendant, and the fourth motif elaborated on the third, adding a concentric ring around the central projection. The repetition of a fixed number of motifs indicates that the pendant design was not random, but instead relayed information about the figurine itself, or perhaps the identity of a person or social category that was being represented. The four different pendant designs were observed on figurines with variable combinations of clothing and other jewelry, and did not seem to coincide with one particular outfit.



Figure 5.15: Pendant Design Motifs on Half-Conical Figurines

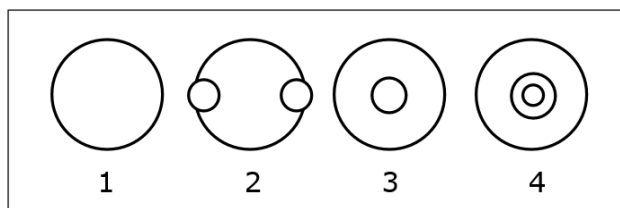


Figure 5.16: Drawing of Pendant Design Motifs on Half-Conical Figurines

The individual decorative elements were distributed fairly evenly across the city, and there was no indication of clustering in the distribution of half-conicals with

particular stylistic elements. There was an interesting pattern, however, in the addition of an extra functional element. Of the sample of 90 half-conicals, six of them had additional projections (i.e. supports or handles) attached to the back of the torso (Fig. 5.17). A standing support was a common feature on flat and conical figurines (both handmade and molded) but it seems superfluous on a figurine that easily stands by itself, such as a half-conical. Furthermore, the projection exceeded the base of the figurines, and so they would not have been able to stand on their own at all. The purpose of these projections, therefore, seems to be handles. Of the six examples, four of them occurred in two squares in the west of the city: N2W2 and N2W6. The other two were found in N2E5 and S3W1. The fact that multiple examples of a rare trait occurred in two grid squares could point to somewhat divergent local practices, and an elevated preference for different functional characteristics, or that potentially these figurines were produced in this area of the city.



Figure 5.17: Three half-conical figurines from Teotihuacan. Left and center figurines from N2W2

In either case, the handle was an intriguing functional divergence. Given the wide and flat base, the natural assumption is that half-conicals were meant to stand on their own, perhaps to be observed in arranged scenes. Particularly in contrast to other functional types such as articulated figurines, half-conicals appeared as if they were

designed for stationary use. The examples with handles necessitate a reexamination of this assumption. Instead of a local peculiarity that ran counter to their normal use patterns, the handles could be interpreted as innovations that facilitated handling and manipulating these figurines, which was already a widely-accepted part of half-conical use. At the risk of over-interpreting scant evidence, these handles call into question the assumed functional polarity of half-conicals and articulated figurines.

Discussion and Conclusion

This chapter has explored numerous aspects of variation in figurine production and consumption in urban Teotihuacan. The analysis focused in particular on articulated, half-conical, and warrior figurines from the larger Teotihuacan corpus for the main reasons that they were easily identifiable, they were the three most common types that are easily recognized as coherent types, and they were all or at least partially mold made, increasing the certainty that they were contemporaries and facilitating a synchronic analysis of the ways figurines were made and used in Teotihuacan society. Other types were identified during data collection and were discussed briefly, but were either found in such low numbers (e.g. bound, fat god, enthroned) that analysis of their distribution across the site would not be productive or meaningful, or had inherent limitations in their definitions as types (e.g. conical and flat). 'Conical' and 'flat' are descriptors that can be applied to figurines from the Middle Formative to the Classic based on their general shape. The definition does not take into account nor does it predict subject matter, and I hesitate to even group them into an archaeologically meaningful category such as a style

or type. Some of these figurines will be discussed in the following three chapters, but they were not the focus of this chapter because they were not conducive to the methods of analysis employed here.

The first method used to examine variation in figurine distribution across the urban landscape was partially effective in explaining certain features of variation in the assemblage. Proximity to the civic-ceremonial core was linked to variable distributions of half-conical and warrior figurines in particular, which may reflect underlying socioeconomic or cultural variation in the populations of certain areas. Yet in many cases, inter-grid square variation was just as high as inter-zone variation. Thus, concentric rings emanating from the core containing homogeneous populations of decreasing status does not appear to be a productive way of understanding the ancient residents of the city, nor predicting their selection of figurines.

The neighborhood status model adapted from Robertson (2001, 2015) provided an alternate way of exploring figurine variation in this urban context. Sorting figurines by the status of the location where they were collected accounted for different features of the observed variation within the figurine assemblage, which complemented the results from the previous distance-based model. There was significant overlap between proximity to the core and status, as Robertson notes (2001, 2015), but close proximity to the core did not equate to high status, and previous attempts to group grid squares based on core proximity alone likely obscured status-based differences between grid squares, and even smaller-scale intra-grid square differences.

Variation in the Distribution and Production of Common Figurine Types

Articulated figurines were by far the most numerous of the well-defined types at Teotihuacan. They were more commonly associated with intermediate and low status contexts, but occurred in all areas of the city, and their distribution was not affected by proximity to the civic core. They were also prone to a high level of variation within the type in terms of size and decoration. The presence, absence, and degree of decoration on articulated figurine torsos was strongly related to the method of production. Handmade torsos were typically simpler and sometimes lacking in any additional detail or decoration, whereas mold made torsos had at least one and frequently many of the various decorative elements. In other words, there was variety in the degree of expression of a circumscribed range of decorative options, but it was exceedingly rare to find an articulated figurine with decorative elements beyond the types discussed in this chapter. The different decorative elements were all distributed evenly throughout the city, and neither proximity to the core nor the status of the grid square was a significant determinant of any of the decorative traits.

Articulated figurines are known to have been made by independent workshops in the city. Sullivan (2007) discusses one such domestic workshop in Cosotlan 23, the main product of which appears to have been articulated figurines. Chi-square tests indicated that while articulated figurines were exceedingly popular in all areas of the city, they were more strongly associated with intermediate and low status contexts. Furthermore, they were found in slightly reduced numbers in the core of the city, and were more common in the intermediate and peripheral zones. This finding, combined with the fact

they were made by independent artisans, points to them having a function less strongly connected to elite or imperial interests. They were a highly popular figurine type, but may not have been symbols of state power, in direct contrast to warrior figurines.

Warrior figurines were much more common in the core of the site than in the intermediate and outer areas of the city, and grid squares within the Inner zone of the city were more likely, on average, to have higher counts, meaning that high rates of warrior figurines was a common, shared feature between different grid squares in this area of the city. Warriors were also strongly associated with high status areas. Of the three types focused on in this chapter, warrior figurines were the most standardized and internally consistent in terms of size and appearance. Variation existed, of course, but only in small details that did not overly affect their recognition as warrior figurines.

The Ciudadela workshop (CDD) is known to have produced warrior figurines, in addition to other figurine types and theater censers. Given the importance of theater censers in Teotihuacan domestic ritual, it follows that warrior figurines also had ritual significance since they were produced in the same workshop. Furthermore, the CDD workshop was adjacent to the Ciudadela, one of the major civic-ceremonial monuments in the urban core. The location strongly suggests elite involvement, and Sullivan (2007:155) proposes that the CDD was a retainer workshop. If warrior figurines were produced at the behest of elite sponsors and were more strongly associated with elite contexts and the civic-ceremonial core of the city rather than low-status or peripheral sectors, it points to warrior figurines being used more intensively by elite segments of society.

The CDD may have even been a state-controlled workshop, making ritually important goods to redistribute to the population, which supported state ideology and religion. Brumfiel (1998) describes how Aztec elite nurtured a military cult and ideology for young lower elite men. This served the dual purposes of keeping a standing military force at the ready for imperial expansion, and keeping men of the lesser elite engaged in an honorable activity in the service of empire so that they would not be tempted to make trouble for the empire instead. Warrior figurines may have served a similar function in Teotihuacan society, promoting an ideology of militarization among certain segments of the population.

Half-conicals were quite variable in terms of their size, and even more so in terms of surface treatment. They were found in all areas of the city, although they were more common in the core and less frequent in the intermediate areas. Statistical analysis, however, did not reveal any significant relationship between status and the distribution of half-conicals. The most common outfit involved a belted tunic and cape, but there were a significant number of half-conicals that displayed other clothing styles. The feathered garment was sufficiently different from the most common clothing style that it could warrant being considered a sub-type, however the jewelry that was paired with the garment varied. In fact, analysis of the different items of clothing and jewelry did not find evidence of the same consistent combinations. Clothing or jewelry alone, and not the combination of these attributes in specific ways, may have been the more important indicator of identity or meaning.

Half-conicals also appear to have been produced in at least some numbers at the CDD based on the presence of both half-conical figurines and molds (Sugiyama 2002: Photos 72-3, 82-4), which similarly ties them to state ideology and interests. Some scholars have suggested that this type may represent rulers, and that the circular elements I identify as pendants are in fact pectorals that would have communicated the identity of the figurine (Garcia Chavez—personal communication). I have not found any examples of incised or molded details on these pendants (with the exception of an occasional concentric ring), but since we know that Teotihuacan figurines were originally painted, additional details may have been applied post-firing. I expect that the headdresses, had they survived, would also facilitate identification of subtypes, and may have acted as the primary means of identification for individual or social roles, if that is indeed what these figurines depicted. The shape of half-conicals is so distinctive that the shape alone may have encoded the important information to their users, and the stylistic subtypes that we may define as archaeologists would not have been recognized as different individuals to Teotihuacano consumers, although they may have communicated other relevant information.

Implications for Ritual Variation Among Segments of Teotihuacan Society

This chapter considered two different types of variation in Teotihuacan figurines: how figurines were distributed across the urban landscape, and how variation—in terms of size and decoration—was distributed within those types, and across the city. The purpose of this was to ascertain the extent of diversity in ritual practice and figurine use

in the urban space of Teotihuacan. Working with materials recovered from surface collections is problematic in many ways, however the large sample considered here mitigates the disadvantages somewhat. (Note 9)

Two conclusions can be drawn from the evidence presented in this chapter. First, the inhabitants of Teotihuacan shared an established and fairly unified figurine tradition during the Early Classic and Classic, where all areas of the city and all social classes appeared to have access to the same types of figurines. There was no evidence that certain figurines were the exclusive domain of only one group, or completely ignored by other groups. Second, there was evidence for intra-societal variation in domestic ritual based on the unequal distribution of the main figurine types considered here, although the sources of that variation were not fully clear. The evidence supports Hypothesis 1b, which posited that there would be intra-city variation in terms of the figurines that were found in different areas. Given the association between certain figurine types and areas of the city and status groups, there is evidence in support of sociospatial variation.

The three common figurine types considered in this chapter—articulated, half-conical, and warrior—were found in large numbers across the city, and there were no areas or grid squares that used one figurine type to the exclusion of all others. Beyond their near ubiquity, there was a degree of spatial variation in their distribution patterns that suggested unequal consumption of certain types in specific areas of the city. Proximity to the core and the status of the households that resided in the grid square seem to have influenced the relative consumption of figurine types in different areas of the city, but they alone were not able to account for all of the observed variation in distribution

patterns. Much of this variation seems to have occurred between grid squares even within the same status group and area of the city, indicating that similar segments of the urban population were potentially quite heterogeneous in their use of figurines, and by extension, their ritual practices. The level of resolution with this data limits my ability to untangle the nature of the differences between these communities, however, I hope the recognition of this variability in the use of figurines will guide the interpretations of archaeologists who encounter them in better contexts.

The less frequently encountered types such as enthroned, "fat gods", and bound figurines were too few in number to state with any certainty what their role in urban ritual practices might have been. Given the minute percentage of the TMP assemblage that they accounted for, it follows that they may have played a smaller role in Teotihuacan ritual life compared to the more numerous types. The bound figurines could reference captives or sacrificial victims, which are referenced in other types of material culture at Teotihuacan (Carballo 2007b), actual examples of which have been found in excavations at the Pyramid of the Moon and the Feathered Serpent Pyramid (Sugiyama and López Luján 2007; Sugiyama 2005). For the enthroned and "fat gods," their low numbers may result of them being fairly late additions to the figurine tradition at Teotihuacan, although controlled excavation would have to confirm this.

Pasztory (1992) has suggested that preexisting regional ritual practices persisted in urban Teotihuacan, which were distinct from the dominant religion supported by the state. Cowgill (1997) allows for the possibility of dual ritual systems in operation in Teotihuacan, but does not believe that these systems would have necessarily been in

direct conflict with each other to the extent that one could be interpreted as direct resistance. In the case of warrior figurines, their standardization, area of production, and association with elites at both the production and consumption ends, strongly argues for their connection to dominant Teotihuacan ideology. Conversely, articulated figurines were less standardized than warrior figurines, and are known to have been made by independent artisans. Half-conicals were less standardized than warrior figurines, yet they too were more common in the center of the city and were produced at the CDD workshop, connecting them to state ritual. The examples with handles challenge the presumed functional dichotomy between figurine types as well, indicating that handling and manipulation may have been important in the way all types were used by their owners.

The results of this analysis indicate that although articulated, half-conical, and warrior figurines were widely available and used throughout the city, they had stronger associations with different segments of society. The picture that emerges is one of variation in intensity, but not presence or absence. Many of the residents of Teotihuacan appear to have used similar ritual paraphernalia, indicating a similar set of beliefs and underlying world view, that incorporated figurines from both state-affiliated and independent producers.

Chapter 5 Notes

1) The TMP initial survey of the independent Cosotlan 23 workshop area recovered a number of the common Classic figurine types including articulated (24.70%), cylindrical (54.87%), flat (8.31%), and warriors (5.70%). The resurvey of C23 conducted by Sullivan (207: 103) yielded different proportions: articulated (3.54%), cylindrical (71.13%), enthroned (0.13%), flat (18.32%), half-conical (0.28%) and warriors (0.57%). For the Ciudadela workshop (CDD), excavation yielded fragments from many of the same types: articulated (0.41%), cylindrical (33.33%), flat (62.33%), half-conical (0.27%) and warriors (3.66%). Flat and cylindrical figurines were the most common by far, and there were no enthroned figurines. Molds were recovered for flat figurines (n=49) and warrior heads (n=5). In addition to composite censers, the CDD workshop seems to have manufactured bound, half-conicals, fat gods, and women figurines, in addition to other less well-defined types (Sugiyama 2002).

2) Cabrera-Cortes (2005) describes evidence of independent potters who lived at the extreme southeastern margin of the city, and produced ritual ceramics such as Storm God effigies.

3) Traditionally, the term *barrio* has been used by Mesoamerican archaeologists and anthropologists, however Smith and Novic (2012: 14) argue that *barrio* is not a helpful analytical term, given the range of situations that it has been historically used for. Instead,

they support use of the term 'neighborhood', and 'district' for a larger multi-neighborhood spaces.

4) Over 200 zoomorphs were found in the portion of the TMP assemblage analyzed in this project, but were excluded from analysis in this dissertation. The most common zoomorph types were birds, canines, reptiles, monkeys, rabbits, and bats, in that order. A large number, however, could not be assigned to specific taxa.

5) The charts discussed above present similar information, but the rates of occurrence are calculated based on the total number of figurines found in those zones across all periods—this reflects the percentage of of the overall assemblage made up by different figurine types, but is less useful in understanding patterns of consumption and use within the Classic periods. Although Table 5.12 is temporally restricted to figurines that are reliably dated to the Early Classic and Classic periods, and although only three types are included, the row totals in the far right column include all phase-appropriate figurines even though they are not listed, so calculated percentages are based on grid square totals.

6) Several squares had neighborhoods of two or more statuses, however, and in these cases the squares have been grouped in the status category that best fits the overall characteristic of the square.

7) Unspecified limbs were missing their distal and/or proximal ends and were therefore difficult to identify as arms or legs. These fragments were overall quite similar in their cross-sectional size. When graphed there was not a bimodal distribution, therefore it does not appear to be possible to discern whether groups of the unspecified limbs should be reassigned to the arms or legs categories (Appendix M).

8) Width (mean=4.4, SD=1.2) and thickness (mean=2.5, SD=0.6) measurements of complete (n=54) half-conical figurines were normally distributed, while height (mean=3.0, SD=0.8) was not.

9) The utility of using surface collections to draw conclusions about spatially extensive areas, which are increasingly covered by modern settlement and may never be excavated due to constraints in time and resources, has been argued for elsewhere (Cowgill 1974, 2015; Robertson 2015: 177). Furthermore, the relatively shallow depth of archaeological finds at Teotihuacan means that surface finds in the city are generally a good indicator of what lays beneath the surface (Cowgill 1974: 368) although that is not to say that working with surface collections is not without difficulties. We know from excavations that not all apartment compounds were uniform in their usage of figurines, and it is unclear whether these differences were fully expressed in surface assemblages. Manzanilla (1996: 239) mentions that the excavation of Oztoyalco only recovered 132 figurine fragments, which is a surprisingly low count for an entire apartment compound, and in contrast, the Maquixco Bajo area had over 2,100 fragments from the

same period (Kolb 1995). In general terms, surface collections are useful in distinguishing broad patterns of consumption across areas of the city, but fine-grained analysis runs the risk of over-interpreting finds that may not faithfully reflect underlying patterns.

CHAPTER 6. DIACHRONIC TRENDS IN FIGURINE STYLE, ICONOGRAPHY, AND SUBJECT MATTER IN THE BASIN OF MEXICO

This chapter explores the degree of ritual and cultural affinity between Teotihuacan and the rural communities believed to be politically subordinate to it. Using both quantitative and qualitative assessments of the figurine assemblages recovered from Axotlan, Cerro Portezuelo, Huixtoco, and Teotihuacan, I explore whether there is evidence of a shared cultural and ritual identity in the Basin of Mexico before and during the Teotihuacan state, and what effects, if any, Teotihuacan's emergence had on the cultural identity of the Basin population. The nature of the relationships between Teotihuacan and the rural communities in its regional territory, and how the people living there conceived of their relationship to Teotihuacan, bears on the debate surrounding Teotihuacan's status as a state or empire, and the circumstances facilitating the expansion of the first state-level polity in the region.

Models of Teotihuacan expansion and its relationship to rural communities in the Basin of Mexico range from ones of complete domination (e.g. Sanders et al. 1979: 128), to more dynamic and contextually variable arrangements (e.g. Clayton 2013). (Note 1) Although rural sites were likely politically subordinate to Teotihuacan, we still do not fully understand the relationship between hinterland sites and the primate center, both in how these relationships were initially established and how they were variously maintained (or not) over time. A regional comparison of artifacts tied to ritual practice has the potential to reveal how elements of Teotihuacan's ideological system aligned with other possible ideological systems on a sub-regional level and whether elements of

imperial ideology permeated into the hinterland. In many theories, religion takes a dominant explanatory role in Teotihuacan's initial growth and expansion, its sociopolitical structure, and its ability to attract immigrants throughout the history of the city (Nichols 2016: 21).



Figure 6.1: Basin of Mexico map

The aims of this chapter are to locate and interpret similarities and differences in the figurine assemblages from Teotihuacan, Axotlan, Cerro Portezuelo, and Huixtoco (Fig. 6.1) in the periods leading up to and encompassing the apogee of Teotihuacan's power. This chapter takes a long view of figurine traditions in the Basin of Mexico,

including figurines ranging from the Middle Formative to the Classic. I concentrate more heavily on the later periods due to the nature of the questions I am asking, but a diachronic analysis of these assemblages is key to revealing how the emergence of Teotihuacan impacted previously established figurine traditions and regional ritual practices.

Analysis revealed Basin-wide trends such as an increased prevalence of clothing and jewelry on figurines, increasing extravagance of said costumes, and the spread of Teotihuacan style figurines into sites in the rural hinterland. But there were also dissimilarities between sites in terms of relative distributions of figurine types and stylistic divergence within types that point to heterogeneity in figurine production and use between the individual rural sites, and between these sites and Teotihuacan.

Assemblages Under Investigation

This section provides a brief characterization of the four assemblages and data sets. Chapter 3 provides more in-depth discussions about the sites themselves.

Axotlan

Materials from the Axotlan excavation are stored at the Casa de Morelos museum in the municipality of Ecatepec in the State of Mexico. I was able to access the materials from Frente 2, referred to as La Longaniza, from the MIGDAL operation of the excavations. It was not possible to locate excavation materials from Frentes 1 and 3, which have been moved or lost since excavation. There were 540 figurine fragments in

the Frente 2 assemblage, and all major periods of Basin occupational history were well represented. Close to 10% of this excavated assemblage was too fragmented to accurately assign dates or phases.

Cerro Portezuelo

The Cerro Portezuelo collection is housed at the Fowler Museum at UCLA, and originally consisted of over 600 figurine fragments. In an unpublished study based on research conducted in 1999, Janet Montoya (Montoya n.d.) selected 556 of these figurine fragments for analysis. Unfortunately, in 2015 when I visited to conduct my own analysis, the staff and I were only able to locate a total of 169 fragments. Out of the portion of the assemblage I analyzed, 4% of it was too fragmented to date. Nevertheless, all periods were represented within the portion of the assemblage that I was able to locate.

Huixtoco

The Huixtoco assemblage is stored at the Casa de Morelos in Ecatepec with the Axotlan materials. Figurine fragments were found from all periods included in this investigation, however the assemblage is skewed heavily towards the earliest periods; it contained a disproportionate amount of Middle and Late Formative figurine fragments, and Teotihuacan period figurines were less well represented. The assemblage contained 263 figurine fragments, 10% of which was too fragmented to reliably date.

Teotihuacan

The Teotihuacan assemblage analyzed by this project was collected by the Teotihuacan Mapping Project (TMP) (Millon 1973), and is housed in the Arizona State University Teotihuacan Research Laboratory in the town of San Juan Teotihuacan, in the State of Mexico. Approximately 32% of the TMP assemblage was too fragmented or eroded to accurately date. The high number of undatable fragments is not surprising given that this assemblage was produced by surface collection. In spite of these limitations, the sheer volume of archaeological materials collected by the TMP, including the figurines, allows us to study aspects of their production, consumption, variation, and changes over time in the city. This sheds light on the ritual practices of tens of thousands of inhabitants of this ancient urban center.

Characterization of the Data

Table 6.1 presents the counts of all figurine fragments by site, including undated fragments, divided into anthropomorphs and zoomorphs. Table 6.2 presents only the dated fragments from each site, which are used in subsequent analysis. Over 2,600 fragments, most of them limbs, were impossible to date in a reliable way (designated "UNK—frag" in Table 6.3) given their state of breakage. Table 6.3 gives the relative rates of dated anthropomorphs and zoomorphs by site assemblage. Cerro Portezuelo had an unusually high rate of zoomorphs (11%), whereas the rates at the other three sites ranged from 3-4%. Finally, Table 6.4 presents the counts of dated anthropomorphic

figurines by site and period, which is the data that is used for further analysis in this chapter.

Table 6.1: Counts of Forms by Site (including undated fragments)

Site	Anthropomorphs	Zoomorphs	Molds	Total
AXT	514	26	0	540
CPZ	147	22	0	169
HXT	254	9	0	263
TEO	8101	226	8	8335
Total	9016	283	8	9307

Table 6.2: Counts of Forms by Site (dated fragments only)

Site	Anthropomorphs	Zoomorphs	Molds	Total
AXT	465	21	0	486
CPZ	144	17	0	161
HXT	230	8	0	238
TEO	5499	176	8	5683
Total	6338	222	8	6568

Table 6.3: Percentage of Forms by Site (dated fragments only)

Site	Anthropomorphs	Zoomorphs	Molds	Total
AXT	96%	4%	0%	100%
CPZ	89%	11%	0%	100%
HXT	97%	3%	0%	100%
TEO	97%	3%	0%	100%

Table 6.4: Totals of Anthropomorphic Figurine Fragments by Site and Period

Period	AXT	CPZ	HXT	TEO	Total
Middle Formative	38	10	82		130
Late Formative	52	10	127	10	199
Terminal Formative	69	60	5	1728	1861
Early Classic	130	28	4	1018	1180
Classic	176	36	12	2743	2967
(UNK--frag)	49	3	24	2602	2678
Total	514	147	254	8101	9015

Table 6.5 further breaks down the counts by site, and presents the counts of figurine fragments by site, period, and the body part of anthropomorphic figurines (I.e. limbs, heads and headdresses, torsos, and whole figurines). As expected, the assemblages recovered through excavation have lower ratios of limbs to heads and torsos. The Teotihuacan assemblage has significantly fewer heads and torsos, and the majority of the collection is made up of limbs. Axotlan is the only site in which the number of heads exceeded that of torsos. Huixtoco is unusual in its high proportion of nearly complete figurines. A figurine did not need to be entirely intact in order to be classified as whole, but it had to have five out of six body parts intact (e.g. limbs, torsos, and head). Graph 6.1 shows the ratios of different body parts by site.

Graph 6.1: Rates of Occurrence of Figurine Body Parts Across the Assemblages (all periods)

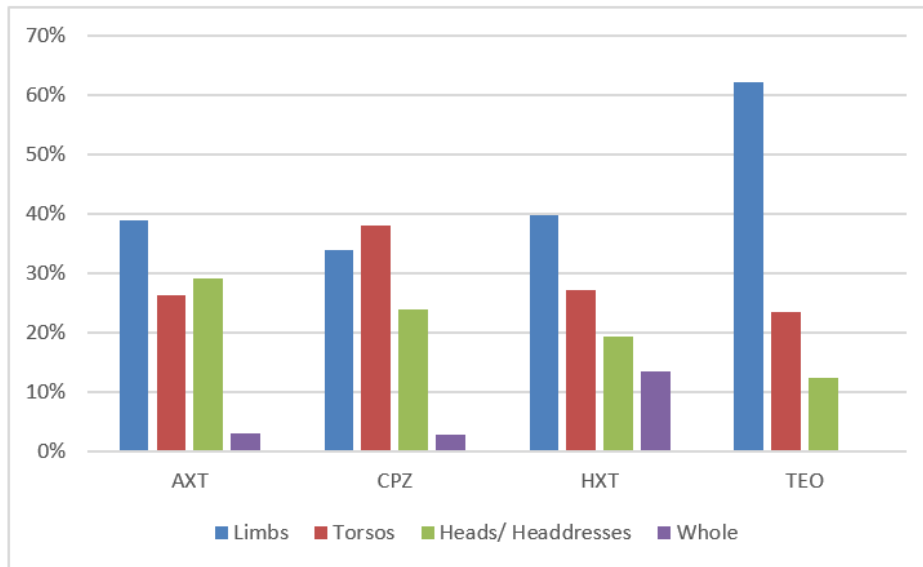


Table 6.5: Counts of Figurine Body Parts by Site and Period

Site	Period	Heads/					Total
		Limbs	Torsos	Headdresses	Whole	Unkown	
AXT	Middle Formative	10	11	13	4		38
	Late Formative	12	16	19	5		52
	Terminal Formative	33	20	15	1		69
	Early Classic	31	32	64		3	130
	Classic	84	51	33	5	3	176
	(UNK--frag)	30	5	6		8	49
	Total		200	135	150	15	14
	%	39%	26%	29%	3%	3%	100%
CPZ	Middle Formative		2	8			10
	Late Formative	2	2	6			10
	Terminal Formative	18	29	9	3	1	60
	Early Classic	9	12	6	1		28
	Classic	19	10	6		1	36
	(UNK--frag)	2	1				3
	Total		50	56	35	4	2
	%	34%	38%	24%	3%	1%	100%
HXT	Middle Formative	45	21	11	5		82
	Late Formative	24	44	29	29	1	127
	Terminal Formative	5					5
	Early Classic			4			4
	Classic	6	3	3			12
	(UNK--frag)	21	1	2			24
	Total		101	69	49	34	1
	%	40%	27%	19%	13%	0%	100%
TEO	Late Formative		2	8			10
	Terminal Formative	693	756	244	6	28	1727
	Early Classic	277	346	379	4	12	1018
	Classic	1834	541	329	13	26	2743
	(UNK--frag)	2244	254	43		65	2606
	Total		5048	1899	1003	23	131
	%	62%	23%	12%	0.3%	2%	100%

Analysis of the Figurine Assemblages by Period

This section compares the four figurine assemblages within each temporal period, in order to develop a better understanding of the extent to which these sites participated in a shared figurine tradition in the periods under investigation, and to highlight changes

over time in the figurine assemblages. One of the goals of this study is to understand whether the rise of Teotihuacan had an impact in domestic ritual around the Basin, as seen through the lens of one type of ritual artifact. A comprehensive view of Basin figurine traditions before urbanization at Teotihuacan and the subsequent expansion is necessary in order to quantify and describe the changes that coincide with Teotihuacan's ascendance.

Middle Formative

The Middle Formative period (ca. 900-600/500 BCE) in the Basin has been described by Vaillant (1930, 1931), and encompasses the Zacatenco-Copilco cultural horizon, as well as the earlier part of the subsequent Ticoman-Cuicuilco culture. The Hay-Vaillant figurine types included in this period were A, B, C, D, and F (Vaillant 1930, 1931, 1934, 1935; Lesure 2015). Type E figurines were a transitional type between the Zacatenco-Copilco complex and the Ticoman-Cuicuilco complex, and are discussed in the Late Formative section of this chapter.

All three of the hinterland sites had figurines dating to the Middle Formative, and this period was particularly well represented at Axotlan and Huixtoco. Table 6.6 gives the Hay-Vaillant type counts for each site. The figurine types at Axotlan include A-D, although Cs and Ds were the most numerous. Cerro Portezuelo only had B and C type figurines from the Middle Formative. Huixtoco had Types B-D represented in the assemblage, Type C being the most common.

Table 6.6: Breakdown of Middle Formative Assemblages Using the Hay-Vaillant Typology

Period	Site	A	B	C	D	Unassigned	Total
Middle Formative	AXT	4 11%	3 8%	9 24%	22 58%		38 100%
	CPZ		3 30%	7 70%			10 100%
	HXT		16 20%	57 70%	3 4%	6 7%	82 100%

Sexual Attributes

Sexual attributes were common features on Middle Formative figurines (Table 6.7). Breasts were by far the most common sexual attribute on Middle Formative figurines, making up 86% of the total number of sexual attributes during this period. One example each of a pregnant torso, a pubic triangle, and male genitalia were also present. Huixtoco had a much higher rate of occurrence of sexual attributes on Middle Formative figurines than the other two sites, although they were present at every site. Sexual attributes are discussed in detail in Chapter 8.

Table 6.7: Counts of Sexual Characteristics from Middle Formative Torsos

Period	Site	Breasts	Pregnant	Pubic		Male Genitalia	None/Unknown	Total Attributes	Total Torsos	Total Torsos	% Torsos with Sexual Attributes
				Triangle	Genitalia						
Middle Formative	AXT	1	1		1	16	3	2	18	11%	
	CPZ	1				1	1	1	2	50%	
	HXT	17		1		11	18	18	29	62%	

Body Position

Table 6.8 gives the counts of body positions (seated or standing) at each site. Many of the figurines at Axotlan were broken at the waist, so it was difficult to tell whether they were sitting or standing, however at both Axotlan and Huixtoco standing figurines outnumber seated ones. I ran a Chi-square and a Fisher's Exact test, which is more reliable than Chi-square on nominal variables with low numbers, of the totals of seated and standing figurines from Axotlan and Huixtoco, to test whether body position was independent of the site. Neither test returned significant results, indicating that there was not a significant difference in the distribution of standing and sitting figurines from these two sites.

Table 6.8 Bodily Positions of Middle Formative Figurines by Hay-Vaillant Type

Period	Site	Type	Seated	Standing	Unknown	Total
Middle Formative	AXT	A	1		1	2
		B			1	1
		C	1	2	3	6
		D		4	5	9
		Total	2	6	10	18
		%	11%	33%	56%	100%
	CPZ	B			1	1
		C			1	1
		Total			2	2
		%			100%	100%
HXT	Unknown			2		2
	B				1	1
	C	6	12	8		26
	Total	6	14	9		29
	%	21%	48%	31%		100%

Personal Adornment

Figurines during this period wore simple jewelry, typically in the form of a single appliqued coil collar or earspools (Table 6.9). There was no evidence in this sample of figurines wearing more than one collar, although four examples from Huixtoco and one from Cerro Portezuelo wore a single beaded collar made from a series of balled appliques. Bracelets were found on figurines from this period, but they were restricted to the Huixtoco assemblage. There was limited co-occurrence of different types of jewelry, and this was found only at Huixtoco; four of the figurines wearing earspools also had evidence of a collar.

I compared the number of figurine fragments wearing jewelry to the total number of recovered fragments for each site (Table 6.10). All body parts were included in analysis since limbs, torsos, and heads displayed evidence of jewelry during this period. Cerro Portezuelo had the highest rate of jewelry on figurines (70%, or seven out of 10), and Huixtoco had the highest total count (n=33). Axotlan had the lowest rate and count of the three sites.

Table 6.9: Number of Collars on Middle Formative Figurines by Site

Period	Site	1 Collar	2 Collars	3+ Collars	Total Fragments
Middle Formative	AXT	3			38
	CPZ	2			10
	HXT	11			82

Table 6.10: Counts and Types of Jewelry on Middle Formative Figurines by Site

Period	Site	1 Collar	Beaded Collar	Bracelet	Earspools	Total Jewelry	Total Fragments		% Fragments with Jewelry
							Fragments with Jewelry	Total Fragments	
Middle Formative	AXT	3			3	6	6	38	16%
	CPZ	2	1		5	8	7	10	70%
	HXT	11	4	9	9	33	29	82	35%

I tested the occurrence of jewelry by site in order to determine whether these patterns reflected statistically significant differences. Both a Chi-square and Fischer's Exact test measuring the independence of site and jewelry rates returned insignificant results. Although jewelry appears to have been more popular at Cerro Portezuelo and Huixtoco, these discrepancies do not reflect statistically significant differences.

Clothing

Clothing was infrequent on figurines during the Middle Formative and consisted of belts or simple loincloths (Table 6.11). Cerro Portezuelo yielded no examples of clothing from this period. Huixtoco had five figurine fragments with evidence of clothing, one of which was an incised belt (or skirt) with additional hanging ornamentation. Axotlan had two examples of belts, both with additional ornamentation in the form of circular appliques, perhaps representing beads (Fig. 6.2).

Table 6.11: Counts of Clothing Types on Middle Formative Torsos by Site

Period	Site	Appliqued Belt	Appliqued Tied Belt	Appliqued simple loincloth	Incised Belt	None/Unknown	Total	% Clothed
Middle Formative	AXT	2				16	18	11%
	CPZ					2	2	0%
	HXT	1	1	1	2	24	29	17%



Figure 6.2: Examples of Middle Formative Clothing from Huixtoco (left) and Axotlan (right)

Headdresses

Unlike clothing, headdresses were quite common during the Middle Formative and occurred on roughly half of the figurines—they were a little more frequent in the Huixtoco assemblage and a little less so at Axotlan (Table 6.12). The types of headdresses were small and had fairly limited ornamentation, although no two headdresses were alike (Fig. 6.3). They typically took the form of small applied caps or turbans and were ornamented with clay fillets and incised lines (Table 6.13).

Table 6.12: Counts of Middle Formative Figurine Heads with Headdresses

Period	Site	Headdress	None	Unknown	Total	% with HD
Middle Formative	AXT	5	1	7	13	38%
	CPZ	4		4	8	50%
	HXT	7		4	11	64%

Table 6.13: Counts and Types of Headdresses on Middle Formative Figurines by Site

Period	Site	Cap	Small turban	Unk-broken	None/ Unknown	Total HD	Total Heads
Middle Formative	AXT	1	3	1	8	5	13
	CPZ	2		2	4	4	8
	HXT	4		3	4	7	11



Figure 6.3: Middle Formative headdress examples from Axotlan (2 left) and Huixtoco (2 right)

Summary

There were many similarities between the regional assemblages in terms of the general range of types and styles present, and the prevalence of certain bodily positions, headdresses, and clothing, which is evidence that people in the Basin of Mexico were in communication with each other and to a certain extent participated in a shared figurine tradition. There were notable differences, however, in the rates of sexual attributes, and the types of jewelry and clothing present in the site assemblages. Huixtoco, for example, had a wider range of clothing and jewelry types than either Axotlan or Cerro Portezuelo. These assemblages were similar in many important respects, but not the same, and there were multiple points of variation within the larger tradition. However, many of the observed differences between site assemblages may be due to sampling error resulting from low numbers at each site.

Late Formative

The Zacatenco-Copilco culture was succeeded by the Ticoman-Cuicuilco complex in the Late Formative (ca. 600-200 BCE). Ticoman-Cuicuilco was first defined at Zacatenco by Vaillant (1930), and subsequent excavations at the site of Ticoman revealed three distinct phases within this cultural period. The Ticoman-Cuicuilco figurines were originally divided into three phases as follows: Early Ticoman types were E1, E2, E3, and I3, Intermediate period types were G1-2, I1-2, L, E4, J, M, N, and Late period types were H1, H2, H3, H4, H5 (Vaillant 1931). As noted in the previous section, early Ticoman overlapped with Late Zacatenco, and so Type E figurines were transitional between Middle and Late Formative cultures.

All four sites had a number of fragments that looked similar to Late Formative types, but could not be confidently assigned to a specific type, due to the condition or size of the fragment. These are groups as 'Unassigned' in Table 6.14. Axotlan had a number of Late Formative types (E-I), and variations of Type H were the best represented. Only three of the 10 Late Formative fragments at Cerro Portezuelo could be assigned a Hay-Vaillant type, largely due to the condition of the figurines, but Types G and I were represented. The Huixtoco assemblage contained Types E, G, H, and I. Type E was the best represented, and the later types occurred at roughly equivalent rates. Teotihuacan only had one fragment that could be assigned a type, which was a Type H.

Table 6.14: Counts of Late Formative Figurines by Hay-Vaillant Type and Site

Period	Site	E	G	H	I	Unassigned	Total
Late Formative	AXT	5 10%	4 8%	19 37%	3 6%	21 40%	52 100%
	CPZ		1 10%		2 20%	7 70%	10 100%
	HXT	50 39%	16 13%	16 13%	14 11%	31 24%	127 100%
	TEO			1 10%		9 90%	10 100%

Body Position

Table 6.15 shows the counts of different body positions in the Late Formative figurine assemblages. Neither Cerro Portezuelo nor Teotihuacan had any torsos where position could be determined, and they have been excluded from additional analysis. Axotlan and Huixtoco had different distributions of sitting and standing figurines; the majority of figurines in the Axotlan assemblage were seated, whereas Huixtoco had nearly four times as many standing figurines as it did seated ones. A Chi-square test and a Fisher's Exact test confirmed the significance of what appeared to be a clear pattern of difference between the two sites in terms of preference for seated or standing figurines. (Appendix Q) The majority of the significance seems to derive from the Type E figurines, which were numerous at Huixtoco and overwhelmingly found in a standing position.

Table 6.15: Bodily Positions of Late Formative Torsos by Hay-Vaillant Type

Period	Site	Type	Seated	Standing	Unknown	Total Torsos
Late Formative	AXT	Unknown	5	1	3	9
		E		2		2
		G	1			1
		H	7	1	1	9
		Total	13	4	4	21
		%	62%	19%	19%	100%
	CPZ	Unknown			2	2
		Total			2	2
		%			100%	100%
	HXT	Unknown	2	2	6	10
E		1	31	7	39	
G		5	7	1	13	
H		4	2	5	11	
I		1	1	4	6	
Total		13	43	23	79	
%		16%	54%	29%	100%	
TEO	Unknown			3	3	
	Total			3	3	
	%			100%	100%	

Sexual Attributes

Sexual attributes were common on Late Formative figurines, and were present in all four assemblages, even though total counts at Cerro Portezuelo and Teotihuacan were very low for this period. Nearly half of the torsos at Axotlan had gynomorphic sexual attributes, and over half of the torsos at Huixtoco did as well, in addition to four torsos with andromorphic attributes. Breasts were again the most common of the sexual attributes, followed by vulva and pregnant torsos, although both of these traits were more common at Huixtoco. See Chapter 8 for a detailed discussion.

Table 6.16: Sexual Attributes on Late Formative Torsos

Period	Site	Breasts	Pregnant	Pubic		Male		None/ Unknown	Total Attributes with Attributes	Total Torsos	Total Torsos with Sexual Attributes	
				Triangle	Vulva	Genitalia	Unknown					
Late Formative	AXT	7	3	2				9	12	10	21	48%
	CPZ	1						1	1	1	2	50%
	HXT	28	11	4	16	4	31	63	47	79	59%	
	TEO	2					1	2	2	3	67%	

Clothing

Figurines during this period did not wear much clothing. No evidence of clothed figurines was found at Cerro Portezuelo or Teotihuacan, although they had extremely low counts. The rates of Late Formative figurines with clothing at Axotlan and Huixtoco were 14% and 8%, respectively. The only types of clothing that were recorded were belts (both applied and incised) and applied balls. I included applied balls under clothing if they occurred on the trunk or limbs of the body (and did not appear to be part of a collar or bracelet), yet it is unclear what they were meant to represent, and if they are excluded from counts, then the rate of clothing at Huixtoco drops to just 1%. Clearly, clothing was not a common element on figurines at any of the sites during this period.

Table 6.17: Counts of Clothing on Late Formative Torsos by Site

Period	Site	Applied balls	Applied Belt	Incised Belt	None/Unknown	Total Torsos	% Clothed Torsos
Late Formative	AXT		2	1	18	21	14%
	CPZ				2	2	0%
	HXT	5	1		67	73	8%
	TEO				3	3	0%

Personal Adornment

Jewelry was also scarce, although it was somewhat better represented than clothing (Table 6.18). Teotihuacan in fact had the highest rate of jewelry during this period, although the second lowest count. Numerically speaking, jewelry was better represented at Axotlan and Huixtoco, although less than a quarter of fragments at either site wore jewelry. Single collars and earspools were the most prevalent types of jewelry,

but a couple of bracelets were found an Axotlan and Huixtoco, and a beaded collar and a pendant were also found at Huixtoco.

Table 6.18: Counts and Types of Jewelry on Late Formative Figurines by Site

Period	Site	Fragments										% Wearing Jewelry	
		1 collar	1 collar Bracelet	1 collar, incised design	Beaded collar	Bracelet	Small earspools	Large earspools	Pendant	None/Unknown	Fragments with Jewelry		Total Fragments
Late Formative	AXT	1	1	1			6	2		41	11	52	21%
	CPZ						2			8	2	10	20%
	HXT	3			1	1	16	6	1	99	28	127	22%
	TEO	1					3			6	4	10	40%

Headdresses

Headdresses were more common during this period than either clothing or jewelry, and occurred on approximately half of the figurines at Axotlan and Huixtoco (Table 6.19). The rates at Cerro Portezuelo and Teotihuacan were decidedly lower, but again they had much lower total counts during the Late Formative. For the most part headdresses conformed to the size and shape of the head, though, so they were classified as caps and small turbans (Table 6.20). None of the appliques or headdress elements stuck out far beyond the head, as became common in later Teotihuacan styles. Circular, punctilated, and cord appliques were the most common decorative features on Late Formative headdresses, and they were combined in different arrangements to form a variety of headdresses (Fig. 6.4). Although there were many repeating headdress elements, there was also a good deal of variety, particularly among Type E figurines. Type H figurines (Fig. 6.5) were more similar between figurines and sites.

Table 6.19: Counts of Late Formative Figurine Heads with Headdresses

Period	Site	Headdress	None/Unknown	Total	% with HD
Late Formative	AXT	10	9	19	53%
	CPZ	1	5	6	17%
	HXT	14	15	29	48%
	TEO	2	6	8	25%

Table 6.20: Counts and Types of Headdresses on Late Formative Figurines by Site

Period	Site	Cap	Small turban	Unk-broken	None/ Unknown	Total
Late Formative	AXT	4	2	4	9	19
	CPZ			1	5	6
	HXT	9		5	15	29
	TEO	1		1	6	8



Figure 6.4: Headdresses on Late Formative figurines from Axotlan (3 left) and Huixtoco (right)



Figure 6.5: Two Type H figurines from Huixtoco with matching headdress/hair styles

Summary

Sexual attributes were somewhat more common during the Late Formative than in the preceding period, the rate of clothing remained low, jewelry was found in low, yet relatively consistent amounts between sites, and headdresses were common across the Basin. There was an intriguing difference in the rate of seated and standing figurines between Axotlan and Huixtoco, indicating that local preferences may have shaped these assemblages on the sub-regional level. There is no evidence suggesting any of these figurines should be interpreted as images or effigies of leaders, deities, or important persons that would be readily identifiable based on some repeating stylistic clue or decorative element. That is not to say that these figurines absolutely did not represent

these things—only that there is no clear evidence that they did. Many of them—at least the ones for which I was able to determine a type—follow an internal stylistic language, which allows them to be grouped into types. In that sense they index one another and make use of the same stylistic language which creates coherence within each type (Gell 1998). Beyond the initial iconographical analysis, however, evidence for meaningful divisions within each Hay-Vaillant type is harder to find and interpret, limiting the effectiveness of an iconological or symbolic interpretation (see Lesure 2011: 51).

Terminal Formative

A distinctive Teotihuacan "style" emerged in the Teotihuacan Valley during the Terminal Formative period, and began appearing in areas outside of the Valley as well. The Terminal Formative included two major ceramic phases: Patlachique (ca. 150-1 BCE) and Tzacualli (ca. 1-125 CE). (Note 2)

Head Shape and Prognathism

Figurines from both phases had distinctive eye types that facilitate dating them. Patlachique figurines had almost lupine facial features, and slanted eyes made by simple converging impressions (Fig. 6.6, 6.8). Several were extremely prognathic, but most were moderately or only slightly so (Table 6.21). Tzacualli phase figurines were characterized by coffee bean-shaped eye appliques (Fig. 6.7). Compared to Patlachique phase heads, Tzacualli heads varied to a much higher degree in terms of their shape; some were flat and wide (similar to Patlachique), while others were round, elongated, or flared (Fig 6.8).

Prognathism seemingly increased in this phase—the majority of Tzacualli heads were moderately or extremely prognathic.

Table 6.21: Prognathism on Terminal Formative Heads (all sites)

Phase	Slight	Moderate	Extreme	Total
Patlachique	5 42%	5 42%	2 17%	12 100%
Tzacualli	17 17%	59 60%	23 23%	99 100%



Figure 6.6: Patlachique heads from Teotihuacan



Figure 6.7: Tzacualli heads from Teotihuacan



Figure 6.8: Terminal Formative figurines from Cerro Portezuelo (Patlachique left, Tzacualli center) and Axotlan (Tzacualli, right)

Two of the Teotihuacan style Terminal Formative heads found in the Cerro Portezuelo assemblage are shown in Figure 6.8. One was quite similar to Patlachique-phase heads from Teotihuacan, although the paste was orange-brown in color, which was not a common paste color in Teotihuacan. The Tzacualli-style head was made of the same orange-brown clay, and it was stylistically unusual compared to Tzacualli figurines at Teotihuacan. The elongated shape of the head is not unheard of for this period, but the face was unusually flat and the earspools larger than would be expected on a Tzacualli figurine from Teotihuacan. It seems possible that these were local products of Cerro Portezuelo, however it is impossible to tell without chemical sourcing.

Body Position

Table 6.22 shows the body positions for figurines from this period, arranged by site. Very few fragments from this period were found at Huixtoco. For the other three sites, the two most common body positions were sitting and standing, and some of the standing figurines were aided by a back support, which have been counted separately.

Back supports appear to have been a Teotihuacan innovation since they were not found on figurines prior to the Terminal Formative—there was no evidence of them on Middle and Late Formative figurines in the rural assemblages. Furthermore, when they did appear they were more common at Teotihuacan than other sites, although their high frequency at Axotlan is notable. Eight examples of the standing figurine with a support were recovered from Axotlan during this period, and only one such example was found at Cerro Portezuelo.

Back-bending figurines—possibly the "extended over table" variety described by Goldsmith (2000: 113-114)—were found only at Teotihuacan. Fourteen examples were found that likely date to the Terminal Formative, but they were a minority body position.

Table 6.22: Bodily Positions of Terminal Formative Torsos by Site

Period	Site	Back-		Standing,		Unknown	Total
		bending	Seated	Standing	support		
Terminal Formative	AXT		3	5	8	6	22
	%		14%	23%	36%	27%	100%
	CPZ		4	6	1	19	30
	%		13%	20%	3%	63%	100%
	TEO	14	172	216	82	295	779
	%	2%	22%	28%	11%	38%	100%

Personal Adornment

Jewelry was more prevalent during the Terminal Formative than in previous periods. All forms of jewelry were well represented at all sites except for Huixtoco, which had a very low figurine count. Seventeen and sixteen percent of the Cerro

Portezuelo and Teotihuacan assemblages, respectively, had jewelry, and the rate was almost double that at Axotlan where 28% of figurines had some form of jewelry. Furthermore, for the first time there were figurines wearing multiple collars at once. Thirty-nine figurines had two collars—35 of which occurred in Teotihuacan—and two figurines from Teotihuacan had three collars. Compared to previous periods where figurines never wore more than one collar at a time, it appears that the amount and extravagance of jewelry began to escalate during the Terminal Formative and most of these more extravagant forms occurred at Teotihuacan.

Three examples of multiple collars were found in the rural sites and the ratio of single to multiple collars was remarkably consistent; about 80% of the collars at each site were single collars, and 20% were multiple collars (Table 6.23). Multiple collars were a new occurrence in the Basin of Mexico figurine tradition, and the fact that they appeared in similar numbers relative to single rolled collars at each site (excluding Huixtoco) suggests a fairly high degree of communication between sites.

Table 6.23: Number of Collars on Terminal Formative Figurines by Site

Period	Site	1 collar	2 collars	3+ collars	Unknown	Total
Terminal Formative	AXT	12	3		50	69
	CPZ	5	1		50	60
	HXT				4	5
	TEO	142	35	2	1455	1727

Table 6.24: Counts and Types of Jewelry on Terminal Formative Figurines by Site

Period	Site	Simple Beaded			Total Jewelry	Total Fragments with Fragments	% Fragments with Jewelry
		Collars	Collar	Bracelet			
Terminal Formative	AXT	15	2	1	6	24	28%
	%	63%	8%	4%	25%	100%	
	CPZ	6	1	2	3	12	17%
	%	50%	8%	17%	25%	100%	17%
	HXT			1		1	20%
	%			100%		100%	
TEO		179	6	52	48	285	16%
	%	63%	2%	18%	17%	100%	
						1727	
						272	

The ratios of different jewelry types were fairly consistent between sites (Table 6.24). Collars were the most common type of jewelry in each assemblage, and were followed by earspools in popularity. Bracelets and beaded collars were found in most of the assemblages, and bracelets were exceedingly common at Teotihuacan. Despite low counts for the Terminal Formative in the rural sites, Axotlan and Cerro Portezuelo had the same range of jewelry types as Teotihuacan. Axotlan has the highest proportion of figurines wearing jewelry out of all of the sites, but I am inclined to think that much of this difference is likely due to the better state of preservation in the Axotlan assemblage compared to the TMP.

Clothing

The frequency and diversity of clothing increased during the Terminal Formative compared to earlier periods (Table 6.25). The rate of clothed figurines jumped to 16-18% of the assemblage at all sites (excluding Huixtoco, where no clothing elements were found). Applied balls and belts, which were present during the Late Formative, continued into the Terminal Formative period and were joined by an assortment of new clothing types. Loincloths, *quechquemits*, skirts or *huipils*, sashes, pads, and capes appeared during the Terminal Formative. Additionally, belts and loincloths had simple and embellished ("fancy") varieties. The "fancy" versions vary somewhat in execution, but in basic terms they had decorative non-functional appliques (e.g. loops of extra clay coils, appliques, incisions, etc.) that differentiated them from their simple counterparts. Clothing increased in absolute and relative numbers during the Terminal Formative, new

elements and styles of clothing were added to figurines, and those elements of clothing were already beginning to see signs of embellishment.

Nevertheless, simple styles of outfits were still the most common forms. Simple belts and loincloths were the two most common types of clothing at Teotihuacan during the Terminal Formative, and virtually the only types of clothing found in the rural sites (Table 6.26). The Axotlan assemblage had seven belted figurines, and one example of a torso with feather-like appliques. Figurines in the Cerro Portezuelo assemblage had belts, simple loincloths, and one example each of appliqued balls and a fancy loincloth. The diversity in clothing styles—and combinations of multiple pieces of clothing—seems to have been limited to Teotihuacan during this period. The florescence of clothing elements and styles in the TMP assemblage were limited to the city and do not seem to have been taken up at the rural sites, suggesting that the locus of the innovation was Teotihuacan.

Table 6.25: Proportion of Clothed Terminal Formative Figurines by Site

Period	Site	Total		Total	% Clothed
		Clothed	No Clothing		
Terminal	AXT	9	47	56	16%
Formative	CPZ	9	43	52	17%
	HXT	0	5	5	0%
	TEO	267	1225	1493	18%

Table 6.26: Count of Clothing Types and Combinations on Terminal Formative Figurines by Site

Period	Site	Applied balls		Applied balls simple		Applied balls fancy		Applied balls and Quechquemiti		Tied Belt		Huijil Belt		Cape Simple		Simple loincloth		Fancy loincloth		Sash simple loincloth		Pads fancy loincloth		Unknown applique	
		balls	loincloth	balls simple loincloth	balls fancy loincloth	Quechquemiti	feathers	Belt	Belt	Incised	Cape	loincloth	loincloth	loincloth	loincloth	loincloth	loincloth	loincloth	Sash	Pads	Pads	loincloth	loincloth	loincloth	loincloth
Terminal	AXT					1	7																		1
Formative	CPZ	1					4																		(1)
	HXT																								
	TEO	13		1	4	1	98	5	1	1	1	1	1	1	1	76	15	3	7	7	7	1	1	12	20

Headdresses

Headdresses occurred on nearly half of figurines during the Terminal Formative, and rates were remarkably similar between three of the sites—Huixtoco was excluded due to a lack of head fragments from this period (Table 6.27). Although the general headdress shapes of caps and turbans persisted, they were stylistically distinct from previous versions in the Late Formative. 'Wide Band' headdresses began to emerge during this time, and were mostly confined to Teotihuacan. Axotlan had one potential example of a Wide Band headdress on a Late Tzacualli-style head, but it lacked the central vertical applique that was common to Teotihuacan versions of the headdress (Fig. 6.9). Besides the possible example at Axotlan, Wide Band headdresses were limited to Teotihuacan and were in fact the most popular style during this period and the next. Their near confinement to Teotihuacan during this period suggests that they were an original innovation of the Teotihuacan figurine tradition.

Table 6.27 Counts and Types of Headdresses on Terminal Formative Figurines by Site

Period	Site	Small		Large	Wide	Unknown		Total Headdresses	Total Fragments	% Headdresses
		Cap	turban	turban	Band	Other	type-broken			
Terminal Formative	AXT			2	1		4	7	15	47%
	CPZ	1				1	2	4	9	44%
	TEO	11	13	10	32	1	48	115	244	47%



Figure 6.9: Wide Band headdress on Tzacualli phase figurines from Teotihuacan (left and center), and a possible example from Axotlan (right)

Summary

The Terminal Formative was an important period for the formation of Teotihuacan society and material culture. The city itself had not reached metropolitan proportions, yet it was growing quickly, and the hallmarks of Teotihuacan culture were beginning to be established on both monumental and smaller scales. This is seen clearly in the innovations in clothing and headdresses that took place in the Teotihuacan figurine tradition during the Terminal Formative, many of which persisted into the Classic period. While some of the innovations such as clothing and headdresses were not adopted immediately by the rural sites, other elements of the Teotihuacan figurine style such as eye shape spread quickly during the Terminal Formative period.

Early Classic

The Early Classic period contained the Miccaotli (ca. 125-200 CE) and Tlamimilolpa (Early ca. 200-275 CE; Late 275-350 CE) ceramic phases. In most other studies on Teotihuacan, the Early Classic is not treated as a distinct period in the Teotihuacan chronology and so Miccaotli is grouped in the Terminal Formative period and Tlamimilolpa gets grouped into the Classic. However, Miccaotli and Tlamimilolpa figurines have more in common with each other stylistically than with previous or later phases of figurines, which supports considering them as a distinct period. Molds, which were used to make the majority of Classic period figurines, did not appear until sometime during the Late Tlamimilolpa phase, meaning that many if not most Tlamimilolpa-phase figurines continued to be made by hand. Finally, grouping two phases at a time was a

strategic decision that facilitated a more careful diachronic analysis with collections of artifacts that were heavily damaged, and could typically be placed in the appropriate period, but not always in a specific phase.

The Early Classic period was when many of the different functional classes common in the Classic period started to differentiate. Articulated figurines were present by Tlamimilolpa, and early handmade versions of warrior, half-conical, and masked figurines started to appear as well. The diversification of figurine types coincided with the disappearance of other types, such as nude female and pregnant torsos. Some elements of Early Classic and Classic Teotihuacan figurines had roots in the Tzacualli phase, such as certain headdresses and jewelry, but it was not until the Early Classic that many of the standard types and functional classes appeared. We can therefore point to this period as the time when certain elements of Teotihuacan ritual practice and the ideological system that supported it solidified. That is not to say that ritual practice and the broader ideological system did not undergo change in the roughly 400 years between the start of the Early Classic and the collapse of Teotihuacan, only that the Early Classic was a pivotal period for the development of many aspects of Teotihuacan culture and ideology, including the figurine tradition.

Head Shape and Style

The shape and size of Miccaotli heads varied, but a fairly high degree of consistency can be seen in terms of facial features, headdress styles, jewelry, and the overall effect created by the combination of these attributes (Figs. 6.10-11). Conical

heads were not uncommon during this phase, but the majority of Miccaotli heads were rather flat, and oblong or rounded in shape with little to no chin or prognathism. Many heads with headdresses maintained the appearance of an oblong shape, however they flared towards the crown in order to help the headdresses adhere. Eyes and mouths were parallel, horizontal slits formed by simple impressions, and noses were frequently small appliques that were smoothed into the clay of the cheeks and forehead, leaving a small protrusion. At Teotihuacan, there were also several irregular head shapes with Miccaotli facial features, including "elongated" and "heart" heads (Fig. 6.11).



Figure 6.10: Miccaotli heads from Axotlan, Cerro Portezuelo, Huixtoco, and Teotihuacan



Figure 6.11: Miccaotli irregular head shapes from Teotihuacan

Miccaotli-style figurines are immediately recognizable as such and give the appearance of being rather uniform, however within the Miccaotli sample at Teotihuacan there was in fact a rather large degree of variation in terms of head shape and size. Many of the Miccaotli heads found in rural sites appeared different in terms of their dimensions,

but were in fact well within the scope of variation in the urban sample. While many Miccaotli figurines seem to be approaching a fairly narrow standard, it does not seem to have been a well-controlled one. I interpret the simultaneous similarity in facial features and variability in size as the result of many different artisans (potentially even in different sites) attempting to adhere to the same style. Conformity in appearance was valued, but size and shape did not need to adhere to a convention.



Figure 6.12: Miccaotli (left, center) and Tlamimilolpa (right) figurines from the Teotihuacan site museum

Tlamimilolpa-style heads were quite similar to their Miccaotli predecessors in many respects, but there were some subtle differences that help to distinguish the two. Tlamimilolpa faces included more details, particularly around the eyes and mouth. The slit impressions that form the eyes tended to be a little deeper and wider, and the appearance of eyelids and brows was made by scraping and pushing the wet clay up and away from the eyes (Figs. 6.13-14). Similarly, the mouth frequently had more detail in the form of modeled lips and a more deeply carved incision. Noses were also more naturalistic in their shape and the attention to detail. Conical, rounded heads increased in

proportion during this phase, although some irregular shapes continued, including the "heart-shaped" and "elongated" heads (Figs. 6.12, 6.14).



Figure 6.13: Tlamimilolpa heads from Teotihuacan



Figure 6.14: Tlamimilolpa irregular head shape

Figurine Types and Body Position

In the Early Classic assemblages simple seated figurines were slightly more common than their standing counterparts, unless standing figurines with supports are also included, in which case standing figurines were more common (Table 6.28). Close to two-thirds of the body fragments from this period were too fragmented to discern whether they were seated or standing, which tells us that the ratios of seated and standing figurines at each site are tentative; more complete figurines may yield different ratios of

body positions. Back-bending figurines occurred only at Teotihuacan, and there were only two examples of them.

Table 6.28: Bodily Positions of Early Classic Torsos by Site

Period	Site	Back-bending	Seated	Standing	Standing, support	Unknown	Total
Early Classic	AXT		10 26%	5 13%	5 13%	18 47%	38 100%
	CPZ		2 17%	1 8%	3 25%	6 50%	12 100%
	TEO	2 1%	92 26%	78 22%	23 6%	164 46%	359 100%

The two most common figurine types during the Miccaotli and Early Tlamimilolpa phases were flat and conical figurines that wore clothing that indexed feminine and masculine identities. One of these types were figures covered in both a *quechquemilt* and skirt or *huipil*. In the flat versions of this type, sometimes the clay of the clothing alone formed the body of the figurine, as can be seen in some of the examples from Axotlan, Cerro Portezuelo, and Teotihuacan (Figs. 6.16-18). In the conical versions of the same type, a conical body was "dressed" in thin slabs of clay that formed the clothing—frequently the shapes of the underlying limbs were still visible. Hands and feet emerged from beneath the garments in many examples, or arms crossed the torso beneath the hem of the *quechquemilt*.

Of the figurines clothed in the *huipil* and *quechquemilt* for which it was possible to determine the body positions, the ratio of seated to standing figurines was relatively similar between Axotlan and Teotihuacan (Table 6.29). At both sites seated figurines

made up about a quarter to a third of the total count, and standing figurines accounted for two-thirds to three-quarters of the count. The assemblages diverged, however, in the ratio of simple standing to figurines with a standing support. Simple standing figurines wearing *huipils* and *quechquemitls* were far more common than those with supports at Teotihuacan, whereas at Axotlan the number of figurines with a support was double that of the simple standing versions. Of course, the numbers at Axotlan were much smaller, so this perceived difference is tentative.

Table 6.29: Position of Early Classic Figurines Wearing *Huipils* and *Quechquemitls*

Site	Seated	Standing	Standing, support	Total	Unknown	Grand Total
AXT	3 25%	3 25%	6 50%	12 100%	13	25
CPZ		1 50%	1 50%	2 100%	4	6
TEO	34 32%	54 50%	19 18%	107 100%	96	203

The other common Early Classic type of figurine was a conical body that sometimes appeared without clothing, but in other cases appliqued balls, feathers, and loincloths were present, or the limbs bore incised patterns no doubt meant to represent clothing (see Fig. 6.12). Many of these figurines do not seem to have worn as much jewelry as the figures dressed in *quechquemitls* and *huipils*. These figurines were also produced in seated and standing versions. In both Axotlan and Teotihuacan, standing versions of these figurines were more numerous than their seated counterparts when standing figurines with back supports are included. However, of the standing figurines,

simple standing versions were much more common than versions with a standing support. In fact, standing supports were much more common on the figurines that wore *quechquemitls* and *huipils*.

Table 6.30: Position of Early Classic Figurines Wearing Masculine Clothing (Loincloths, Belts, App. Balls)

Site	Seated	Standing	Standing, support	Total	Unknown	Grand Total
AXT	2 29%	3 43%	2 29%	7 100%	3	10
CPZ			1 100%	1 100%		1
TEO	10 42%	10 42%	4 17%	24 100%	27	51



Figure 6.15: Miccaotli style figurines from Axotlan



Figure 6.16: Miccaotli style figurines from Cerro Portezuelo



Figure 6.17: Miccaotli figurines from Teotihuacan

Prototypical forms of articulated, half-conical, and warrior figurines began to appear during the Early Classic, but were mostly restricted to Teotihuacan (Table 6.31). Three simple handmade versions of what appeared to be half-conicals were found in the TMP assemblage, as well as one potential example at Axotlan (Fig. 6.18). Three handmade bound torsos were also found, and appear to date to the Miccaotli phase or Early Tlamimilolpa (Fig. 6.19). Several back-bending torsos and a ball player type were also found at Teotihuacan, and these types seem to have been discontinued after this period (Fig. 6.20). Finally, there were a number of handmade bald heads and nude torsos that appeared reminiscent of warrior figurines (Fig. 6.21). I did not find any evidence of early handmade versions of enthroned or fat god types in the sample.

Table 6.31: Totals of Early Classic Figurines by Site

Period	Site	Articulated	Back-bending	Ball Player	Bound	Half-conical	Warrior	Conical	Flat	Total
Early Classic	AXT					1		22	107	130
	CPZ							10	18	28
	HXT			1					4	4
	TEO	35	3		3	3	32	347	596	1017



Figure 6.18: Potential early half-conicals from Axotlan (left) and Teotihuacan (three right)



Figure 6.19: Bound figurines from Teotihuacan



Figure 6.20: Ball player and back-bending figurines from Teotihuacan



Figure 6.21: Potential Early Classic Warrior prototypes

Personal Adornment

Adding pigment was a common post-firing method of decoration on many Early Classic figurines. Some fragments still had traces of red and yellow paint, however there was evidence of pigment at only Teotihuacan and Axotlan. Of the 1180 Early Classic fragments analyzed during this study, a total of 50 or 4% of the sample still had traces of paint. Traces of pigment occurred on 17% of fragments at Axotlan, and only 3% of fragments at Teotihuacan. The significantly higher rate of pigment at Axotlan was likely due to the better state of preservation that the assemblage is in.

Early Classic figurines had more frequent and ostentatious jewelry than in any of the previous periods. The number of figurines per site with jewelry increased, as did the

amount of jewelry worn by individual figurines. Collars continued to be the single most popular type of jewelry in every assemblage, and the number of collars on each figurine increased on average (Tables 6.32-33). In the Early Classic, the number of double collars were nearly equal to or in excess of the number of single collars at each site, and triple collars became more popular as well. Triple collars were found in Axotlan, Cerro Portezuelo, and Teotihuacan, and triple collars even exceeded the number of single collars by a small margin at Axotlan.

Beaded collars decreased in popularity during this period as did bracelets, although neither disappeared entirely. Earspools increased in frequency at both Axotlan and Teotihuacan, but dipped at Cerro Portezuelo possibly due to a lower total count of figurines during this period. Teotihuacan had the highest count yet lowest rate of jewelry out of the four sites, most likely because of worse preservation in the TMP collection, but also because the calculations below count all body parts, many of which are partial limbs or broken torsos. The relatively modest rates of figurine fragments with jewelry are not to be understood as the rate of figurines that would have worn jewelry—that number is surely much higher. Instead this number serves as a gauge of the general trend of increasing jewelry on figurines over time.

Table 6.32 Number of Collars on Early Classic Figurines by Site

Period	Site	1 collar	2 collars	3+ collars	Unknown	Total
Early Classic	AXT	5	17	7	90	130
	CPZ	6	2	1	19	28
	HXT	1	2		1	4
	TEO	73	72	26	790	1018

Table 6.33: Counts and Types of Jewelry on Early Classic Figurines by Site

Period	Site	Simple		Beaded		Total Jewelry	Fragments with Jewelry	Total Fragments	% Fragments with Jewelry
		Collars	Collar	Bracelet	Earspools				
Early Classic	AXT	29		4	19	52	40	130	31%
		56%		8%	37%	100%			
	CPZ	9	1		2	12	9	28	32%
		75%	8%		17%	100%			
HXT	3			2	5	3	4	75%	
	60%			40%	100%				
TEO	171	3	10	64	248	228	1018	22%	
	69%	1%	4%	26%	100%				

Clothing

Similar to jewelry, the rate of clothing dramatically increased during the Early Classic. The rate of fragments with traces of clothing at Axotlan, Cerro Portezuelo, and Teotihuacan was double the Terminal Formative rate at each site. Almost half of the Early Classic fragments at Axotlan bore traces of clothing, and around a third of the fragments at Cerro Portezuelo and Teotihuacan were clothed. The clothing types that were newly introduced in Teotihuacan during the Terminal Formative—*quechquemits* and *huipils*—dramatically increased in numbers and spread to additional sites; *quechquemits* and *huipils* were found on figurines in Axotlan, Cerro Portezuelo, and Teotihuacan during the Early Classic. Indeed, figurines wearing one or both items of clothing were the most common of the clothed varieties in the Early Classic assemblages at these three sites. Interestingly, neither Axotlan nor Cerro Portezuelo had any types of clothing that were not also found at Teotihuacan, and in all but one instance (Applied Feathers) clothing types that appeared at multiple sites were more common at

Teotihuacan. There were also multiple clothing items and combinations present at Teotihuacan that were not found in any of the rural assemblages.

Table 6.34: Count of Clothing Types and Combinations on Early Classic Figurines by Site

Period	Site	Applied		Applied		Applied		Tied		Tied		Huijil		Huijil		Unknown	
		Balls	Pads	Feathers	Belt	Belt	Belt	Skirt	Pads	Belt	Simple	Fancy	Huijil	Belt	Quechqemiti	Huijil	Quechqemiti
Early Classic	AXT	2	1	2	2											10	2
	CPZ				1											5	
	TEO	8	3	1	19	1	2	1	4	2	104	9	9	17	71		9

Table 6.35: Proportion of Clothed Early Classic Figurines by Site (no heads included)

Period	Site	Total		Total	% Clothed
		Clothed Figurines	No Clothing		
Early Classic	AXT	34	38	72	47%
	CPZ	7	15	22	32%
	TEO	251	388	643	39%

Headdresses

Headdresses were common in the Early Classic at all sites, and for the larger assemblages at Axotlan and Teotihuacan, headdresses occurred at a rate of around 50%—the Axotlan assemblage was better preserved and has a slightly higher rate than Teotihuacan (Table 6.36). Caps, which were the smallest form of headdress, dwindled in popularity during the Early Classic period, and the most common types were larger styles of headdresses such as Wide Bands and turbans, in that order. Wide Band headdresses were found at all sites but Cerro Portezuelo (which had few Early Classic heads), indicating an increased spatial distribution of this type outside of Teotihuacan. In fact, Wide Band headdresses made up half of the Early Classic headdresses at Axotlan, which was the highest rate out of all the sites including Teotihuacan. The spread of Wide Band headdresses to other sites during the Early Classic can be interpreted as an instance of diffusion from the core to the rural periphery.

Table 6.36 Counts and Types of Headdresses on Early Classic Figurines by Site

Period	Site	Cap	Small	Large	Wide	Unknown		Total	Total	%
			turban	turban	Band	Other	type-broken			
Early Classic	AXT	1	4	1	17	2	9	34	64	53%
	CPZ		2				2	4	6	67%
	HXT				1		2	3	4	75%
	TEO	7	12	7	44	7	78	155	379	41%

Headdresses with one design element (in addition to the base of the headdress) were classified as simple, two elements as moderately extravagant, and three or more elements as extravagant (Table 6.37, Fig. 6.22). In this system, Wide Band headdresses were considered simple because the only additional ornamentation was the single applique in the middle. Caps with two additional design elements such as feathers, rings, cords, or tassels were moderate. Headdresses that combined three or more of such additional design elements were considered extravagant. The majority of the headdresses from this period were simple in design, although there were multiple moderate and extravagant headdresses at Teotihuacan, and one of each at Axotlan.



Figure 6.22: Simple, Moderate, and Extravagant headdresses from Axotlan (left and right) and Teotihuacan (two center)

Table 6.37: Extravagance of Early Classic Period Headdresses by Site

Period	Site	Simple	Moderate	Extravagant	Unknown	Total
Early Classic	AXT	6	1	1	13	21
	CPZ					
	HXT	1			1	2
	TEO	56	14	5	80	155

Summary

There was widespread acceptance of Teotihuacan figurine styles in the rural sites during the Early Classic, which is potentially indicative of the acceptance of other, less tangible things emanating from the core. Middle, Late, and Terminal Formative figurines had never worn as much clothing as did figurines in the Early Classic, and this appears to have been an innovation of figurine makers at Teotihuacan.

During the Early Classic, many stylistic elements of the Teotihuacan figurine canon emerged, solidified, and spread to rural sites in the region. Although figurine clothing conventions at Teotihuacan filtered out to rural sites, the rural sites did not exhibit the same degree of diversity in clothing styles as the urban core, nor did they have evidence of local innovations or styles that were not also represented at the core. Personal ornamentation was also observed to escalate in all of the sites.

The Early Classic figurines at Axotlan resembled their Teotihuacan counterparts to such an extent that they may have been products of the city, or faithful local replicas. Conversely, the examples of Early Classic figurines recovered from Cerro Portezuelo appeared slightly different than their peers at Axotlan and Teotihuacan, as if they were of an inferior quality. They wore less jewelry, and the necklaces lacked the two converging diagonal incisions common on Miccaotli figurines elsewhere. Furthermore, no conical

versions of clothed women were recovered—only the flat ones. It is possible that these were local copies of Miccaotli figurines from Teotihuacan rather than imports, in which case the extent of cultural influence and ideological intrusion may have been quite high if rural figurine makers were attempting to emulate core styles.

Classic

Early Classic innovations in personal dress and ornamentation set the stage for the Classic period Teotihuacan figurine tradition. The Classic period was when many of the well-known mold made figurine types such as half-conicals, warriors, articulated, and enthroned figurines were made popular. Figurine types that had been popular in the Early Classic, namely the clothed woman, persisted in the Classic period, although in significantly reduced numbers.

The Classic period included the Xolalpan (Early ca. 350-450 CE; Late 450-550 CE) and Metepec (ca. 550-650 CE) ceramic phases, and was defined by the use of mold technology in the production of a range of ceramics, including figurines. Classic period figurine types were variable in terms of their stylistic attributes and the amount of adornment and attention to detail. Some types, such as warrior figurines, were austere in their simplicity, while others, such as enthroned figurines, were extremely elaborate in their composition. And still others, such as articulated and half-conical figurines, were variable in terms of personal adornment.

Head Shape and Style

The faces of many Classic figurines wore a neutral expression. Eyes became increasingly hooded during the Classic period, frequently with defined brows. Noses were defined and often quite wide through the bridge and nostrils, and mouths were similarly well defined, with full lips that were either pressed together or slightly parted. As is evident in Figure 6.23, heads took a variety of shapes and sizes—some had rounded faces and chins while other had longer faces, and still other had triangular faces or heart-shaped heads. There have not been enough studies of complete or nearly-complete figurines to be able to say for sure which heads paired with which bodies, and it has been noted that there was more variety in heads than torsos (Scott 2001). This is an area of study needing further research.



Figure 6.23: Classic period heads from the TMP

Body Position

Most figurines from this period were in the standing position (with or without a support) (Table 6.38). The rate of seated figurines declined drastically in this period at all sites, no doubt because of the reliance on mold technology. Figurines with standing supports were very common at Axotlan and Cerro Portezuelo, and even Huixtoco had a standing figurine with a support despite its exceedingly low count. Standing supports

were less common at Teotihuacan, however this may be due to preservation issues.

Figurine types that were observed to have standing supports at Axotlan, Cerro Portezuelo, and Teotihuacan included standing women, enthroned, and "fat god" figurines. Half-conicals with handles were only found at Teotihuacan (see Chapter 5). The "moving" body position was restricted to articulated figurines.

Table 6.38: Bodily Positions for Classic Period Torsos by Site

Period	Site	Kneeling	Moving	Seated	Standing	Stand, support	Unknown	Total
Classic	AXT	2 4%	7 13%	1 2%	15 27%	22 39%	9 16%	56 100%
	CPZ		1 10%		2 20%	6 60%	1 10%	10 100%
	HXT			1 33%		1 33%	1 33%	3 100%
	TEO	4 1%	156 28%	15 3%	255 46%	34 6%	95 17%	559 100%

A total of six kneeling figurines were found (two at Axotlan, and four at Teotihuacan), which appear to have been a new position in this period. In contrast to the relatively convex shape of the front of half-conicals, kneeling figurines had protrusions in the front near the base that suggest the presence of flexed knees folded under a garment. Kneeling figurines appear to have been women given that they were dressed in a *huipil* and *quechquemitl*.

Distribution and Stylistic Variation Within Classic Figurine Types

The distribution and variations in quality, style, and subject matter of Teotihuacan Classic period figurine types across the region allow us to ascertain the degree of ideological penetration of Teotihuacan beliefs and practices into the rural sites. Table 6.39 indicates the total counts and relative proportions of the well-defined figurine types found in the four site assemblages.

Table 6.39 Totals of Classic Figurine Types by Site (all fragments)

Period	Site	Articulated	Bound	Enthroned	Fat God	Half-conical	Warrior	Conical	Flat	Mold	Total
Classic	AXT	36 21%	3 2%	15 9%	8 5%	14 8%	9 5%	47 27%	41 24%		173 100%
	CPZ	5 14%	1 3%		2 6%		2 6%	14 39%	11 31%		36 100%
	HXT	4 33%		1 8%				2 17%	5 42%		12 100%
	TEO	1392 51%	4 0.1%	8 0.3%	6 0.2%	96 3.5%	305 11%	585 21%	343 13%	4 0.1%	2743 100%

Articulated

Articulated figurines occurred at every site under investigation, and the rate was by far the highest at Teotihuacan (51%). The rate of articulated figurines at Axotlan (21%) was less than half the rate at Teotihuacan. Furthermore, several of the Axotlan articulated figurine torsos diverged stylistically from Teotihuacan counterparts (Fig. 6.25). In Teotihuacan, articulated torsos were rather simple in their decorative scheme (see Chapter 5), whereas four of the torsos from Axotlan had deeply incised belts and lines on their chest. At Teotihuacan, the incised (or impressed) lines on the chest were invariably arranged in an inverted V shape. Some of the Axotlan articulated figurines

exhibited the same pattern, however, two of the examples had flipped the orientation of the lines on the chest, which occurred in a true V shape (shown below). Instead of giving the appearance of physical features, it produced an almost clothing-like effect, except that two of them also had circular protrusions and indentations on the chest that resembled nipples. One of the 'belts' had additional ornamentation in the form of impressed circles, which is a decorative element never seen on articulated torsos at Teotihuacan. Finally, the general shape of several of the Axotlan torsos differed from the normal shape at Teotihuacan, where articulated figurines typically had broad shoulders and dramatically narrow waists. Three articulated torsos at Axotlan resembled the Teotihuacan articulated style, whereas four other differed in several respects from the Teotihuacan norm (Fig. 6.24).

For the four torsos that diverged in terms of style and shape from the Teotihuacan examples, they were in fact quite similar to contemporary articulated figurines produced at Azcapotzalco (Von Winning 1958). Azcapotzalco was the second largest center in the Basin of Mexico during the Teotihuacan period, and was a known producer of ceramics during this time (Nichols et al. 2013; Nichols 2016). The ceramics it produced were quite similar to Teotihuacan wares, leading many to believe that it was a regional center subordinate to Teotihuacan. Given that the Axotlan assemblage contains articulated figurines similar to examples produced both at Teotihuacan and Azcapotzalco indicates that the site had economic and social ties to multiple sites within the Teotihuacan state.

Only articulated limbs were found in the Huixtoco assemblage, although they were within the range of variation at Teotihuacan in terms of size and shape. At Cerro

Portezuelo, one torso and four articulated limbs were found in the assemblage, all of which with very similar to urban counterparts (Fig. 6.25) . The relative rates for articulated figurines were lower at both sites than the rate at Teotihuacan, although the overall sample sizes were quite low.



Figure 6.24: Articulated figurine torsos from Axotlan



Figure 6.25: Articulated torsos from Cerro Portezuelo (left) and Teotihuacan (center, right)

Bound

Bound figurines occurred at Axotlan, Cerro Portezuelo, and Teotihuacan, but in very low numbers (Fig. 6.26). The bound figurine examples from Teotihuacan and Cerro Portezuelo had horizontal bands running along the restraints, indicating the presence of multiple cords or ropes. The Axotlan examples were larger than those from other sites, and they diverged in the sense that the restraints binding the Axotlan figurines were

decorated with a crosshatched woven pattern and were more elaborate than those from other sites.

The meaning of bound figurines is not entirely clear, but the restraints certainly reference the idea of a captive, or perhaps a sacrificial victim, and may index military or related ritual activities. Similarly shaped obsidian eccentrics have been described by Carballo (2007b), which he linked to Teotihuacan's martial ideology and materialized manifestations of state power. It should also be mentioned that actual bound sacrificial victims have been found in association with several of the major monuments at Teotihuacan (White et al. 2002; Sugiyama 2005; Sugiyama and López Luján 2007). Furthermore, the CDD workshop apparently produced bound figurines (Sugiyama 2002). Bound figurines were not among the more numerous figurine types at any of the sites, yet there is a strong connection between this type and expressions of Teotihuacan's institutional power. The presence of bound figurines in two of the three rural assemblages may indicate that these sites were receiving specific messages about their place in the political hierarchy of the Basin of Mexico. Conversely, the stylistic elaboration on the bound figurines from Axotlan indicate that they likely were not receiving these figurines directly from Teotihuacan.



Figure 6.26: Bound torsos from Axotlan (left), Cerro Portezuelo (middle), Teotihuacan (right)

Fat Gods

The 'fat god' type is described elsewhere, and I retain usage of the term for the sake of consistency even though I am dubious about whether it is a representation of a divine figurine. It is also described by some as a 'corpulent torso' type (e.g. Scott 2001), or a warrior (Kubler 1967). They were found in low numbers in Teotihuacan (n=6), Axotlan (n=8), and Cerro Portezuelo (n=2), and in terms of relative proportions this type was much more common at Axotlan than at Teotihuacan. The examples from Cerro Portezuelo and Teotihuacan were the most stylistically similar—each wore a simple loincloth and had a protruding belly and evidence of a collar, but they were not elaborate by any means (Fig. 6.27). The examples from Axotlan bore extra decorative elements such as added detail on the loincloths, extra bands around the stomach, and punctilation on the appendages. It is possible that these were not all examples of the same type, although the consistency in subject matter (body shape, position, and clothing style) argues against this idea. The Axotlan examples were made from different molds yet they were both stylistically coherent, and different enough in details from from any examples at Teotihuacan or Cerro Portezuelo that they may have been locally made products.



Figure 6.27: 'Fat God' torsos from Axotlan (left), Cerro Portezuelo (middle), and Teotihuacan (two right)

Enthroned

Enthroned figurines were found in extremely low numbers in the Teotihuacan assemblage, but in comparatively high numbers at Axotlan. The Axotlan collection had triple the number of enthroned figurines at Teotihuacan, and in a much smaller collection, which may reflect differences in use patterns between these two sites. The fifteen fragments of Classic period enthroned figurines from Axotlan were in keeping with the stylistic precedents of Teotihuacan versions, both from the current study and from the TMP Type Collection (Fig. 6.28-29). Most of the examples from Teotihuacan were wearing a tunic with a segmented pattern resembling woven material (Fig. 6.29). The enthroned figurines at Axotlan displayed both this type of tunic, as well as a plain one.

The supposed absence of images of rulers from Teotihuacan art is one of the challenges we face in reconstructing its political structure. Yet the imagery of a figure that is seated on a raised platform (or throne) is a symbol of power in many cultures, and enthroned figurines have been tentatively interpreted as depictions of rulers (Garcia Chavez—personal communication). When that is combined with the elaborate headdress and personal ornamentation present on figurines of this type (Fig. 6.30), the interpretation of these figures as important individuals or even rulers seems plausible. If enthroned figurines indexed political power, it is interesting that they should be found in higher numbers at a provincial center rather than the core. In fact, this finding lends support to the idea that they were connected to political power—it would be fitting that certain symbols of imperial power would be emphasized in the provinces. In rural sites where imperial power could not be communicated by the imposing edifices of the civic-

ceremonial core, easily transportable images of leaders and rulers may have served to communicate the authority of Teotihuacan even at a distance.



Figure 6.28: Enthroned figurines from Axotlan



Figure 6.29: Enthroned figurines from Teotihuacan (current study left) and the TMP Type Collection (three right)



Figure 6.30: Enthroned figurine (left) and mold (right) from the National Museum of Anthropology in Mexico City

Half-conicals

Half-conicals were common at both Teotihuacan and Axotlan. The half-conicals recovered from Axotlan closely resembled their urban counterparts. There was variation in size and the shape of the profile, but overall they fell within the range of shapes and sizes observed at Teotihuacan. The same was true of their clothing and jewelry. The belted tunic and cape outfit common at Teotihuacan was reproduced at Axotlan, and the jewelry consisted of beaded collars and large pendants or pectorals, similar to the core. The pendant motifs at Axotlan reproduced core styles (see Chapter 5); Motifs 2 and 4 were found in the assemblage, and there were multiple examples of Motif 4 (Fig 6.31, left).

No half-conicals were found at Cerro Portezuelo or Huixtoco during my analysis, however according to the list of Cerro Portezuelo figurines sent to MURR for INAA (Nichols et al 2013; <http://archaeometry.missouri.edu/datasets/datasets.html>) the assemblage originally included three half-conicals. I was only able to locate a photo of one of the Cerro Portezuelo half-conicals (Fig. 6.31, center), which appears similar in size and style to urban examples. The pendant also matches Motif 4, similar to contemporary examples at Teotihuacan and Axotlan.



Figure 6.31: Half-conicals from Axotlan (left), Cerro Portezuelo (center), and Teotihuacan (right)

Warriors

Warrior figurines were found at all sites except for Huixtoco. Only two fragments were found in the Cerro Portezuelo assemblage though, both of them body parts and potentially from the same figurine (Fig. 6.32). Nine warrior fragments were found at Axotlan, and they could have come from as few as three complete warrior figurines. Their rate of occurrence was quite low compared to Teotihuacan and also when compared to the other Classic styles that were well represented at Axotlan such as enthroned and half-conicals.



Figure 6.32: Warrior figurine fragments from Axotlan (left, center) and Cerro Portezuelo (right)

Personal Adornment

The trend towards increasingly elaborate jewelry continued during the Classic period. Triple collars were the most common during the Classic period, and were numerically more frequent than single and double collars across the Basin (although Huixtoco only had one example of each type) (Table 6.40). The rate of jewelry at Axotlan remained consistent with Early Classic levels, but the rates dipped somewhat at both Cerro Portezuelo and Teotihuacan (Table 6.41). Warriors became a common figurine type during this period, which deflated the rate of jewelry somewhat. Furthermore, the majority of fragments from the TMP assemblage during this period were limbs and frequently without jewelry, which similarly deflated the rate of jewelry. If limbs and warrior figurines are left out of the equation, the rate of jewelry rises to 50%. Given the increasing instances and ornateness of jewelry on other types of figurines, I do not believe there was in fact a decline in jewelry wearing amongst Classic period figurines at Teotihuacan. Many still wore jewelry and increasing amounts of it.

Table 6.40: Number of Collars on Classic Figurines by Site

Period	Site	1 collar	2 collars	3+ collars	Unknown	Total
Classic	AXT	7	12	23	118	176
	CPZ	1		4	28	36
	HXT	1	1	1	7	12
	TEO	34	47	112	2440	2743

Table 6.41: Counts and Types of Jewelry on Classic Figurines by Site

Period	Site	Jewelry				Total Jewelry	Total		
		Simple Collars	Beaded Collar	Bracelet	Earspools		Fragments with Jewelry	Total Fragments	% Fragments with Jewelry
Classic	AXT	42 56%	4 5%	4 5%	25 33%	75 100%	58	176	33%
	CPZ	5 50%	2 20%	0 0%	3 30%	10 100%	8	36	22%
	HXT	3 50%			3 50%	6 100%	5	12	42%
	TEO	193 53%	44 12%	46 13%	78 22%	361 100%	303	2743	11%

Pendants became a common addition to necklaces during the Classic period. They ranged from the simple and singular disks worn by many half-conicals to multiple and elaborate pieces. Figure 6.33 shows Classic period figurines from Teotihuacan wearing multiple collars; one of which is adorned with five skulls (left), and an articulated torso with less extravagant pendants (right).



Figure 6.33: TMP figurines with pendants

Headdresses

Three-quarter of figurine head fragments wore headdresses at Axotlan. The rate at Cerro Portezuelo dipped to 50%, while at Huixtoco it rose to 100%, although the counts were quite low at both sites. The rate at Teotihuacan did not change between the Early Classic and Classic, but held steady at 41% (Table 6.42). Wide Band headdresses decreased in popularity during the Classic and I only found five molded examples, all of which were restricted to Teotihuacan. Turbans were still present, but the overwhelming favorites during this period were caps of varying degrees of ostentation.

Similar to clothing and jewelry, headdresses also followed the trend of increasing extravagance over time. The majority of headdresses from this period were highly fragmented, preventing a typological classification of them; the use of molds, which facilitated creating large, complex headdresses, also produced thin and easily breakable ones. Fortunately, many pieces were large enough to allow classification of their degree of extravagance. Headdresses with one design element were classified as simple, two elements as moderately extravagant, and three or more elements as extravagant. The majority of headdresses from this period were of moderate or high extravagance (Table 6.43). Moderately extravagant headdresses were found in the Axotlan, Huixtoco, and Teotihuacan assemblages, and extravagant headdresses made up the majority in all sites.

Table 6.42: Counts and Types of Headdresses on Classic Figurines by Site

Period	Site	Cap	Small turban	Large turban	Wide Band	Other	Unknown type-broken	Total Headdresses	Total Fragments	% Headdresses
Classic	AXT	11	3	2		1	9	26	33	79%
	CPZ	3						3	6	50%
	HXT	2		1				3	3	100%
	TEO	52	11	14	5	3	49	134	329	41%

Table 6.43: Extravagance of Classic Period Headdresses by Site

Period	Site	Simple	Moderate	Extravagant	Unknown	Total
Classic	AXT		6	10	10	26
	CPZ			2	1	3
	HXT		1	1	1	3
	TEO	11	22	38	63	134

The individual elements of headdresses were also recorded whenever possible. These elements included feathers, tassels, bars, rings, cords, vertical appliques, crosshatching, segmentation, punctilation, animals, skulls, chin straps, diadems, and wavy lines motifs (Table 6.44). Unsurprisingly, all elements were better represented at Teotihuacan than at other sites. Axotlan, however, did yield headdresses with a wide range of the usual Teotihuacan elements. No new elements were found on figurines from the rural assemblages, indicating that there was not a high degree of elaboration on Teotihuacan headdress styles in the rural sites; any headdress element at a rural site was also represented in the urban sample, and in higher numbers.

Table 6.44: Counts of Classic Period Headdress Elements by Site

Site	Chin											Vertical		Wavy Lines
	Animals	Bars	Strap	Cords	Crosshatch	Diadem	Feathers	Punctuation	Rings	Segmented	Skulls	Tassels	App.	
AXT	2	5		2	3	1	8	2	2	4		1		1
CPZ	2						1							
HXT		1						1						
TEO	6	49	1	32	11	8	30	4	4	27	2	6	5	18

Classic period headdresses were diverse, and many of the headdresses were too fragmentary to facilitate the creation of a headdress typology. Geometric elements such as horizontal and vertical bars were the most commonly used elements in Classic period headdresses, and were frequently paired together (Fig. 6.34). The second most common element was feathers (Figs. 6.35-37, 6.39). Figures 6.34 to 6.41 show examples of Classic headdresses from Teotihuacan and the rural sites.



Figure 6.34: TMP headdresses with geometric decoration: bars, vertical appliques, segmentation, and wavy lines



Figure 6.35: TMP headdresses with feathers in horizontal, asymmetrical, and vertical orientations



Figure 6.36: TMP headdresses with animal elements



Figure 6.37: TMP headdress with tassels



Figure 6.38: TMP headdresses with punctilation



Figure 6.39: Axotlan Classic period headdresses (note the presence of tassels on the middle headdress)



Figure 6.40: Cerro Portezuelo Classic period headdresses—the two on the right are quite similar but from different molds



Figure 6.41: Huixtoco Classic period headdresses

Two of the Classic period heads at Huixtoco were noticeably different from Teotihuacan figurine styles (Fig. 6.42). These two heads were mold made and at least one of them resembled a standard warrior figurine head. The departure from standard conventions involved adding hand-modeled jewelry to the head in the form of earspools and collars. In Teotihuacan, figurines could combine handmade and molded parts—the

most common examples of this being articulated and warrior figurines that had molded heads (and torsos in the case of articulated) and handmade bodies or limbs—but there was no evidence of adding handmade jewelry to molded heads in the over 2400 Classic period fragments I analyzed from the TMP, 329 of which were head and headdress fragments. The unusual combination of mold made heads with handmade jewelry (and headdresses in at least one of the cases) being found twice in the same site but not at the core strongly suggests an origin for these figurines outside of Teotihuacan. The faces are very similar to Teotihuacan figurines and the molds may have originated in the city, but the final products likely did not. Perhaps they were made at Huixtoco, or a nearby site in the region. The strong resemblance of the head on the right to a typical warrior figurine compounds the uniqueness of this figurine, since that types was never given jewelry in any of the other sites. This seems to be a possible case of hybridity, where the maker was interested in emulating certain aspects of Teotihuacan styles, but in the end combined elements that typically never occurred together.



Figure 6.42: Unusual heads from Huixtoco combining molded and handmade elements

Tassel Headdress

The recurrence of one headdress element in several sites and in other art media suggests that this form may have been an important and widely recognized headdress type. Tassels appeared on several Classic period headdresses at Teotihuacan (Fig. 6.37) and Axotlan (Fig. 6.39), and potentially at Huixtoco as well (Fig. 6.41). Furthermore, the Tassel Headdress appeared in multiple contexts at Teotihuacan, and has been described elsewhere (Millon 1973, 1988; Taube 2000; Scott 2001). The headdresses varied somewhat in the exact composition, but they typically featured at least three or four registers of decoration. In an example from a mural at Techinantitla (Fig. 6.43), there were five registers on the main body of the headdress. The bottom register contained flower emblems, followed by a register of concentric rings, then by the register containing the actual tassels, which was topped by a scalloped design, and finally a plume of feathers. There were additional feathers and a ribbon hanging off the back of the headdress.

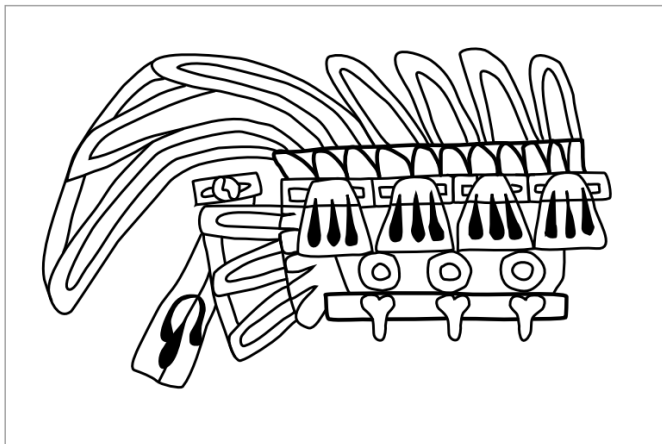


Figure 6.43: Drawing of Tassel Headdress from Techinantitla mural (drawing by author)

Headdresses seem to have communicated a great deal of information. In fact, beyond being markers of status, some may have referenced particular individuals, or the social roles filled by those individuals at the very least. In his discussion of a writing system at Teotihuacan, Taube (2000: 6) draws attention to two likely glyphs painted on conch shells, which were pictures of headdresses with affixed numerical coefficients. In a mural at Techinantitla, a figure in full ceremonial costume including a Tassel Headdress was pictured next to a glyph of a similar yet slightly different Tassel Headdress, paired with Tlaloc goggles (Taube 2000: 10). On another section of mural from the same compound, a single tassel was used as a glyph in its own right. And the Tassel Headdress has also appeared on ceramic vessels both inside and outside of Teotihuacan (Taube 2000: 12; Linne 1942: Fig. 128). On one of these ceramics—a bowl from the site of Las Colinas in Tlaxcala—the Tassel Headdress appeared twice: once as a disembodied glyph, and again being worn by the leader of a military ceremonial procession. Clara Millon (1988) has detailed the associations between the Tassel Headdress with religious and military authority and has found that the headdress was typically associated with Tlaloc imagery and military symbolism.

The appearance of the Tassel Headdress in multiple contexts, media, and areas of Teotihuacan suggest it was an important symbol or marker of political and/or religious power in Teotihuacan, and perhaps even more distant areas. Furthermore, the Tassel Headdress has been found on portable objects and carved stelae as far away as Oaxaca and Guatemala. Figures were shown wearing the Tassel Headdress on Stela 32 at Tikal and Stela 11 at nearby Yaxhá (Fig. 6.44) (Millon 1988: 127-128). Clara Millon (1988:

131) writes that the "tassel headdress functioned as a distinguishing signature, as a label of a specific category of persons, as a badge of office. It was worn by the Storm God, by military leaders..., and by images carved on stone monuments in Zapotec and Maya areas." Its appearance on public monuments in foreign culture areas is evidence of a connection between the polities.

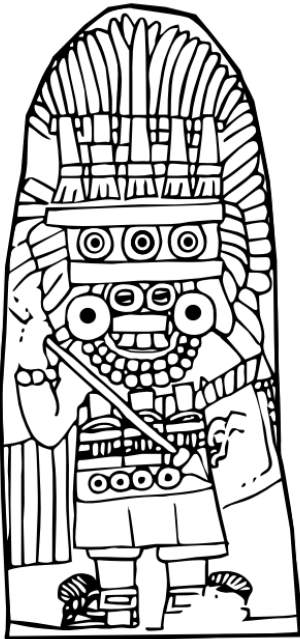


Figure 6.44: Stela 11 at Yaxhá, Guatemala (drawing by author, after photos and drawings by Linda Schele)

Several examples of the Tassel Headdress were found on figurines in Teotihuacan and the rural sites. As many as six fragments were found in the TMP, however the example shown in Figure 6.45 was the most complete version and I am less sure about the other examples. One was found in the Axotlan assemblage, and in good condition. A final possible example was located in the Huixtoco assemblage. The Axotlan headdress had more details, although it is possible that they were present but became obliterated in

the Teotihuacan case. The Axotlan headdress also had two registers of feathers, compared to one from Teotihuacan, although the Teotihuacan example would have had more tassels than the Axotlan headdress. Slight stylistic differences aside, the appearance of the Tassel Headdress on figurines around the Basin of Mexico could signify the expansion of imperial power and allegiance and cooperation with imperial authority on the part of local residents.



Figure 6.45: Tassel Headdresses from Teotihuacan (left), Axotlan (center), and a possible example from Huixtoco (right)

Summary

Facial features, jewelry, clothing, and headdresses were all remarkably similar between assemblages and, most importantly, there were very few examples of design elements present in the rural assemblages but not in the city. Exceptions to this were the articulated, bound, and "fat god" figurines found in Axotlan, which were more elaborate than the examples from Teotihuacan. They were similar in terms of functionality and subject matter, yet the restraints and clothing on the Axotlan figurines were more ornate than their TMP counterparts. For articulated figurines in particular, there is strong evidence that some may have come from Azcapotzalco to the south, and given the extra

decorative elements it is possible that the bound and "fat god" figurines came from there as well.

There were noticeable differences in the distribution of common figurine types between sites. Enthroned and half-conical figurines were better represented in the Axotlan assemblage than at Teotihuacan. Conversely, articulated and warrior figurines were less common in all of the rural assemblages than they were at Teotihuacan. All three types of figurines were potentially indexes of imperial power, albeit in slightly different ways. I interpret the higher numbers of both enthroned and half-conical figurines at Axotlan, combined with the lower numbers of warrior figurines, as evidence of Axotlan having been targeted with a specific ideological message. Brumfiel's (1998) argument that the Aztec empire targeted specific groups with different sides of the same message is relevant to these findings, which suggest that Axotlanos may have been the recipients of messages about imperial power, namely the authority of rulers and the state, in the form of enthroned and half-conical figurines. Warrior figurines, which invoked militaristic ideology and may have been one of the ways in which Teotihuacan recruited individuals into joining the military, would have been unsuitable for the rural provinces. This would also explain the lower incidence of enthroned figurines in the city—where the authority of the state was ever-present—and the higher rate of warrior figurines if Teotihuacan was drawing on the urban population to fill their military ranks.

The same argument does not necessarily apply to Cerro Portezuelo and Huixtoco, where enthroned and half-conical figurines were largely absent. Warrior figurines were also sparse—present only at Cerro Portezuelo—and so it might be that neither of these

sites received as much in the way of ideological messaging as did Axotlan. These two sites were only marginally farther than Axotlan from Teotihuacan, but it is possible that they were less strategically or materially important to Teotihuacan, and so imperial presence was felt to a lesser degree.

Regional Diachronic Patterns and Differences in Site Assemblages During the Teotihuacan Period

This section synthesizes results from the previous sections, and proposes interpretations of the results, especially in terms of how these regional sites interacted with each other, and to what extent there was a shared figurine culture during the Teotihuacan period.

Terminal Formative

During the Terminal Formative period, figurines in a distinctively Teotihuacan style emerged in the Teotihuacan Valley, and in rural sites across the Basin of Mexico. Hallmarks of some of the earliest figurines in the Teotihuacan tradition were lupine, almost zoomorphic faces with slanted, deeply incised eyes (Patlachique phase), followed by increasingly anthropomorphic faces with distinctive appliqued coffee bean eyes (Tzacualli phase). Faces in both styles were found in Cerro Portezuelo—evidence of very early contact between the northern and southern Basin. No heads or torsos from this period were found at Huixtoco, however, and so even though there were multiple limbs that appear to date to the Terminal Formative, contact between Huixtoco and the north is

not as well supported. The assemblage at Axotlan also seems to reflect early contact with the Teotihuacan Valley, but the situation is complex.

Figurines from Axotlan suggest a Teotihuacan period occupation dating from Tzacualli phase through the Classic period, but the earliest architecture uncovered by excavations dated to the Tlamimilolpa phase during the Early Classic period. García Chávez et al. (2004, 2005, 2015) and Clayton (2009, 2013) have presented findings that support the idea of an occupational hiatus between the Ticoman and Tlamimilolpa phases. After Ticoman, the oldest ceramics, architecture, and the majority of burials dated to Tlamimilolpa. In many respects, it seems that an occupational break occurred after Ticoman, and the site was reoccupied during the Early Classic by a group of Teotihuacanos. An important caveat to this theory is that only a portion of the Axotlan site was explored by excavations, and earlier architecture could have been missed by survey and excavations, or destroyed at any point over the last 2,000 years.

In addition to the Ticoman figurines, which were abundant in the Axotlan assemblage, there were multiple Tzacualli-style figurines in the assemblage, and even more Miccaotli figurines. The Tzacualli-style figurines were distinctive and closely related to Teotihuacan Tzacualli-style figurines in head shape, headdresses, and eye type. If there was no occupation at Axotlan prior to the Tlamimilolpa phase, then either we are witnessing a curation phase of potentially up to 300-400 years between Tzacualli and Tlamimilolpa, which seems quite long, or there was indeed a pre-Tlamimilolpa settlement in the area of Axotlan, which seems very possible. Outside of the Teotihuacan Valley, there is some disagreement in the progression and timing of ceramic phases.

Some chronologies for the greater Basin of Mexico state that the Ticoman ceramic phase ended around 1 CE when Teotihuacan I or Tzacualli phase ceramics began appearing (e.g. Carballo 2007a: Figure 2), while others put the end of Ticoman around 150 BCE and Tezoyuca and Patlachique in the Basin chronology before Tzacualli phase (Cowgill 2015: Figure 1.1). Given the presence of Ticoman ceramics at Axotlan, and the possibility that in at least some sites Tzacualli ceramics replaced Ticoman, the presence of Tzacualli and Miccaotli figurines at Axotlan may in fact be evidence of figurine traditions spreading faster across the rural countryside than utilitarian ceramics. (Note 3)

The appearance of Patlachique and Tzacualli style figurines at Cerro Portezuelo certainly supports the conclusion that Teotihuacan style figurines were circulating in the Basin of Mexico prior to the emergence of a state-level polity in the Teotihuacan Valley. The Terminal Formative Teotihuacan style figurines appeared in rural sites across the Basin of Mexico in advance, it would seem, of large amounts of contemporary Teotihuacan style ceramic wares. The spread of objects specifically linked to domestic ritual practices indicates a very unique type of ideological contact between the growing city and its hinterland, and the figurines foreshadow increasingly strong ties between Teotihuacan and the region in the centuries to come.

Early Classic

The spread of Teotihuacan style figurines to rural communities in the Basin of Mexico intensified during the Early Classic period. Articles of clothing such as *quechquemits*, *huipils*, and wide band headdresses became exceedingly common on

figurines both at Teotihuacan and in the rural sites in the region. Double collars were common during the Early Classic period, and triple collars were present in all sites except Huixtoco. At Axotlan and Teotihuacan, double and triple collars outnumbered single collars among Early Classic figurines, but at Cerro Portezuelo single collars were still more common. Only one example of a triple collar was found, and the necklaces lacked the diagonal incisions common on figurines from Axotlan and Teotihuacan.

Cerro Portezuelo Early Classic figurines were more simple in terms of their design than their Teotihuacan counterparts, and were more limited in form, particularly in the case of clothed women. Many figurines in the Cerro Portezuelo assemblage were similar in subject matter and appearance to Early Classic figurines from Teotihuacan, although they varied slightly in their stylistic treatment from their counterparts at Axotlan and Teotihuacan. In contrast, contemporary figurines at Axotlan were well made and were generally more similar to examples from Teotihuacan. The lower average of collars at Cerro Portezuelo, the lower count of Early Classic figurines in general, and the absence of conical women figurines may be evidence of a less enthusiastic acceptance of certain elements of Teotihuacan culture, including figurine practices and styles. However, there is no evidence to support the idea of an outright rejection of Teotihuacan goods and cultural practices either. (Note 4)

The differences between the Early Classic assemblages at Axotlan and Cerro Portezuelo included size, the quality of the figurines themselves, and their faithfulness to contemporary figurine practices at Teotihuacan. The Axotlan figurines were similar enough that they could have come from the city itself, whereas the Cerro Portezuelo

examples diverged slightly, both materially and stylistically, from the urban examples. The differences between these figurine assemblages during the Early Classic is indicative of disparate figurine practices related to manufacture, procurement, and perhaps even use. There was clearly not an outright rejection of Teotihuacan style figurines in the southern Basin of Mexico during this period, however, their acceptance of such figurines seems qualitatively different when compared with the community of Axotlan.

The count of Early Classic figurines at Huixtoco was so low that it is difficult to compare it to the other contemporary assemblages. Teotihuacan style figurines were present at Huixtoco during this period, however it is difficult to draw conclusions beyond that.

Classic

During the Classic period, the ornateness of costume, jewelry, and headdresses continued to increase, both at Teotihuacan and the rural sites. Typical Teotihuacan figurine types were distributed across the Basin, but not in similar proportions to their distribution in the city. Patterns of distribution in addition to stylistic features on certain types point to their possible social significance. Furthermore, stylistic elaboration on several figurine types at Axotlan was another point of departure from standard Teotihuacan practices.

The standard Classic types were well represented at Axotlan, although the distribution rates were unique. The most common types at the core—articulated and warrior figurines—were much less common at Axotlan. Conversely, enthroned, "fat

god", and half-conical figurines, which were seemingly not as popular at Teotihuacan, were extremely well represented at Axotlan. In addition, articulated, bound, and "fat god" figurines from Axotlan had stylistic properties not found on any examples from the TMP, and there is strong evidence that they may have been products of Azcapotzalco, or at least influenced by styles emanating from the southwest Basin. The differences in rates of occurrence of figurine types combined with the stylistic variations on certain types at Axotlan point to a figurine tradition that paralleled the urban tradition in many ways, yet was not an exact reproduction of it. The signs of elaboration on Teotihuacan types indicate local production and the acceptance, internalization, and personalization of core practices. But beyond that, the differences in distribution reflects potentially important differences between Axotlanos and Teotihuacanos in terms of their preferential use of certain figurine types over others.

If enthroned figurines were depictions of a ruler or important official as the position, clothing, and ornate headdress suggests, then their unusually high numbers in a rural community could be evidence of direct attempts by the state to influence rural subjects. The relative abundance of symbols of imperial power lends support to the idea that Teotihuacan projected its power in part by imposing a dominant Teotihuacan-centric ideology in rural sites. Alternatively, residents of Axotlan may have intentionally wanted to perform Teotihuacano identity and declare their affiliation with Teotihuacan, and either traded for these symbols of imperial power or produced them locally.

Nine fragments of warrior figurines were found at Axotlan, and it is noteworthy that the number of warriors was smaller than the counts of both half-conicals and

enthroned figurines. Given the over-representation of half-conicals and enthroned figurines, a smaller number of warrior figurines could be evidence that imperial military ideology was targeted at only certain segments of the population. In her discussion of Aztec ideology and ritual practice, Brumfiel (1996, 1998) argues that there were clear asymmetries in terms of ritual practice and ideology across the imperial landscape. Military ideology was targeted at young elite males in the core of the empire, and rural communities for the most part did not take part in this aspect of the Aztec ideological system. The comparatively low numbers of warrior figurines in the hinterland sites could be interpreted as evidence that rural populations were the recipients of different ideologies, and only a small portion of the rural population would have been suitable for this ideological message.

Articulated figurines were the most common of the figurine types at all sites during the Classic period, although they may have been disproportionately popular at Teotihuacan. Four of the seven articulated torsos at Axotlan had decorative elements that were unique to the Axotlan assemblage, which points to a place of origin outside of Teotihuacan. These four torsos were quite similar to examples from the site of Azcapotzalco (see Von Winning 1958), and perhaps they were acquired from this site, or made locally based on Azcapotzalco's stylistic influences. Functionally, however, they were the same as other articulated figurine torsos found in the regional assemblages in this study.

Bound and "fat god" figurines at Axotlan also received unusual treatment. The bound figurines found at Axotlan bore extra decoration on their bindings and were more

similar to each other than they were to the examples found at Teotihuacan and Cerro Portezuelo, which were relatively plain in comparison. As was the case with bound figurines, the Axotlan "fat god" examples were internally consistent with one another, and diverged stylistically from the examples at other sites. These figurine types appear to have arisen at Teotihuacan and then spread to other sites in the Basin. The internal stylistic consistency in the examples from Axotlan is evidence for similar production locales, again probably outside of Teotihuacan. This supports the hypothesis that rural communities were producing their own versions of some urban types or acquiring them from secondary centers, which would indicate the acceptance and reproduction of Teotihuacan cultural practices, and the internalization of some elements of Teotihuacan ideology. The differences show, however, that faithful reproduction of Teotihuacan styles was not always required.

Articulated, bound, "fat god", and warrior figurines were all found in low numbers at Cerro Portezuelo, as well as a number of Teotihuacan style heads and headdresses. The clothed woman type was also found in the assemblage. In many ways, the bound and "fat god" examples at Cerro Portezuelo were stylistically more congruent with figurines from Teotihuacan than those of Axotlan. Although they were not present in the portion of the assemblage that I was able to locate, enthroned and half-conical figurines also appear to have been a part of the Classic assemblage at Cerro Portezuelo, in which case, a majority of the standard Teotihuacan types were represented at Cerro Portezuelo in at least small numbers. The small numbers and stylistic similarities between

articulated, bound, and "fat god" figurines Cerro Portezuelo and Teotihuacan may suggest that the figurines found at Cerro Portezuelo were imports from the core.

Of the three rural sites, Huixtoco had the smallest figurine count during the Classic period. Articulated and enthroned fragments were found, as well as several other fragments of Classic period flat and conical figurines, including a molded woman wearing a *quechquemitl* and *huipil*. No bound, "fat god", half-conical, or warrior fragments were found in the collection. Stylistically, the Classic fragments that were present were extremely similar to Teotihuacan versions (with two notable exceptions to this discussed earlier in the chapter), and may have been urban products, or made elsewhere with Teotihuacan molds. Beyond that, the count is too low to say much more in the way of comparison.

Discussion

The assemblages studied in this dissertation were shaped by over a millennium of economic and cultural forces including inter-community interaction, exchange, and trade. These forces had a large impact on the resulting figurine assemblages, and when Teotihuacan began to emerge as a regional power, it likely took advantage of a preexisting network of economic relationships in the Basin of Mexico (Stoner et al. 2015), as well as the preexisting behavior of sharing cultural materials across distances.

Interregional trade in artifacts throughout the Formative period was more than a series of purely economic transactions—other forms of cultural currency, such as ideas, images, and ideologies were frequently embedded in this exchange behavior. The

connectivity created by exchange provided a context for the formation and maintenance of social relationships across distances. Intraregional exchange behavior included the transfer and trade of figurines during the Middle and Late Formative in the central Mexican highlands, which is attested to by the many similarities in the site assemblages recognized both in this study, and in the work of others (e.g. Lesure 2011, 2015; Vaillant 1930, 1931, 1934, 1935). The earliest appearances of Teotihuacan-style figurines in the rural sites may have been facilitated by these preexisting networks of exchange that crisscrossed the Basin of Mexico during the Formative periods. Figurines may have initially moved around as novelty items from the Teotihuacan Valley along existing trade routes to rural communities, and demand for them subsequently grew.

The Middle and Late Formative period assemblages in the sites of Axotlan, Cerro Portezuelo, and Huixtoco were more similar to each other than not. Similarities between figurines (within the same Hay-Vaillant type) in terms of stylistic treatments of faces and bodies, headdresses, jewelry, the general lack of clothing, and the positioning of the body served to create a stylistic coherence between figurines in sites that were removed by distances of up to dozens of kilometers. This stylistic coherence is evidence for at least periodic, if not frequent and sustained, contact and the exchange of objects and ideas between communities in the Basin of Mexico. There was a limit to the similarities between these assemblages, however, and differences in the rates of certain features in the site assemblages point to multiple points of variation within the broader tradition. Within the same stylistic framework, each site had a slightly different proportion of seated to standing figurines, and different rates of jewelry and sexual characteristics.

These differences may point toward the effect of individual preferences coupled with local production. A certain degree of variation is to be expected and these differences seem to be the result of variation created through the natural barriers of time and distance, rather than intentional difference. In a general thematic sense, the rural assemblages were more similar to each other than not, which I interpret as a more or less regionally coherent system of ritual artifacts that in turn reflected similar (although not necessarily identical) ritual practices. Although it is entirely possible that these figurines were used in different ways at each site, there were no obvious signals that this was the case.

The Terminal Formative period, when the city of Teotihuacan was experiencing an explosion in population, its major monuments were being expanded, agricultural activity around the city was intensifying, and many exchange networks in the region were reoriented to include the city (Nichols et al. 2013), was a break of sorts with previous figurine traditions in the Basin of Mexico. Patlachique and Tzacualli-style figurines in Teotihuacan were not clearly derived from previous Basin types. Patlachique, if anything, was a regression from the more naturalistic figurines of the Late Formative. Tzacualli, which does appear to have naturally grown out of the preceding phase, was an interesting phase in the development of the Teotihuacan style. Tzacualli-style figurines were found in all the assemblages under investigation in this study, demonstrating that Teotihuacan style figurines were circulating widely in the Basin of Mexico by this time.

The jewelry on Tzacualli figurines began to increase in both frequency and amount, beginning a pattern of increasing personal ornamentation on figurines that persisted through the end of the Classic. This change occurred not only at Teotihuacan

but also in the rural sites. The Terminal Formative was the first period in which more than one collar was worn by a figurine, and they occurred at remarkably similar rates at all of the sites. The increase in personal ornamentation on figurines at the beginning of the Teotihuacan period is likely reflective of the contemporary process of social stratification that was occurring in Basin of Mexico society during the emergence of Teotihuacan. Furthermore, the fact that jewelry increased uniformly across all the sites under investigation shows that at the very least the Basin figurine assemblages had become dominated by the Teotihuacan style, and perhaps that similar processes of social stratification were occurring in sites across the region. Tzacualli style figurines in the rural sites may have been imports from Teotihuacan or local products mimicking the core style, but in either case, Teotihuacan figurine styles (and the message encoded in them) were becoming popular around the Basin of Mexico.

Similar to escalating jewelry, clothing became increasingly frequent during the Terminal Formative period and specific garments and headdress types that would become standard on Early Classic figurines began appearing in small numbers at Teotihuacan. The fact that these new forms of clothing were practically non-existent in the rural sites during this period is strong evidence for Teotihuacan having been the locus of innovation for these particular clothing styles, and most likely the driving force in the escalation of personal adornment.

The new clothing and jewelry conventions that were popular at Teotihuacan appeared in all the rural sites during the Early Classic. Many of the figurines may have been made in the city and exported to rural sites, although there were indications that

some examples may have been local products. The Miccaotli-phase figurines from Cerro Portezuelo, for instance, stood out as poorer in quality than those found at Teotihuacan and Axotlan, and lacked some of the embellishments typical in figurines from the other sites. In contrast, the Axotlan figurines from this period were all of a high quality and similar to those found in the TMP collection. The Early Classic fragments found at Huixtoco were too few and highly fragmented to support a detailed comparison—their presence indicates that Teotihuacan figurines and possibly other materials made it to the site, but in low numbers.

In the Classic period, urban figurine styles continued to be well represented in the rural site assemblages. All the main types common in the city were present in at least small amounts in the rural periphery, although not every type was found at each site, and certain types were more popular in Axotlan than they were at Teotihuacan. Facial features, jewelry, clothing, and headdresses were all very similar between assemblages and there were few examples of design elements in the rural assemblages that were not also seen in the city.

I interpret the extravagance of personal ornamentation on the majority of figurines during the Classic period as a reflection of the importance of markers of wealth and social status during this period. Headdresses reached a similar peak in extravagance and detail. The increasingly elaborate displays were facilitated by mold technology since molds allowed for the efficient production of highly ornamented figurines.

In summary, the strongest diachronic trend observed in these regional figurine assemblages was the steady, measurable increase in personal ornamentation during the

Teotihuacan period. Beginning in the Terminal Formative, the extravagance of jewelry and headdresses increased consistently from one period to the next. Parallel to this was an increase in the quantities and varieties of clothing worn by the majority of figurines. The increasing personal ornamentation and attention to detail in jewelry, clothing, and headdresses signals an increased interest in marking social differences, likely based on wealth, rank, or status. The picture that emerges from this trend is an increasing emphasis on social hierarchy concurrent with Teotihuacan's ascendance as a regional power, and the social stratification that was occurring in Teotihuacan society.

The second major trend was the diffusion of different elements, styles, and figurine types from Teotihuacan into the rural sites. I interpret the appearance of triple collars, wide band headdresses, *huipils*, *quechquemits*, and many prototypes of standard Classic types in Teotihuacan before their appearance in rural sites as evidence that the majority of these were local innovations at Teotihuacan. During the Early Classic, the Teotihuacan-style figurines in rural sites were quite similar to those of the core. During the Classic, adherence to strict Teotihuacan styles seems to have varied between rural sites. Teotihuacan was almost certainly not the only site of figurine production in the Basin of Mexico, and the stylistic variation between sites within well-defined figurine types demonstrates that the rural sites were not mirror images of Teotihuacan society and cultural practices, yet there may have been a high degree of ritual similarity between certain sites and the core, exemplified by Axotlan.

The third trend was the diversification of figurine types over time culminating in the standard Classic assemblage, and their subsequent diffusion to the rural sites. The

expansion in the number of forms and subjects depicted by Teotihuacan figurines suggests that the uses (or users) of figurines were similarly expanding. Furthermore, evidence presented here and in Chapter 5 suggests that certain figurine types were more strongly associated with different social strata or groups. The clearest example of this among the regional assemblages was found in Axotlan, where rates of half-conical and enthroned figurines were surprisingly high in comparison to their rates at Teotihuacan. Given the potential association between these two figurine types and the dominant imperial ideology, their overrepresentation at a rural site could reflect active attempts by state actors to project imperial power into the rural hinterland, or an acceptance of Teotihuacan culture and a purposeful demonstration of fealty towards Teotihuacan. Stylistic innovations in other Classic types at Axotlan supports the second option, that at least a portion of the Axotlan community were active performers of Teotihuacan ritual culture, but that does not preclude the first option.

Conclusion

Once Teotihuacan began to emerge as a center of influence, the assemblages in the rural sites realigned and adopted Teotihuacan figurine styles rather quickly. The figurine assemblages in the rural sites show a definite Teotihuacan presence in the rural periphery from as early as Tzacualli in Axotlan and Huixtoco, and potentially as early as Patlachique in Cerro Portezuelo. It is not possible to distinguish between a "push or pull" of Teotihuacan culture into the rural hinterland, but the presence of early figurines in the rural assemblages attest to Teotihuacan's cultural influence in the Basin from a very early

time. Perhaps they served as envoys of Teotihuacan ideology, paving the way for cultural and ritual, and finally political, assimilation during Teotihuacan's expansion.

As the Teotihuacan period progressed, a number of features that were inventions of Teotihuacan figurine makers gradually spread to and were adopted by the rural sites. Early Classic figurines were present at all of the rural sites, but they were more stylistically faithful to the core at Axotlan than at Cerro Portezuelo, and they were few in number at Huixtoco. During the Classic, all of the defined Teotihuacan figurine types were present in the hinterland and represented in the Axotlan and Cerro Portezuelo assemblages, although not at Huixtoco. The evidence in this chapter lends strong support to Hypothesis 2b, which predicted that the style and subject matter of figurines in the Basin of Mexico would change over time. (Note 5)

Each figurine assemblage was unique in some ways when compared to the others. These specific differences included variations in the ratios of certain types of figurines, such as the higher numbers of half-conical and enthroned figurines at Axotlan, and stylistic differences at all sites, including the embellishments on certain Classic period figurine types at Axotlan, the minor variations in Early Classic clothed women figurines at Cerro Portezuelo, and the unique combination of Classic molded heads with handmade jewelry at Huixtoco. These differences between site assemblages suggest a slightly different arrangement at each site in terms of figurine procurement patterns, figurine use, and the meaning and value ascribed to figurines by the communities who used them.

Variation in figurine assemblages between rural sites, and specifically between rural sites and the city of Teotihuacan, suggests asymmetrical relationships between

Teotihuacan and communities in its hinterland. Even though Axotlan, Cerro Portezuelo, and Huixtoco were all roughly 40km away from the city of Teotihuacan, the strength of affiliation of these sites to Teotihuacan seems to have been uneven, and expressed in variable ways. Based on the figurine assemblages alone, Axotlan seems to have had stronger cultural ties to Teotihuacan than Cerro Portezuelo or Huixtoco. This evidence agrees with the conclusions drawn by others (e.g. Clayton 2013), that Teotihuacan may have had stronger ties to certain sites, even within its relatively proximate hinterland.

Chapter 6 Notes

1) The traditional ecological model of Teotihuacan expansion rested on the presumed ability of Teotihuacan to control access to water and agricultural production around the city, which in turn led to an increase in population (Sanders et al. 1979). An alternative economic model stressed the interplay between imports and exports, which in turn encouraged growth and occupational differentiation within the growing city (Kurtz 1987). Smith and Montiel (2001) cite the large and spatially complex capital, a seeming monopoly on certain goods such as Pachuca obsidian and Thin Orange ware, and the appearance of Teotihuacan-like architecture in rural sites as evidence that Teotihuacan is best understood as an empire. Others interpret Teotihuacan as a territorial or dendritic state (e.g. Santley 1989; Algaze 1993; Cowgill 1997; Manzanilla 2001; Nichols 2016). As far as military conquest and direct control are concerned, a state-sponsored ideology that privileged conflict and warfare may have contributed to Teotihuacan's ability to annex territory and consolidate power over a large swath of the Basin and establish more distant extractive colonies (Sugiyama and Lopez Lujan 2007), however Cowgill (1997: 144) notes that militaristic themes seemed to have strengthened over time, implying that they may not have been as important in early Teotihuacan society. Many scholars refer to Teotihuacan's military prowess, and indeed we have strong evidence for military themes in art and ritual practice (Cabrera 2002; Carballo 2007b; Sugiyama and Lopez Lujan 2007; Cowgill 1997), however there is very little direct evidence of military action outside of the city (Smith and Montiel 2001). Militaristic themes in art would be particularly interesting if found outside of Teotihuacan, or if they were asymmetrically

distributed between certain sites. See Chapter 3 for a more thorough discussion of these models.

2) There is an earlier ceramic phase referred to as Tezoyuca (ca. 200-150/100 BCE), however it is unknown whether Tezoyuca and Patlachique figurines were substantially different from one another, and in many references to figurines from this time Tezoyuca and Patlachique are hyphenated, or Tezoyuca is left out completely.

3) Parsons (1971:189) has expressed doubt regarding the distribution of Tzacualli ceramics in the Basin of Mexico, and their ability to inform us about occupational histories of sites outside of the Teotihuacan Valley. The paucity of Tzacualli ceramics in many areas of the Basin of Mexico (outside the Teotihuacan Valley) has historically been interpreted as evidence for a general depopulation of rural areas as people relocated to Teotihuacan, thereby fueling the city's growth (e.g. Sanders et al. 1979). However, as Parsons notes, it is equally possible that Tzacualli style ceramics were more of a localized tradition than previously believed, and the near-absence of such ceramics in the Cuautitlan or Texcoco regions does not demonstrate a contemporary depopulation event but rather limited acceptance or use of Tzacualli style ceramics in an otherwise well populated Basin of Mexico.

4) We know from excavation results that Cerro Portezuelo was occupied during the Early Classic and was in contact with the northern Basin. However, the failure to locate and

excavate domestic structures at the site (see Chapter 3) has no doubt had an effect on the sample of figurines available for analysis. Figurines from the other three sites under investigation came from mostly domestic contexts, whereas the Cerro Portezuelo assemblage was generated during the excavation of monumental architecture in the site core. Comparisons should proceed with this caveat in mind.

5) But see the discussion of representations of women with children in Chapter 8, which supports Hypothesis 2d.

CHAPTER 7. DIACHRONIC AND SPATIAL VARIATION IN PASTE CHARACTERISTICS

At the time of analysis, it was not possible to conduct Instrumental Neutron Activation Analysis (INAA) on the figurines from these collections. Nevertheless, I recorded data on ceramic paste characteristics to test whether they could lead to similar descriptive potential regarding regional and diachronic differences in figurine provenance, production, and consumption. Paste characteristics were recorded and compared based on the idea that general differences in ceramic paste color, temper, and texture could be indicative of divergent practices related to the production and consumption of figurines across space and over time. Differences in general paste characteristics could signal the exploitation of different clay sources, preferences in paste color, or differences in methods of firing between sites indicating regionalism in the sample, and changing patterns of production and consumption over time.

A finished ceramic figurine is the end result of a complex chain of behaviors related to the sequence of production including the procurement of raw materials, and the treatment and processing of those materials including blending, mixing in additives, forming, and firing. Each of these steps influences the final product, and the human element throughout makes the finished ceramic more than the sum of its parts (Burton and Simon 1996).

The literature on ceramic production is both encouraging and discouraging on the topic of the utility of visual analysis of pastes. In the Basin of Mexico, and especially in the Teotihuacan Valley, paste characteristics visible to the naked eye (in conjunction with

other qualities) are frequently used in determining the likely phase (or larger period) of production for ceramics (e.g. Rattray 2001). The color, texture, and temper of ceramic pastes can be used to assign vessel sherds to tentative wares and phases (Rattray 2001: 91), and is a common practice in ceramic analysis in general (Bishop et al. 1982: 277). It is unclear whether this pattern is as strong for figurines, and I am inclined to think that the differences may be less obvious in many cases. From this author's experience, Postclassic ceramics and figurines both have paste colors that are remarkably different from Classic and Formative paste colors, but the difference between a Classic and Formative figurine is less clear, and I would not be comfortable phasing a figurine based on its paste attributes alone. Therefore, while paste color as an indicator of period can be of varying utility, there are some general trends that stand out, and ceramic typologies and chronologies frequently reference readily visible paste attributes in their descriptions.

Abbott (2008), however, indicates that firing temperatures in excess of 700 degrees Celsius can have extreme effects on the finished paste color, suggesting that firing technology and temperature may have a more important effect on final paste color than the source of raw material. This can be helpful if firing technology is known to vary over time, however it creates problems for those looking to correlate fired paste color with the location where the raw clay was procured. Results from Abbott (2008) further indicate that the synergistic effects of additives (tempers, salt, etc.) and high firing temperature produce significant changes to the color of the finished piece. A simple correlation of paste color to location of production (or raw material procurement) is inadvisable, therefore, given the mediating effects of other steps within the ceramic

production process. In spite of these issues, I attempt to interpret the results of the visual analysis of the paste characteristics in the figurines under investigation, with the caveat that all results should be confirmed by chemical analysis if and when it becomes feasible in the future.

Analysis of Paste Properties

Paste Color

During data collection, figurines were assigned one of ten paste colors, based on the Munsell soil color chart. Table 7.1 presents the Munsell hue, value, and chroma range for all of the paste colors I recorded, as well as the corresponding names that I used to record data. The color names I used differed in some cases from the color names provided by Munsell, and Table 7.1 provides the colors that I used during data collection.

Table 7.1: Paste Color Names and Munsell Values

Paste Color Name	Munsell		
	Hue	Value	Chroma
Brown	10-YR	3-4/	/3-6
Buff	5-7.5-YR	8/	/2-4
Gray-Brown	7.5-YR	4-6/	/1-2
Orange	7.5-YR	7/	/6-8
Orange-Brown	7.5-YR	5-6/	/6-8
Reddish-Brown	5-YR	3-4/	/3-6
Tan	10-YR	5-6/	/3-4
Tan-Brown	10-YR	4/	/2-6
Yellow	10-YR	7/	/6-8
Yellow-Brown	10-YR	6/	/6-8

Table 7.2 presents the counts of the ten paste colors found in the figurine assemblages, arranged by site and period. Gray-Brown, Yellow, and Yellow-Brown were extremely rare paste colors. One example of Yellow paste was found at Axotlan, and Gray-Brown (n=13) and Yellow-Brown (n=80) were completely confined to Teotihuacan. Given their low numbers and limited spatial distribution, these three paste colors were excluded from further analysis.

The remaining seven paste colors were well represented at most sites. Figurines with brown paste colors were more common, on average, at the rural sites than Teotihuacan. Buff paste colors were not exceedingly common at any of the sites. Orange pastes occurred at all sites, but they accounted for less than 10% of the assemblages except at Huixtoco (13%). Orange-Brown was a common color, but especially so in the southern sites of Cerro Portezuelo and Huixtoco. Reddish-Brown was not a common paste color, although it too was slightly more common (in terms of rates) in the southern sites. Tan and Tan-Brown were extremely common at all sites, particularly at Axotlan and Teotihuacan in the north.

Table 7.2: Counts of Paste Colors by Site and Period

Site	Period			Gray-		Orange-		Reddish-		Tan-		Yellow-		Total
		Brown	Buff	Brown	Orange	Brown	Brown	Tan	Brown	Yellow	Brown			
AXT	(UNK--frag)	6			5	4			19	15				49
	Middle Formative	2	6		4	7	1		12	6				38
	Late Formative	6	7		3	6			13	17				52
	Terminal Formative	7			1	10			35	16				69
	Early Classic	6				20			59	44	1			130
	Classic	15			9	10			83	59				176
	Total	42	13		22	57	1		221	157	1			514
	%	8%	3%		4%	11%	0.2%		43%	31%	0.2%			100%
CPZ	(UNK--frag)					3								3
	Middle Formative	1			2	2				5				10
	Late Formative	1			1	2	2	2	2	2				10
	Terminal Formative	2	1		7	21	5	6	18	18				60
	Early Classic	1				14	1	3	9	9				28
	Classic	1			1	11	1	5	17	17				36
	Total	6	1		11	53	9	16	51	51				147
	%	4%	1%		7%	36%	6%	11%	35%	35%				100%
HXT	(UNK--frag)	2			6	8	1	1	6	6				24
	Middle Formative	11			9	27	5	11	19	19				82
	Late Formative	7	3		15	38	5	30	29	29				127
	Terminal Formative	2			1	1		1	1	1				5
	Early Classic					2			2	2				4
	Classic				2	7			3	3				12
	Total	22	3		33	83	11	43	59	59				254
	%	9%	1%		13%	33%	4%	17%	23%	23%				100%
TEO	(UNK--frag)	28	24	8	113	401	31	1173	793		31			2606
	Late Formative				1	2	1	3	3					10
	Terminal Formative	18	8	3	60	273	35	732	582		16			1727
	Early Classic	6	5		32	148	6	424	393		4			1018
	Classic	20	20	2	101	425	14	1215	917		29			2743
		Total	72	57	13	307	1249	87	3547	2688		80		
	%	1%	1%	0.2%	4%	15%	1%	44%	33%		1%			100%

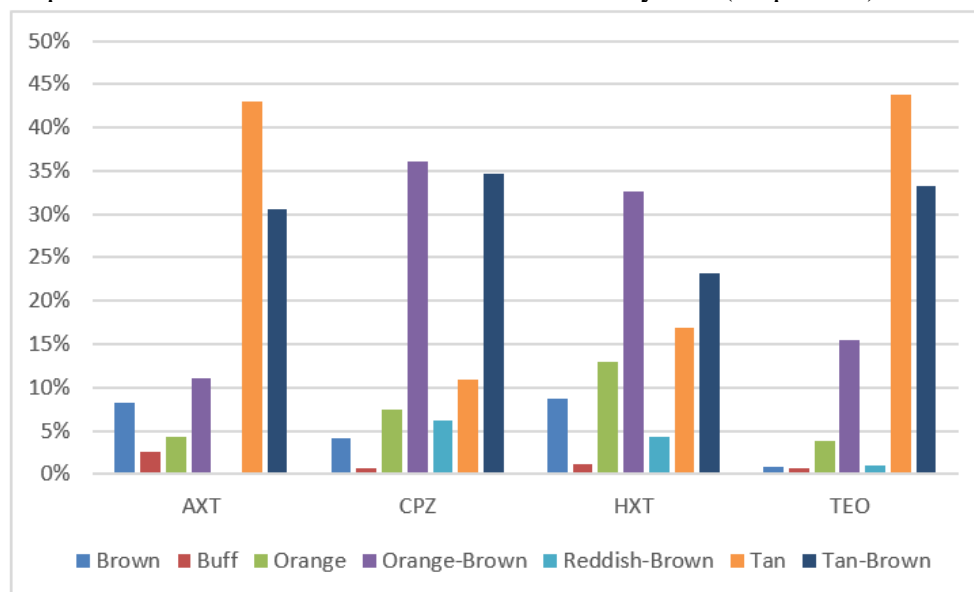
A Pearson's Chi-square test was used to determine whether there was an association between paste colors and sites (Appendix R). The test included counts of the seven most common paste colors, including all fragments from all periods. The results of the test were highly significant, indicating that there was a relationship between paste color distribution and site, and that the null hypothesis can be rejected. Post-hoc calculation of residuals indicated that the largest discrepancies between observed and expected values occurred in the Orange-Brown and Tan paste colors. Orange-Brown pastes were indeed more common in the south at the sites of Cerro Portezuelo and

Huixtoco, and Tan colored pastes were more common in the north, particularly at Teotihuacan. Brown pastes were also confirmed to be slightly more common at the rural sites than at Teotihuacan.

There were two general patterns in paste color distribution observed in the assemblages (Graph 7.1). At Teotihuacan and Axotlan, Tan was the most common paste color followed by Tan-Brown, both of which occurred at very similar ratios between the two sites. Orange-Brown was the third most common paste color at both sites, followed by the remaining colors. At Cerro Portezuelo and Huixtoco, Orange-Brown and Tan-Brown pastes dominated the assemblages and occurred at similar rates, followed by the other paste colors, which were present in sizable numbers and occurred at strikingly similar rates between sites.

I interpret these differences as indicative of different patterns of procurement or manufacture between sites in the northern and southern halves of the Basin. It is possible that these patterns could be explained by geographical location which affected the utilized clay sources, given that the sites in the northern and southern halves of the Basin has such similar paste color profiles. But that would assume that the figurines at each site were all locally made, and it is possible that the color profiles for each site were influenced by factors other than the composition of local clay sources, given that Tan-Brown pastes were common at all four sites. Perhaps similarities and differences in paste color profiles resulted from different procurement strategies, including sub-regional trade and exchange.

Graph 7.1: Relative Distribution of Paste Colors by Site (all periods)



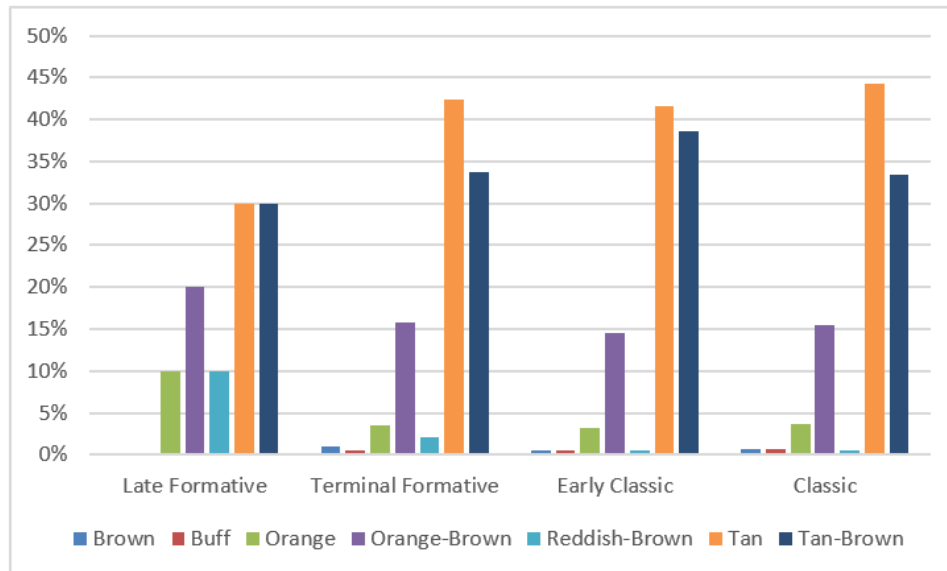
To continue the investigation of differences in paste color profiles across sites, I explored the intra-site changes in paste color over time, looking to see whether there was a distinct change in the distribution of paste colors within each site. Graphs 7.2 to 7.5 show the relative distributions of paste colors in datable figurine fragments at each site by period.

During the Middle and Late Formative, there were a plurality of common paste colors in use at all of the sites. Beginning in the Terminal Formative, however, there was a pruning effect of sorts where two or three paste colors came to dominate each site's assemblage. In the north, Tan and Tan-Brown paste colors became the dominant colors in the assemblage, followed at a distance by Orange-Brown. The progressive distribution of paste colors in Axotlan closely mirrors that of Teotihuacan during the Terminal Formative through Classic periods, possibly indicating a strong connection between the

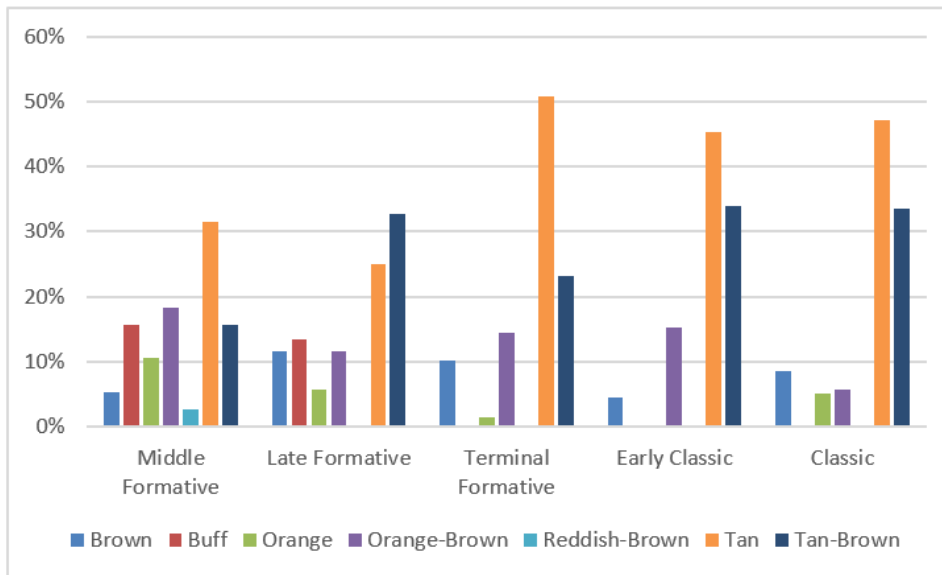
sites in terms of similarity in methods of production (i.e. access to the same clay sources at the very least) or a shared market for figurines. In the southern sites, Orange-Brown and Tan-Brown became the dominate paste colors, and virtually the only paste colors at Huixtoco due to low general counts.

Although there were differences between sites in the dominant paste colors in each assemblage, the pruning effect was experienced Basin-wide. During the Terminal Formative, contemporary to the emergence of Teotihuacan society and the spread of Teotihuacan-style figurines across the Basin, general paste characteristics were observed to change at all sites. Specifically, fewer paste colors dominated each site's assemblage.

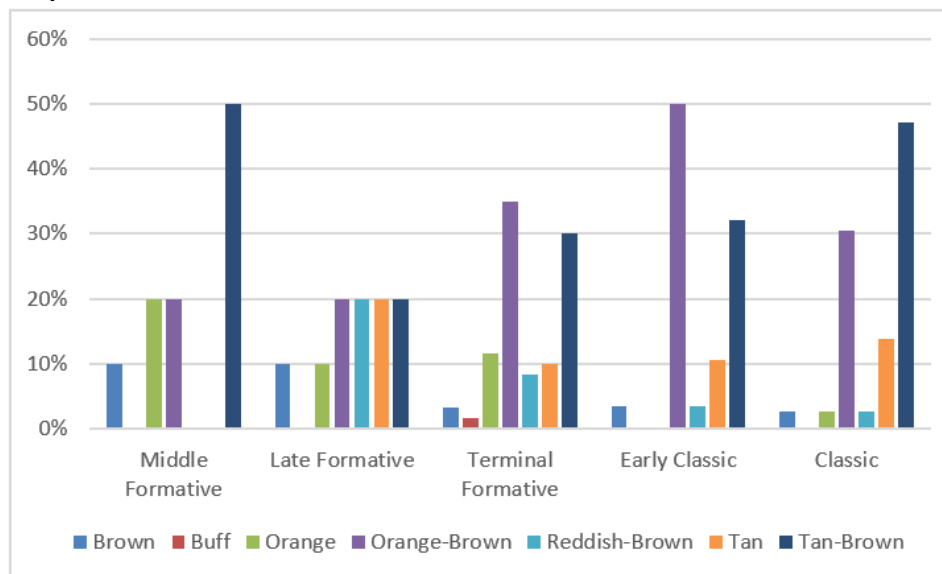
Graph 7.2: Relative Distribution of Paste Colors Over Time at Teotihuacan



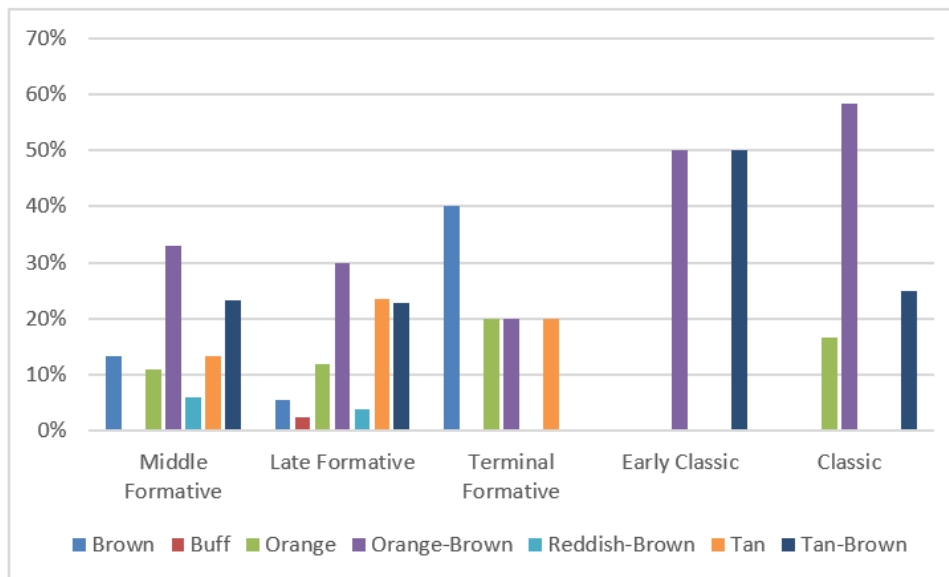
Graph 7.3: Relative Distribution of Paste Colors Over Time at Axotlan



Graph 7.4: Relative Distribution of Paste Colors Over Time at Cerro Portezuelo



Graph 7.5: Relative Distribution of Paste Colors Over Time at Huixtoco



Teotihuacan had a remarkably stable profile from the Terminal Formative onward (Graph 7.2). As with the other sites, there was more variability in the Late Formative, but in the Terminal Formative a pattern was established that persisted through the Classic period. From the Terminal Formative on, Tan paste made up on average a little over 40% of the assemblage for each period, followed by about 33% Tan-Brown, and 15% Orange-Brown, and the remaining four colors made up the remaining 10%. As discussed in Chapters 5, 6, and 8, there were a number of important stylistic and functional changes that occurred in the figurine assemblage between the Terminal Formative and Classic periods, as well as a number of important political developments and demographic changes that occurred in the Basin during this time. In light of these changes, the consistency of the paste color profile over time is remarkable. This could have to do with the geology of the Teotihuacan Valley, and the wide availability of clay sources with similar physical properties. Firing practices and technology also have an impact on the

final color of a fired paste. It is worth noting that paste color is a semi-reliable diagnostic trait and chronological indicator for normal Teotihuacan ceramics (Rattray 2001), although in this case there were several common paste colors, which occurred in consistent frequencies over time.

I conducted Chi-square tests on all four of the assemblages, but only Axotlan and Teotihuacan returned significant results, indicating that paste color and period of time were not independent of each other in these cases (Appendix S). For Axotlan, subsequent Chi-squares and calculations of residuals indicated the biggest differences over time occurred in the Orange-Brown pastes, which decreased over time, and Tan and Tan-Brown pastes, which were more common in later periods. At Teotihuacan, the biggest differences occurred in the paste colors Tan and Tan-Brown. Tan was unusually well represented in the Classic period, whereas Tan-Brown was more common in the Early Classic, and less so in the Classic period. For Cerro Portezuelo and Huixtoco, the counts were too low for multiple paste colors and periods, and recombination of the data in order to meet the conditions of the Chi-test had a normalizing effect, which probably contributed to the insignificant result.

There was greater diversity in the paste color profile during the Late Formative and even into the Terminal Formative at Cerro Portezuelo (Graph 7.4). Orange-Brown and Tan-Brown, which were the dominant colors even in the Formative periods, increased in proportion to the other colors in the Early Classic and Classic periods. Red-Brown and Orange pastes were at their most common during the Terminal Formative, and all but disappeared in later periods. Similar to Axotlan and Teotihuacan, Cerro

Portezuelo Early Classic and Classic figurine assemblages were dominated by two main paste colors, one of which was Tan-Brown. A point of divergence between these sites, however, is Orange-Brown was the second most common of the two main paste colors at Cerro Portezuelo, whereas in the northern Basin, Tan was more common.

It is more difficult to distinguish a temporal pattern of change in the Huixtoco assemblage given the paucity of figurines after the Late Formative (Graph 7.5). All of the six major paste colors were in use during the Middle and Late Formative periods, although Buff was very rare, and Orange-Brown, Tan, and Tan-Brown were the most common paste colors. The diversity of paste colors could indicate that figurine makers at Huixtoco were exploiting a number of different clay sources, or the residents of the site were engaged in systems of exchange with other sites in the Basin that were producing figurines from other clay sources with different physical properties, creating a mosaic of local and non-local figurines. The small number of Classic fragments (n=17) seem to mimic the pattern of paste colors at Cerro Portezuelo. The sample size for the Classic is too small to make a definitive statement, however the similarities between these sites point to a possible economic connection, or clay sources of similar compositions.

Paste Temper

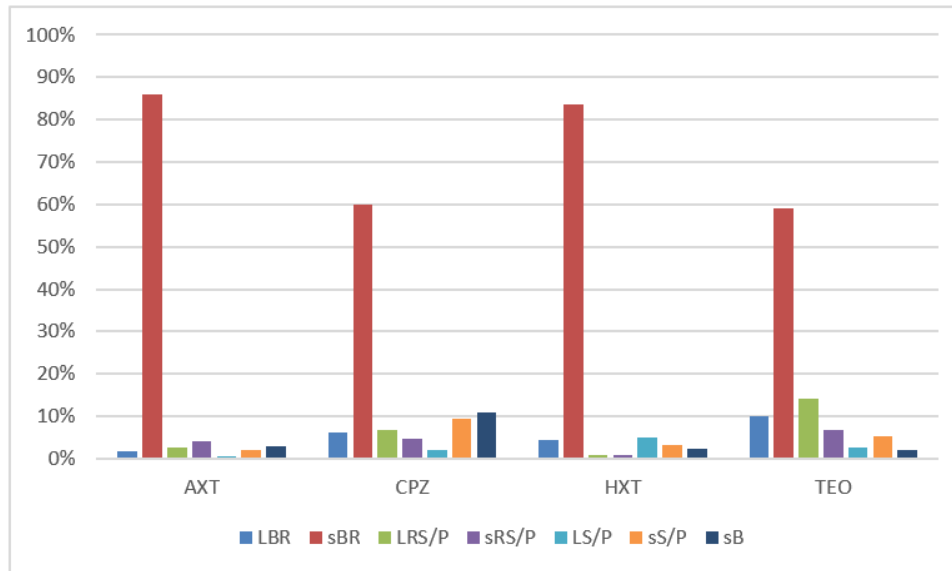
Rattray (2001) describes several different types of temper used throughout Teotihuacan's history, which are labeled in terms of their composition and color. Types that are referred to most commonly include sandy, fine, and micaceous, and common colors are white, yellow-white, and black (Rattray 2001). During data collection I

recorded paste temper through a visual inspection of the surface and break of the figurine fragments according to three criteria: size of inclusions, color, and reflectivity. This produced multiple temper 'types,' and I discuss the seven most common types in this section: Large Black Reflective (LBR), Small Black Reflective (SBR), Large Reflective Salt and Pepper (LRS/P), Small Reflective Salt and Pepper (SRS/P), Large Salt and Pepper (LS/P), Small Salt and Pepper (SS/P), and Small Black (SB). Other combinations did occur such as Small White Reflective (n=7) and Large White (n=5), but they were present only in Teotihuacan and in such low numbers that they have been removed from the following analysis since their presence in a sample of over 10,000 is insignificant.

Table 7.3: Counts of Paste Temper Types by Site and Period

Site	Period	Large		Small		Large	Small	Small Black	Total
		Black Reflective	Black Reflective	Reflective Salt/Pepper	Reflective Salt/Pepper				
A XT	(UNK--frag)	1	45	1	1	1			49
	Middle Formative	3	19	6				10	38
	Late Formative	1	40	1	6			4	52
	Terminal Formative	2	59	3	3	1	1		69
	Early Classic	2	123	2	2		1		130
	Classic	0	156	1	9	1	8	1	176
	Total		9	442	14	21	3	10	15
	%	2%	86%	3%	4%	1%	2%	3%	100%
CP Z	(UNK--frag)	0	1			1	1		3
	Middle Formative	1	5	1	1		2		10
	Late Formative	1	2	1	1		2	3	10
	Terminal Formative	5	36	4	3	2	6	4	60
	Early Classic	0	24	2	1			1	28
	Classic	2	20	2	1		3	8	36
	Total		9	88	10	7	3	14	16
	%	6%	60%	7%	5%	2%	10%	11%	100%
H XT	(UNK--frag)	1	18			2	3		24
	Middle Formative	2	69	1		2	4	4	82
	Late Formative	5	113	1	2	3	1	2	127
	Terminal Formative	1	2			2			5
	Early Classic	2	2						4
	Classic	0	8			4			12
	Total		11	212	2	2	13	8	6
	%	4%	83%	1%	1%	5%	3%	2%	100%
TE O	(UNK--frag)	197	1561	309	195	75	177	84	2602
	Late Formative	2	5	1			2		10
	Terminal Formative	194	458	288	103	58	100	20	1727
	Early Classic	111	576	179	82	20	41	8	1018
	Classic	310	1673	364	171	68	109	46	2743
	Total		815	4276	1141	551	221	429	158
	%	10%	53%	14%	7%	3%	5%	2%	100%

Graph 7.6: Relative Distribution of Paste Temper Types at All Sites (All Periods)

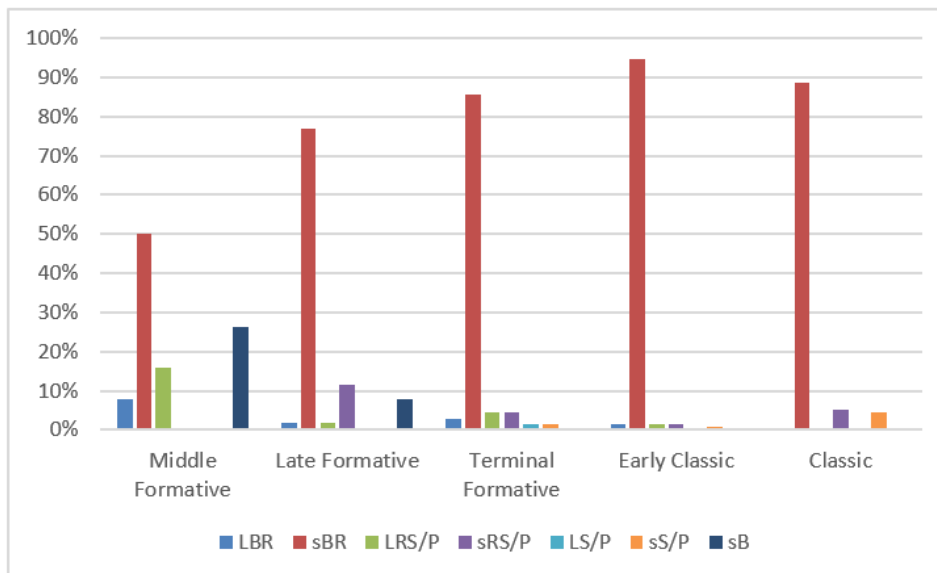


Small Black Reflective (sBR) temper was the most common temper type at all sites. At Axotlan and Huixtoco, it accounted for over 80% of the site assemblage tempers, whereas the frequency was lower at Cerro Portezuelo (60%) and Teotihuacan (59%) (Graph 7.6). All six temper types were found at every site, and the paste temper types other than Small Black Reflective were found more frequently at Cerro Portezuelo and Teotihuacan.

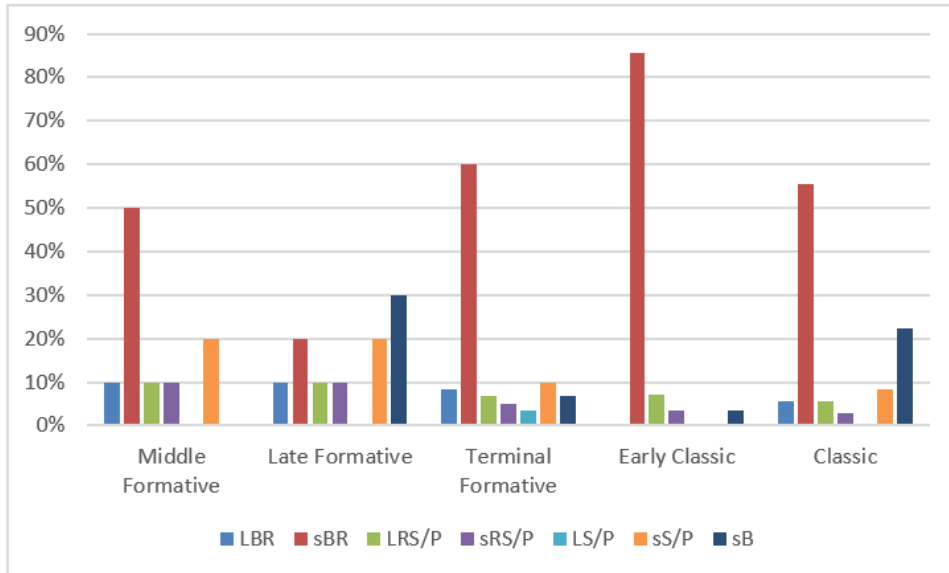
I performed a series of Pearson's Chi-square tests on the counts of paste temper types from Axotlan, Cerro Portezuelo, and Teotihuacan. Huixtoco was excluded due to the low counts in the Classic periods. The Chi-tests analyzed each site separately, using period as the dependent variable and paste temper as the independent variable. The test for Cerro Portezuelo did not return significant results, but both Axotlan and Teotihuacan returned statistically significant results (Appendix T). Post-hoc calculations of residuals demonstrated that Small Black Reflective temper was significantly more common at

Axotlan during the Teotihuacan period, while the other temper types were less common in the Classic periods than they were in the Formative ones. For Teotihuacan, the significant differences occurred in the Small Black Reflective temper as well, which was disproportionately more common in the later periods, and the various salt and pepper tempers, which were more common in the earlier periods, and decreased into the Early Classic and Classic.

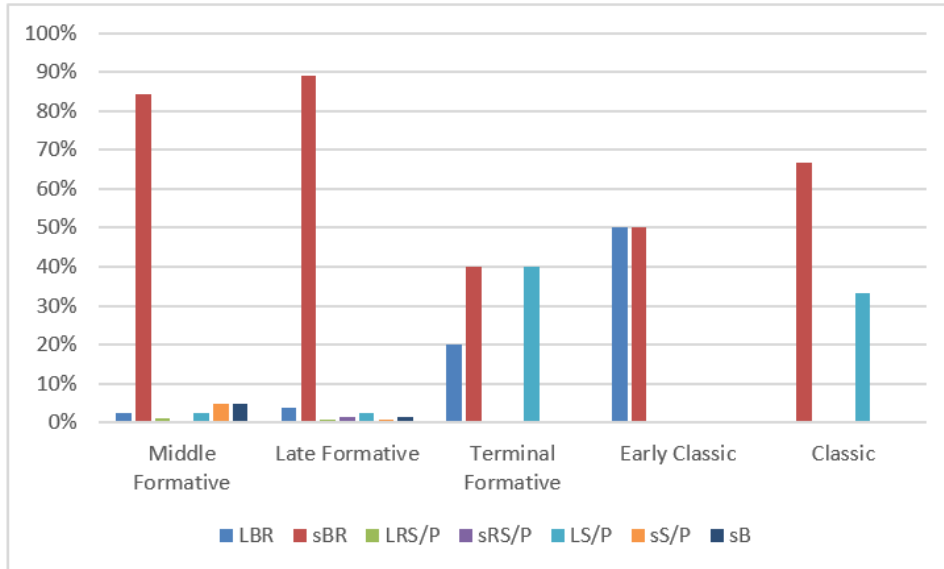
Graph 7.7: Relative Distribution of Paste Temper by Period at Axotlan



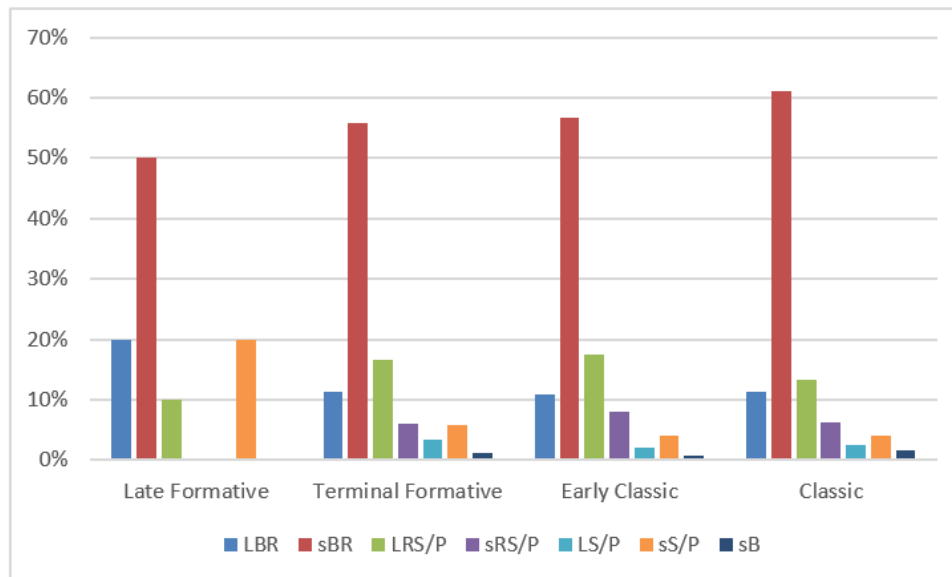
Graph 7.8: Relative Distribution of Paste Temper by Period at Cerro Portezuelo



Graph 7.9: Relative Distribution of Paste Temper by Period at Huixtoco



Graph 7.10: Relative Distribution of Paste Temper by Period at Teotihuacan



Finally, although there were some significant shifts in paste temper frequencies over time, what is equally striking is the near uniform preference for Small Black Reflective temper at all sites throughout the time periods covered in this study. Beyond the near universal preference for Small Black Reflective temper, Axotlan and Huixtoco had the least diversity in paste temper profiles during the Teotihuacan period, whereas Cerro Portezuelo and Teotihuacan had slightly more.

Paste Texture

The third aspect of paste composition under consideration is the overall texture of the ceramic paste. Paste texture is known to vary a great deal by ware in the Teotihuacan ceramic assemblage. For example, "Copa ware is at one end of the scale for its extremely fine compact paste and Coarse Matte is at the opposite extreme; between the two are pastes of varying degrees of coarseness" (Rattray 2001: 91). Rattray goes on to describe

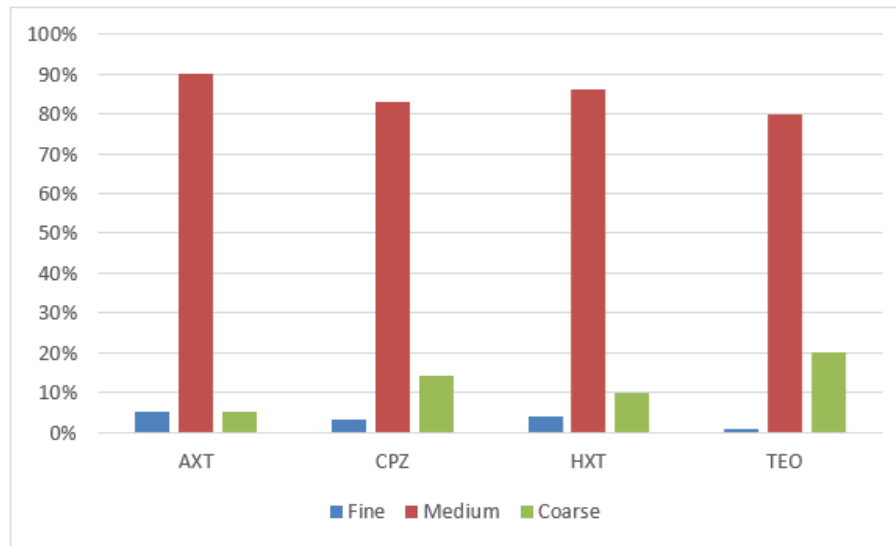
ceramic paste textures in terms of their coarseness and also compactness, including a description of the temper used. The texture of ceramics depends heavily on the type or types of temper used, as well as the firing conditions and the process of manufacture.

During data collection I recorded the overall degree of coarseness of the paste, independently of color and temper. Texture was recorded as 'fine', 'medium', or 'coarse'. Fine textured figurines had a dense, compact, smooth, and fine-grained texture, and frequently there were little to no visible temper inclusions. Medium textured pastes were still relatively compact with smoothed surfaces, but were rougher and sandier than the fine pastes and typically had visible inclusions. Coarse textured pastes were quite rough and sandy to the touch, with a friable, less compact texture. Many large temper inclusions could be seen and felt on the surface of the figurine. Medium textured paste was by far the most common at all four sites, followed by coarse and fine pastes, which were distant second and thirds. In general, a higher proportion of Teotihuacan figurines have a coarse paste, and the other sites have higher percentages of fine pastes.

Table 7.4: Counts of Paste Textures by Site and Period

Site	Period	Fine	Medium	Coarse	Total
AXT	(UNK--frag)	1	47	1	49
	Middle Formative	12	18	8	38
	Late Formative	11	39	2	52
	Terminal Formative		61	8	69
	Early Classic		126	4	130
	Classic		173	3	176
	Total	24	464	26	514
	%	5%	90%	5%	100%
CPZ	(UNK--frag)		3		3
	Middle Formative	2	7	1	10
	Late Formative		7	3	10
	Terminal Formative	2	47	11	60
	Early Classic		25	3	28
	Classic	1	33	2	36
	Total	5	122	20	147
	%	3%	83%	14%	100%
HXT	(UNK--frag)		21	3	24
	Middle Formative	3	74	5	82
	Late Formative	7	106	14	127
	Terminal Formative		3	2	5
	Early Classic		4		4
	Classic		10	2	12
	Total	10	218	26	254
	%	4%	86%	10%	100%
TEO	(UNK--frag)	38	2146	422	2606
	Late Formative		6	4	10
	Terminal Formative	9	1309	409	1727
	Early Classic	1	776	241	1018
	Classic	21	2207	515	2743
	Total	69	6444	1591	8104
	%	1%	80%	20%	100%

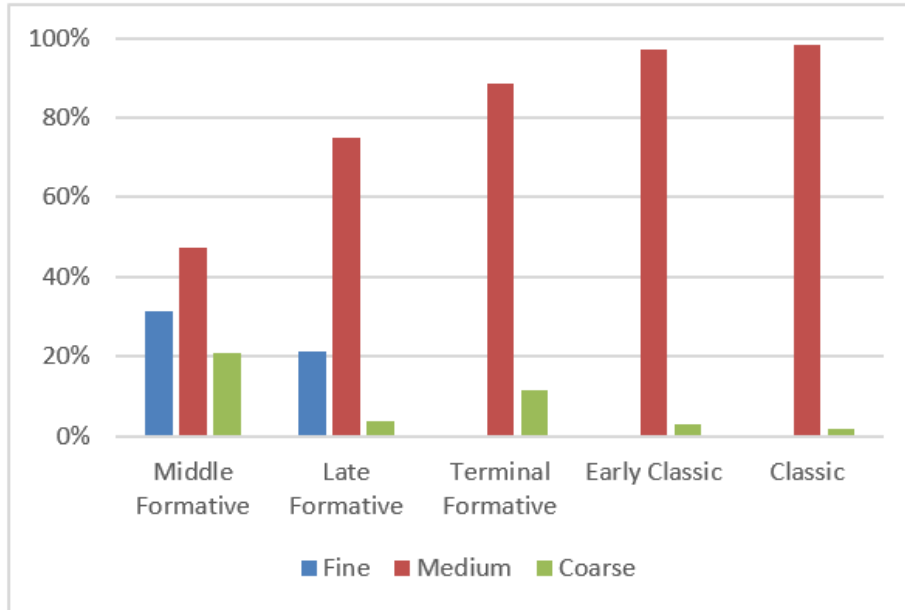
Graph 7.11: Relative Frequencies of Paste Texture by Site (All Periods)



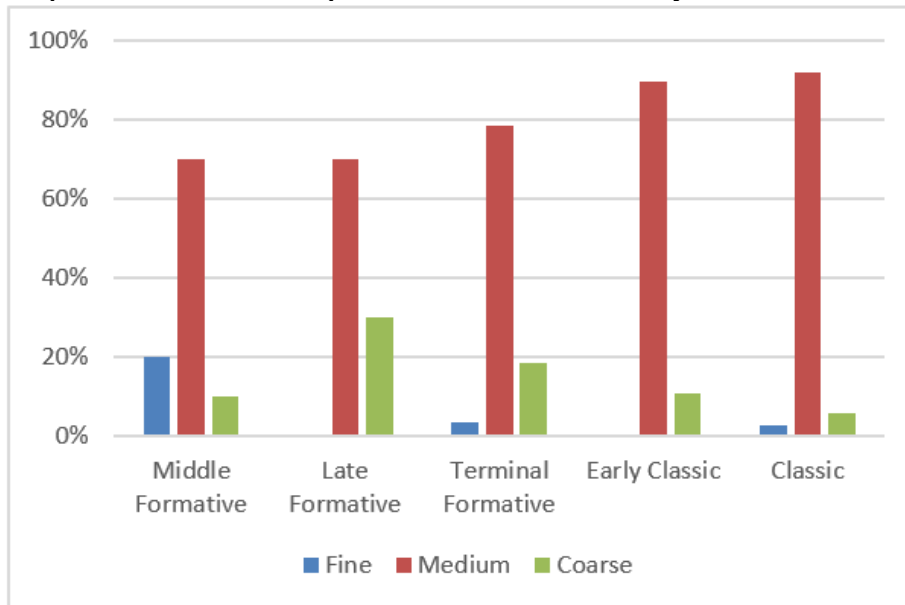
The paste texture profiles at each site were observed to change over time, with finer and coarser pastes decreasing in frequency while medium textured pastes increased in frequency over time. At Axotlan, all three paste textures were common during the Middle and Late Formative period, but fine pastes disappeared from the Terminal Formative onward, and coarse pastes continued to decrease through the Classic period (Graph 7.12). A similar pattern was observed at Cerro Portezuelo where medium textured pastes increased over time, and fine and coarse pastes became less and less common (Graph 7.13). The low counts in the Teotihuacan period at Huixtoco make it difficult to discern a diachronic pattern, but medium textured pastes were the most common in every period (Graph 7.14). Fine pastes were uncommon at Teotihuacan. Medium textured pastes were the most common in all periods, and increasingly so over time (Graph 7.15). Coarse pastes, however, accounted for approximately 20 percent of the assemblage

during the Teotihuacan periods, which is interesting given that they declined in frequency at the other sites over the same period.

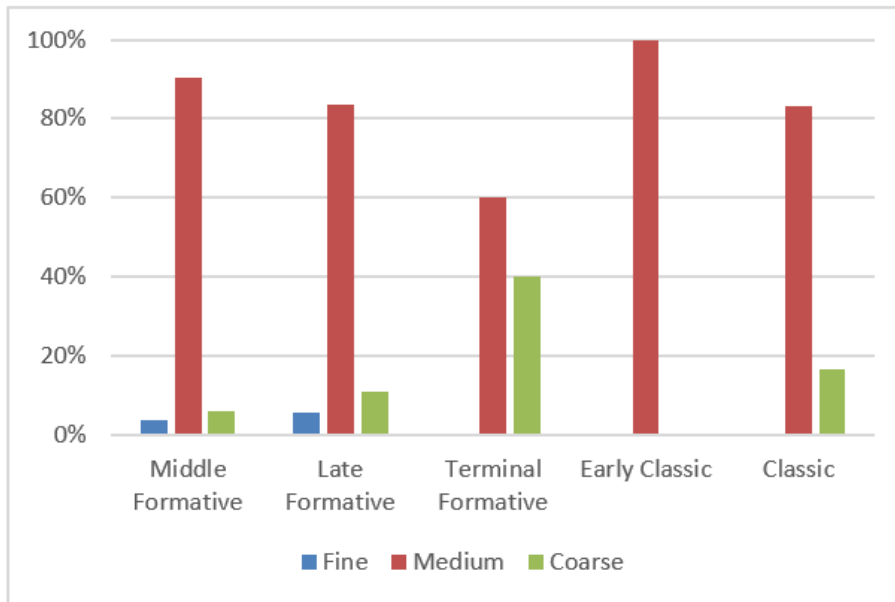
Graph 7.12: Relative Frequencies of Paste Texture by Period at Axotlan



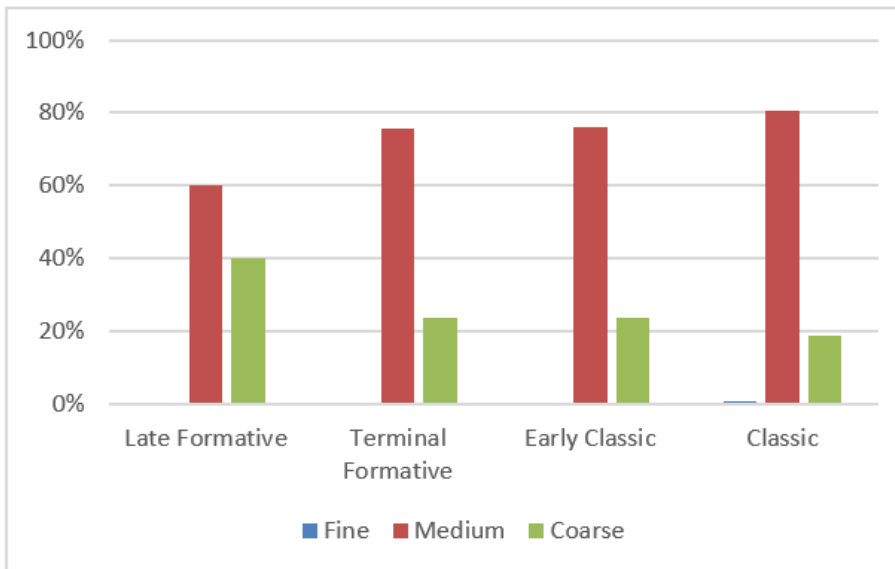
Graph 7.13: Relative Frequencies of Paste Texture by Period at Cerro Portezuelo



Graph 7.14: Relative Frequencies of Paste Texture by Period at Huixtoco



Graph 7.15: Relative Frequencies of Paste Texture by Period at Teotihuacan



Statistical analysis of the distribution of paste textures was not feasible given the low counts for certain textures and periods. Too many of the cells, especially in the fine

paste columns had zero counts, which violates the criteria for Chi-square tests. Data could not be recombined in both a meaningful way and one that would prove useful. Nevertheless, the steady drop in fine and coarse pastes and the rise of medium textured pastes at many of the sites over time seems to represent a meaningful change in the way figurines were being produced.

Discussion

Paste color was a somewhat useful diagnostic technique in discerning internal differences in the figurine assemblages, and comparing those assemblages to others in the region. The source of different paste colors is unclear without further chemical testing, however, comparison of the paste color profiles over time for the four sites under investigation yielded intriguing results that should guide future study and analysis.

Intra-assemblage diversity in paste colors was highest during the Formative, and all four sites experienced a pruning effect over time, where two main paste colors came to dominate the Early Classic and Classic assemblages at each site. Diversity decreased in general from the Terminal Formative period onward, and each site's assemblage was dominated by two main paste colors, although other colors were present in small amounts. Paste colors at Axotlan began to closely mirror Teotihuacan's profile. While Cerro Portezuelo and Huixtoco decreased in the diversity of paste colors used, they did not settle on the same paste profiles as the sites in the north.

The location of the sites appears to have influenced the Teotihuacan period paste color profiles for each assemblage. The sites that were located in the same region of the

Basin had more similar paste color distributions in the later periods than sites farther away. Axotlan and Teotihuacan in the northern Basin had very similar profiles, as did Huixtoco and Cerro Portezuelo in the southern Basin. The dominant Classic paste colors for both Cerro Portezuelo and Huixtoco were Orange-Brown and Tan-Brown, although the Huixtoco sample was so small that this pattern is tentative. These sites are the closest of the four, and they may have had access to clay sources with similar compositions, or maintained economic relationships with each other or shared markets. The dominant Classic period paste colors for both Axotlan and Teotihuacan were Tan and Tan-Brown, and their entire paste color profiles were strikingly similar to each other from the Terminal Formative onward. Both sites are in the northern Basin, although Axotlan fell on the western side of the lake and was only slightly closer to Teotihuacan than Cerro Portezuelo. The similar paste profiles for these two sites could have resulted from access to similar clay sources, or Axotlan having a more intensive socioeconomic relationship with the core, as has been argued by others (e.g. Clayton 2009, 2013).

Cerro Portezuelo is known to have had economic relationships with multiple sites in the Basin including Teotihuacan, and to have sourced some of their ceramics from these other sites (Nichols et al. 2013: 60-61; Clayton 2013). This pattern of sourcing does not necessarily extend to figurines, but serves as an example of how complicated the lateral and hierarchical relationships of exchange and procurement may have been. Nichols et al. (2013: 60-61) and Clayton (2013: 101-102) demonstrated that during the Late and Terminal Formative, the inhabitants of Cerro Portezuelo were not only making their own pottery, but were also engaged in trade with both Teotihuacan and other sites in

the Basin of Mexico. By the Terminal Formative and beginning of the Early Classic (Tzacualli to Miccaotli phases), over 10% of the ceramics were imports from the Teotihuacan Valley (6.7%) and Western Basin (4.4%). Forty percent of the ceramic assemblage was made up of local wares and 44% were unidentified. In the Classic, Cerro Portezuelo continued to make their own wares, but they imported a quarter of their ceramics from Teotihuacan (12.4%) and the southwestern area of the Basin (12.4%) (Clayton 2013: 102).

The site of Azcapotzalco was located in the southwestern Basin near modern day Mexico City and is believed to have been a major producer of ceramics during the Classic. As the second largest population center outside of Teotihuacan during the Classic period, it is also a likely candidate for a regional administrative center under the Teotihuacan state. Cerro Portezuelo might have been importing ceramics from Teotihuacan, both directly and indirectly by way of Azcapotzalco. If this were true, then the unique paste color profile at Cerro Portezuelo during the Teotihuacan period does not necessarily indicate complete economic and political independence from the state; it could be that Cerro Portezuelo was merely acquiring ceramics and figurines from Azcapotzalco in addition to directly from Teotihuacan, which would still indicate a rather large degree of economic integration if Azcapotzalco was indeed incorporated into the Teotihuacan state as it appears to have been (Nichols 2016: 15; Garcia Chavez et al. 1990; Barba et al. 1996). Given what we have learned from INAA on Cerro Portezuelo ceramics and the general diachronic pattern of local and imported wares at Cerro Portezuelo (Nichols et al. 2013; Clayton 2013), the pruning of paste colors at Cerro

Portezuelo during the Early Classic and Classic may indeed reflect constricted and reorganized trade networks in the Basin of Mexico and an increasingly strong economic relationship with Teotihuacan over time.

The changing nature of paste color distributions at the other sites could be indicative of changing access to raw materials, which would affect figurines made locally, or more likely, shifts in economic relationships with sites around the Basin, which influenced the properties of the figurine assemblages at each site if figurines were traded on a regional scale. The noticeable change in paste color distributions occurred nearly simultaneously in three rural sites in the Basin of Mexico, and alongside the emergence of Teotihuacan as a regional center. The timing of these events, together with the appearance of Teotihuacan style figurines in the rural sites during the Terminal Formative, strongly implies that these were not unrelated developments. These Basin-wide changes that occurred around the Terminal Formative may be indicative of a general reordering of the hinterland as was proposed by Sanders et al. (1979), and the economic and political relationships therein. The change in paste color profiles at each site occurred during the Terminal Formative period, when Teotihuacan's population was starting to grow, and the city began to expand. Many of the city's major monumental edifices were also started during this period (Sugiyama and Sarabia 2001; c.f. Nichols 2016: 6) and finished during the Early Classic.

The comparison of the assemblages based on paste temper provided a slightly different perspective. There was a strong preference for Small Black Reflective temper at all sites and in all periods, but it became increasingly common at both Axotlan and

Teotihuacan over time. Cerro Portezuelo and Teotihuacan had a greater variety of temper types, and made greater use of the Salt and Pepper tempers than either Axotlan or Huixtoco. A greater diversity of temper types may be indicative of a greater number of workshops or ceramics producers in a given site, or a wider range of trading partners at other sites within the region who exploited different sources for raw materials.

Conversely, decreased diversity in temper types may indicate fewer local producers or fewer trading partners. The differences between sites, however, do not appear to be as great with respect to temper types as they were with paste colors. And this also raises the issue that a visual inspection of paste temper may be less useful in terms of studying the provenance of figurines, or differences in supply chains to sites in the Basin of Mexico.

The significant results for the Chi-square tests at Axotlan and Teotihuacan are informative in the sense that we can say period and temper types are not completely independent variables, and point to some minor changes over time. The utility of paste temper, however, in studying regional systems of production and exchange is fairly limited given the ubiquity of Small Black Reflective temper during all periods and at all sites, and the difficulty in noticing subtle temper differences using the naked eye.

Petrographic analysis would likely prove more informative than a basic visual inspection, and would be a productive avenue for future research on figurines in the Basin of Mexico.

Paste texture was the final component considered here and was observed to change slightly over time. Medium textured paste was common in all periods at all sites, and made up an increasingly large percentage of each assemblage over time. Fine pastes

were common at the rural sites in the Middle and Late Formative, but they declined and almost entirely disappeared after the Late Formative. Coarse pastes also declined and nearly disappeared at the rural sites during the Teotihuacan period, although they persisted at Teotihuacan, continuing to make up close to 20% of the assemblage through the Classic period.

There were diachronic changes in the paste characteristics of the figurine assemblages from every site, and many of these changes seem to have coincided with the rise of Teotihuacan. Axotlan and Cerro Portezuelo both experienced a decrease in terms of the diversity of paste colors after the Late Formative, and during the Terminal Formative a paste color profile was established that persisted through the Classic periods at both sites. The timing of the changes combined with the stability of the paste color distribution through the Teotihuacan period suggests that these changes were not independent of larger sociopolitical and economic changes in the regional system. Axotlan appears to have more closely aligned itself with the urban center, either using similar clay sources and firing techniques, or directly importing figurines from the city, producing a paste color profile at the Axotlan that was nearly identical to that of Teotihuacan. At Cerro Portezuelo, elements of the chain of figurine production and procurement diverged from Axotlan and Teotihuacan, but the nature of the divergence is still unclear.

It would not be surprising to find that each of the four sites under investigation displayed a pattern similar to Cerro Portezuelo, where ceramic production occurred locally, coupled with exchange with lateral and hierarchical partners. In fact, the different

paste profiles for each site, especially the changes observed in those profiles, point to such a situation where the assemblages were shaped by both local production and sub-regional exchange. And the pruning effect observed in paste color and temper types during the later periods may be a result of more structured exchange relationships in an altered political environment.

The rise of Teotihuacan as a primate center undoubtedly affected regional community relationships in the Basin, which would have influenced patterns of production and exchange in the region. Unfortunately, additional source analysis and INAA is needed to clarify and quantify in what ways these relationships changed, and how figurine use and production was effected. At the very least, I believe we can reject Hypothesis 4a, which posited that figurines around the Basin would be stylistically, thematically, and *compositionally* similar to those produced at the core. Even without the results of chemical analysis, visual inspection of the pastes revealed enough differences to strongly indicate that not all figurines were from the same source. Clearly, the relationships involved in regional figurine production and consumption were more complex than that. The evidence considered in this chapter supports Hypothesis 2c, in that there do appear to have been differences in the material composition of figurines from one site to another, although it is difficult to isolate the cause of the differences.

Conclusion

Visual analysis of paste is a somewhat problematic endeavor as the interpretation of differences is difficult due to a myriad of factors. Nevertheless, the results indicate that

at the very least there was not a static configuration of paste color, temper, and texture across time and space in the Basin of Mexico, and the nature of the variation allows for preliminary interpretations, which should be tested by chemical analysis when it becomes feasible.

All four sites had Formative assemblages that displayed a greater degree of diversity in paste color, temper, and texture than in later periods. Second, all four sites experienced a pruning effect over time, where two main paste colors came to dominate the Early Classic and Classic assemblages, and diversity in paste temper and texture similarly decreased. Third, sites that were nearer to each other had more similar paste color distributions in the later periods than sites farther away. Finally, of the four sites considered here, Teotihuacan had the most diachronically consistent profile of paste color and temper. The changing nature of paste color, temper, and texture profiles at the other sites could be indicative of changing access to raw materials or preferential exploitation of different sources in different periods, which would affect figurines made locally. Another possibility is that shifts in economic relationships with sites around the Basin could have influenced the properties of the figurine assemblages at each site if figurines were traded on a regional scale. Given the range of variation in paste composition seen in the four assemblages, these figurines were likely not all produced in the same place or under the same conditions. If that were the case, one would expect greater overlap in paste color and temper profiles at all of the sites. Some figurines were probably made at the sites in which they were found, and some may have traveled from Teotihuacan or other sites in the Basin of Mexico.

The Late to Terminal Formative period transition seems to have been when many of the sites began to settle into paste color, temper, and texture profiles that would characterize site assemblages through the Classic period. The Terminal Formative was also the period when the population of Teotihuacan was starting to expand and many of the major monuments were under construction. Furthermore, as I argued in the previous chapter, this was also the time when Teotihuacan-style figurines begin to be found in rural sites. The appearance of Teotihuacan figurines as well as the changes in paste composition at the rural sites strongly point to the spread of Teotihuacan influence. Whether Teotihuacan's influence was passive or direct is impossible to tell at this point based on figurines alone, but I believe the evidence presented here (in tandem with the work of other scholars) substantiates the basic presence of that influence.

CHAPTER 8. GENDER IDEOLOGY DURING THE RISE OF TEOTIHUACAN

In this chapter I examine the figurine assemblages through the lens of gender, and discuss the implications for our knowledge of gender ideological constructs in the Basin of Mexico before and during the expansion of Teotihuacan. The visual imagery contained in these figurines, which is a locus for the creation and recreation of cultural beliefs, reflects the ways in which the social and ideological categories of men/women, male/female, and masculine/feminine were constructed. The act of representation is inherently linked to the discursive process of gender construction, and gender is therefore subject to inquiries through these images that were part of the active construction of gender relationships, rather than passive reflections of established gender systems. We can interpret these ancient images not as accurate representations of past social realities, but as reflections of ideological systems and active constituents in the formulation and performance of the beliefs, values, and ideas therein. Identifying these values has important implications for our understanding of Teotihuacan social and ritual life, and how these spaces articulated with imperial ideology and institutions.

Using sexual attributes and clothing to look at how figurine bodies were portrayed in the Basin of Mexico before and during the Teotihuacan state, I argue that in a break with previous Basin of Mexico cultures, women became diminished actors in Classic period Teotihuacan domestic rituals as the rituals were reoriented to focus on the roles of men in Teotihuacan society and the imperial apparatus. In the Formative periods, representations of women were frequent, and femaleness was indexed through a number of variable physical attributes. The number and types of sexual attributes present in the

figurine assemblages dropped dramatically in the Terminal Formative, and disappeared altogether by the Early Classic period. During the Classic, representations of women became infrequent and standardized, whereas contemporary images of men became diverse and increasingly ornate.

Given the interconnection between identity, beliefs, and ritual, a change in ritual paraphernalia likely indexes a change in the ritual itself and therefore reflects changes in the beliefs and identities of the people who practice these rituals. The reduction in the visibility of women in figurine form during the Classic period points to a potential change in the form or content of domestic ritual during this period. This specific transformation in figurine culture points to a change in the status or roles of women in society coinciding with the emergence of Teotihuacan.

Through a regional comparison of the gendered aspects of figurines before, leading up to, and during the period when Teotihuacan was at its most expansive apex, I show how the emergence of this regional political power fundamentally changed the nature of how people were socially constructed, which is evidenced by the ways in which humans were portrayed in figurine form. This is not an exhaustive exploration of all representational art from this period, but rather a consideration of the way human bodies were portrayed in the medium of ceramic figurines, and what a critical comparison of these images can tell us about how people in the Basin of Mexico thought about the human body, the person, and the overlapping ideas of gender and sexuality.

Gender in Archaeology

Gender is a fundamental element of human social interaction. As a constitutive part of a person's identity, gender has a large impact on how that person experiences and interacts with the social world around them. The construction of gender is not only a social process but also a structuring principle, and sets foundations, rules, and boundaries for social life. Given its central role in identity formation and human interaction, a consideration of gender is necessary in anthropological investigations of social practices. In order to study gender, we must view it as a socially constructed feature of identity that does not map directly onto biological categories. Furthermore, the notion that sex is a biological fact in contrast to gender as a cultural construct is a contested idea (Fausto-Sterling 2000, 2012; Johnson and Repta 2012). The human body cannot ever be reduced to a purely biological, culture-less state (e.g. Butler 1993, 1999).

Gender is not an innate, essential property of an individual, but rather the result of a life-long process of active creation and performance (Butler 1993, 1999). Through specific gestures, manipulations, and alterations of the body, a gendered identity is created and constantly reenacted. These actions are often read as expressions of a wholly formed gender identity, but they are in fact the ongoing generative performance of gender itself. As Butler puts it, "...gender proves to be performative that is, constituting the identity it is purported to be. In this sense, gender is always a doing, though not a doing by a subject who might be said to preexist the deed" (Butler 1999: 33).

Modern western conceptions of gender view it as occurring on a spectrum, with potentially infinite intermediate values. Archaeologically and ethnographically described

populations have variously configured gender systems, many of which have set numbers and types of genders, but within these there is a great deal of variation and socially ascribed gender roles vary from one culture to another (Hollimon 2000; Kang 2014; Roscoe 1998; Powers 2005; White, Burton, and Brudner 1977).

Sex and gender dynamics are fundamental to culture and cultural systems, and therefore gender cannot be left out of system-level analysis or processes (Wylie 1991: 35). The variation in the social expression of gender is never in terms of presence or absence—all cultures have gender ideologies—but in conceptualization, configuration, and performance. Just as it is never not present, neither is it a static, fixed state of being; gender is performed in a discursive manner on a daily basis (Butler 1993, 1999). Objects have a key role in the performance and practice of gender, given our entanglement with them (Hodder 2011, 2012), and can be used to study this discursive practice in ancient contexts. Figurines in the Basin of Mexico provide an excellent opportunity to examine the diachronic production of gender, and transformations that occurred in this process coinciding with the emergence of Teotihuacan.

Feminists and 'Finding' Women in the Past

Late twentieth century feminist archaeology critiqued the androcentric bias in anthropological research and spurred an increasing number of studies that sought to re-people the past, primarily by "finding" women in archaeological materials (e.g. Conkey and Spector 1984; Spector 1991). But finding women was only a partial remedy to a much larger problem in archaeology, which was the paucity of considerations of gender

in archaeological studies. Some of the earlier feminist critiques in anthropology that attempted to inject gender into social equations took a Marxist approach (e.g. Leacock 1978; Gailey 1985, 1987), investigating the nature of the sexual division of labor and state formation. Although traditional Marxism does not spend much time explicitly discussing gender, this theoretical alliance made sense in that both perspectives were intensely interested in social difference and conflicts between segments of society. The resulting feminist Marxist scholarship perceived a significant disjuncture between egalitarian and class-based societies in terms of how genders were valued and positioned in relation to one another.

The emergence of state-level societies was long thought to have had a universally detrimental impact on women's status in these societies (e.g. Gailey 1985; MacKinnon 1982; Sacks 1976). Christine Gailey (1987) detailed the shift in gender ideologies that accompanied the rise of state-level societies in the Tongan islands, observing that with the emergence of gender hierarchy, men generally emerged on top of that hierarchy, and the ability of women to wield social power and influence weakened. Gailey argued that women's positions in society invariably worsen with the rise of states due to the weakening of the importance of kinship relations that generally accompanies the transition to a class-based society. The break occurs, according to Gailey, with the formation of classes, commodity production, and market exchange in state-level societies, which emphasizes the more narrowly-defined productive capabilities of its members and downplay the importance of kinship as a structuring principle. Prioritizing

productive labor divorced from earlier kinship structures results in a devaluing of women's labor, and the downgrading of their position and status in society.

Yet this universalizing interpretation inadvertently naturalized inequalities that are products of specific historical processes and realities of modern patriarchal societies, and was contested even by scholars within the second wave movement (Silverblatt 1988). In the quest to uncover ancient gender systems it is important not to uncritically essentialize the roles and status of women across societies, or even within societies for that matter (Pyburn 2004; Stockett 2005; Nelson 2004). In his critique of the neo-evolutionary approach to archaic states, Yoffee (2004: 116-130) stresses how such thinking oversimplifies the lives of women in such societies. Drawing on a micro-historical case study from Old Babylonian Mesopotamia, Yoffee points out that women's lives and social roles in ancient Mesopotamia were variable, diverse, and subject to change based on the historical and political context. A broad, sweeping claim regarding the position and experiences of women in Mesopotamian society would not do justice to the intricacies of any of them, and this is true of any complex society.

Current investigations of ancient gender systems in hierarchical and state-level societies are informed by third-wave feminism and focus more intently on individual experience, agency, and subjectivity (Spencer-Wood 2011), although ancient conceptualizations of individualism are debated (Knapp and van Dommelen 2008; Insoll 2007). Scholarship considers the complicating factors of age, class, race, and sexuality, and how these other social dimensions intersect with gender (Schmidt and Voss 2000; Voss 2008). The result has been an increased scholarly awareness of not only the

diversity of women's experiences within and between cultural settings, but the roles and experiences of men and other genders as well (Moral 2016), since considerations of one gender alone inherently lack crucial information about their position in the broader social system (Geller 2009a). The result of this increasing sensitivity to the potential for diversity in ancient populations has been an increased scholarly awareness of the diversity of experiences within and between genders (Geller 2009a, 2009b; Nelson 2004, 2006, 2007; Wylie 2007), and the particulars of gender formation, expression, relationships (Meskell 1998), and structures of power in unique historical contexts (Meskell 2002; Sweely 1999).

Nevertheless, investigations of gender ideologies and how they intersected with individual experiences in ancient state-level societies remains an important topic of archaeological research. Understanding the spectrum of sexual and gender-based social differences within a society is instrumental to understanding how that society is structured and operates.

Gendered Bodies and Representations: Studying Sex and Gender Through Archaeological Images

An analysis of gendered visual imagery has the potential to inform us about ancient gender systems, and the ways in which these systems were maintained or negotiated over time (Brumfiel 2007, 1996). Gero and Scattolin (2002: 163) propose that scholars make use of visual imagery and take note of "...gendered representations or images in public and private contexts, inquiring how closely the represented images

match social realities, where and in what directions distortions are introduced (and why), and under whose control is the production of gendered images." Figurines are unique in that they were one of the few—and certainly most numerous—classes of figurative art in Basin culture that depicted the human form, and as a result, they are uniquely situated to inform us about ancient gender systems. An analysis of figurines allows us to probe the cultural constructs of men and women and masculinity and femininity, and how these concepts were constructed, represented, and shared (or not) between communities. Changes in the way figurine bodies were formed, styled, and ornamented indicate transformations in the way value was placed on gender categories between places and over periods of time.

More than a passive reflection of aspects of human life and culture, material culture is an active participant in the construction of social meaning, human behavior, and culture (Conkey 1991: 71; Hodder 2011, 2012). Art objects are part of material culture, but they are also set apart from the rest of it in that they are privileged by the social meaning they convey and the psychological effects they may provoke in the observer (Sjöstrand 2017). As Gell (1998) has advocated in his action-centered approach, art objects exist as part of a system of actions and reactions, and are able to act as agents themselves and alter the behavior of other agents through the 'abduction of agency' (see discussion in Chapter 4). Thus, an art object is both a material product of a system of representation built around agreed upon rules, customs, and conventions relaying meaning that would have been understood by their original makers and owners, and also a performative sign in the semiotic sense (Parmentier 2016). Gell's approach expands the

interpretive possibilities for figurative art such as figurines beyond purely symbolic, aesthetic, or functional studies.

The perspective of embodiment has been a popular approach to the subject of figurative ancient art (Joyce 2003, 2005), and complements Gell's suggestion that we consider art objects as having agentic potential. Since the body is identified as "...the locus of identity formation," modifications made to the body are akin to donning a 'social skin' and serve both generative and identifying functions (Fisher and Loren 2003: 225). Gendered identities were performed, normalized, and communicated between individuals in the act of shaping and ornamenting a body. "The textualization of the body's surface is increasingly viewed as a more or less deliberate social strategy through which embodied identities were shaped, not simply signaled" (Joyce 2005: 143). Representations of the human form such as figurines are thus one of the best sources of evidence for how past human cultures inscribed meaning onto human bodies and are particularly useful in studying gender, sexuality, and identity in ancient societies

Methods of dress and bodily ornamentation such as clothing, jewelry, hairstyles, piercings, tattoos, and cosmetics function to both construct and encode messages regarding a person's identity. Clothing and jewelry can mark aspects of social identity such as status, wealth, and gender, but they can also be interpreted as constitutive parts of the process of socialization and the embodiment of social identity (Lee 2000: 114; Joyce 2005: 142-144). More than a signal about personal or community identity, bodily ornamentation can be an active and constructive element that shapes identity in people.

Joyce's (2000: 474) discussion of socializing Aztec children into adulthood presents bodily ornamentation in this way:

Presented at birth as raw materials like precious stones and feathers that were shaped into body ornaments, Aztec children were gradually socialized through habitual action, costume and ornaments...Items of costume should be considered as potential media for lifecycle transitions, and contrasts in their patterns of use evaluated in light of the possible importance of costume as a medium for materializing properly socialized embodied persons.

From this perspective, clothing becomes an active part in shaping, changing, and maintaining social and gender identities. Clothing and bodily adornment is one element of the larger performative practice that is gender (i.e. Conkey and Gero 1991; Butler 1993, 1999), and as such can be used to explore ancient gender ideologies.

Depictions of nude bodies allow us to study the human form as seen through the eyes of their makers. The human form in visual imagery is rarely a faithful rendering of every natural detail, and the way that ancient artisans formed and shaped bodies reveals important elements of relevant ideologies. Depictions of genitalia and sexual attributes can help to assign a sex to figurines, although in many cases these details are absent, and other clues or markers may have been included as a way of marking sex, gender, or other socially important categories. Naked bodies should not be viewed as being in a natural state devoid of cultural attributions, and we should be sensitive to the myriad interpretive possibilities when it comes to these figures. In different artistic traditions, culturally-specific strategies are used to convey important information. In ancient Mesopotamian renderings of human bodies for example, certain female primary sexual attributes such as vulvae and pubic triangles were important markers of femininity whereas emphasis on

musculature and certain bodily positions were important markers of masculinity (Bahrani 2001: 42).

Bahrani (2001) and Graff (2014) discuss nude ceramic plaques from Akkadian-period Mesopotamia (ca. 2350-2150 BCE), and argue that these nude images invoked ideas of sexual allure rather than fertility. Although Bahrani (2001) focuses on the idea of sexual allure, which departs from traditional discussions of female figurines as fertility fetishes, these concepts may not have been as dichotomous as they seem to modern sensibilities. While modern art historians distinguish between "nude" and "naked," Graff (2014) argues that this was not a relevant distinction to ancient Mesopotamians. Figurines that wore no clothing but did wear jewelry may have been perceived by their users as dressed in a sexualized way.

An analysis of figurines, nude or clothed, is an examination of one site of the generation of an ancient system of gender and the subjectivity of ancient living bodies. This chapter analyzes the figurine assemblages through the lens of gender, paying attention to the various ways that certain physical and decorative elements were wielded to varying effects. Though we may never be able to fully "read" these figurines, a consideration of changes over time and space to the strategies used to convey gender through figurines reveals how the categories of man/woman, male/female, and masculine/feminine were constructed and valued in society.

Reconstructing Gender Systems at Teotihuacan

The gender ideologies present in Teotihuacan society are still a subject for debate. Some scholars argue that gender was not an important factor in structuring social relations at Teotihuacan, and some evidence does point to a less rigid gender hierarchy than in other contemporary societies. De Lucia (2008) argues that group identity was a more salient structuring principle than individual identity in Classic period Teotihuacan, and fails to detect much evidence for a gender hierarchy. While it is entirely possible that group identity was considered to supersede individual identity, gender is an essential aspect of a person's self and social world, and no doubt influenced daily interactions and practices for ancient Teotihuacanos. De Lucia's point that we should not necessarily begin an exploration of gender in ancient society by assuming the presence of a hierarchy and looking for evidence of male superiority, however, is very well taken. And data from mortuary studies does indeed seem to show that simple dichotomous gender inequalities do not adequately account for the range of variation observed in the mortuary treatment of males and females in different urban compounds and rural sites (Sempowski and Spence 1994; Clayton 2009, 2011).

In contrast, other scholars do find differences in the construction of gender throughout the city. Based on the observation that there were few qualitative distinctions between the burials of males and females, yet on average female skeletons had fewer grave goods than male skeletons, Sempowski (1994) argued that women in Teotihuacan society had less social standing than men. In her comparison of mortuary practices at Axotlan and several urban apartment compounds, however, Clayton (2009: 256) has

found that even though females were less likely than males on average to have associated grave goods, the difference was not statistically significant, and was not in fact the most important difference between mortuary contexts. Clayton found that the difference in rates of associated grave goods *between* locales was in fact significant, as were several other elements of mortuary practice. (Note 1) Analysis of mortuary treatment and associated offerings from a number of compounds within the city and from the site of Axotlan indicate that the relative status between men and women in Teotihuacan society was quite variable and was dependent on social, economic, and temporal contexts (Clayton 2009, 2011). Even though women were on average less likely to have grave goods than men, when the full range of associated burial behaviors (i.e. body position and orientation, offerings, types and quantities of offerings, etc.) are considered, notions of a strict and uniform gender hierarchy collapse.

The apartment compound is known to have been an important space for economic, ritual and social interaction, and therefore social emphasis at Teotihuacan may have been placed on group affiliation, or compound and community membership (De Lucia 2008: 30). As such, status may have been more heavily dependent on factors other than gender, but that does not mean that gender was not an important structuring principle. Based on the available evidence, it is too simplistic to assert that women were *de facto* of lower status than men, or that there was a strict gender hierarchy that privileged men over women.

Observations from the figurine assemblages, however, suggest an added layer of complexity to the problem of the evolution of gender ideologies in the Basin of Mexico.

The near disappearance of representations of women in the figurine tradition in the Classic period suggests that women's roles and importance in domestic ritual may have declined or at least changed over time. Potentially this is due to the increasing interests of Teotihuacan in maintaining an involvement in private domestic ritual, and shifts in imperial ideology and domestic ritual practice to themes such as militarism, which excluded women. This chapter discusses the long-term patterning of representations of women and men in the Basin of Mexico figurine assemblages in order to provide some clarification to ongoing discussions of Teotihuacan gender ideologies.

Female and Male Sexual Attributes

All occurrences of primary and secondary sexual characteristics were recorded during data collection. Examples of primary sexual characteristics found in the figurine assemblages included incised or applied vulvae, incised pubic triangles, and male genitalia. The secondary characteristics that were recorded included breasts and "pregnant" (distended) abdomens.

Sexual attributes on figurine torsos were made using various techniques. These techniques included modeling the clay during the initial formation of the torso, subsequent appliqueing or incising of the torso, or a combination of all techniques. All four assemblages included figurine torsos with primary and/or secondary characteristics, and all cases of attributes were confined to the Middle through Terminal Formative periods—no sexual attributes were found in the Classic assemblages.

Gynomorphic features were by far the most common category of sexual characteristics (Figures 8.1-8.4). Breasts and pregnant torsos were the two most common attributes found overall. At Axotlan and Huixtoco, pregnant torsos (and sometimes regular ones as well) had a singular circular indentation in the bottom half of the torso representing the umbilicus. At these sites, pregnant torsos typically co-occurred with large breasts. Conversely, Terminal Formative pregnant torsos at Teotihuacan never had the umbilicus indentation, nor did they co-occur with breasts, which makes the interpretation of them as referencing pregnancy problematic. The two next most common attributes were variations on female genitalia: vulvae and pubic triangles (Figure 8.1). Vulvae were either indicated by the application of coffee bean appliques, or a vertically incised line at the bottom of the torso. Pubic triangles were made by incising the clay in the shape of a triangle on the bottom third of the figurine torso.



Figure 8.1: Middle and Late Formative gynomorphic sexual attributes from Huixtoco (breasts, pregnant torsos, pubic triangles, and vulvae)



Figure 8.2: Middle and Late Formative gynomorphic sexual attributes from Axotlan



Figure 8.3: Gynomorphic sexual attributes from Cerro Portezuelo



Figure 8.4: Gynomorphic sexual attributes from Teotihuacan

Andromorphic features were found on a small minority of torsos (n=5), and in only the Middle and early Late Formative periods (Figure 8.5). In the earliest case, which was from Axotlan, a seated torso had three small appliques between the legs of the figurine, indicating male genitalia. The four cases from Huixtoco, dating to the Middle to Late Formative transition (they are counted in the Middle Formative count here), were all standing, and a penis was indicated by an oblong applique attached to the bottom of the figurine torso between the legs.



Figure 8.5: Middle and Late Formative andromorphic sexual attributes from Axotlan (left) and Huixtoco (middle and right)

During the Middle Formative, nearly half of the figurines analyzed had evidence of one or multiple sexual attributes, but they were not uniformly common across all sites (Table 8.1). Nearly two-thirds of the torsos at Huixtoco had sexual attributes of some kind, which was the highest rate for any site during any period. Axotlan had noticeably fewer examples (11%), and the total count at Cerro Portezuelo was so low that the rate is unreliable. (Note 2)

During the Late Formative, the overall rate of sexual attributes in the Basin increased (60%). The rate of sexual attributes increased dramatically at Axotlan (57%),

and the rate held steady at Huixtoco (61%). Although Cerro Portezuelo and Teotihuacan had high rates, the low counts at each site make their rates unreliable. The Basin-wide rate of sexual attributes plummeted moving into the Terminal Formative (7%). The rates at Axotlan and Teotihuacan were below 10%, and Cerro Portezuelo had a rate of 24%; torso counts at each site were higher than in previous periods, making these estimates more reliable. Sexual attributes of all types were absent at every site during the Early Classic and Classic.

Table 8.1: Rates of Sexual Attributes on Figurine Torsos by Period

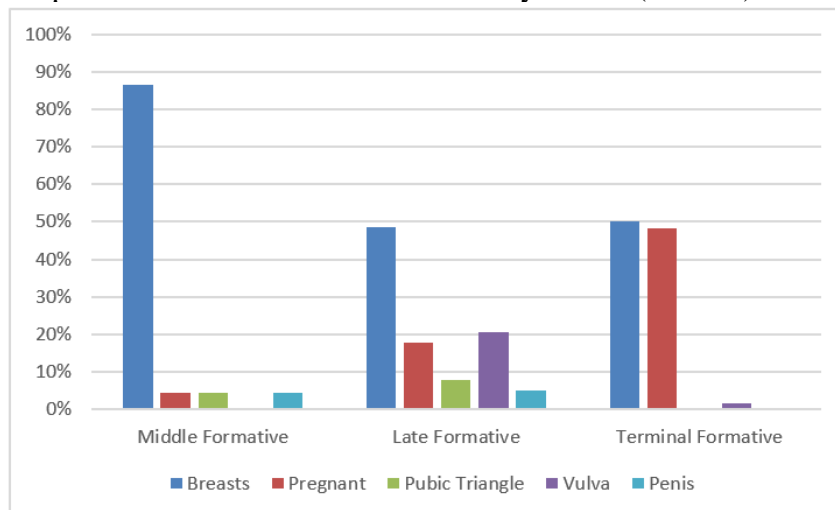
Period	Site	Attributes	No Attributes/ Unknown	Total	% Torsos with Sexual Attributes
Middle Formative	AXT	2	16	18	11%
	CPZ	1	1	2	50%
	HXT	18	11	29	62%
	TEO				
	Total	21	28	49	
	%	43%	57%	100%	
Late Formative	AXT	12	9	21	57%
	CPZ	1	1	2	50%
	HXT	48	31	79	61%
	TEO	2	1	3	67%
	Total	63	42	105	
	%	60%	40%	100%	
Terminal Formative	AXT	1	22	23	4%
	CPZ	8	25	33	24%
	HXT				
	TEO	50	737	787	6%
	Total	59	784	843	
	%	7%	93%	100%	
Early Classic	AXT		41	41	
	CPZ		13	13	
	HXT				
	TEO		366	366	
	Total		420	420	
	%	100%	100%		
Classic	AXT		56	56	
	CPZ		10	10	
	HXT		3	3	
	TEO		559	559	
	Total		628	628	
	%	100%	100%		

In the Middle Formative period, breasts were by far the most common attribute, followed at a distance by other primary and secondary sexual characteristics (Table 8.2; Graph 8.1). The clear majority of sexual attributes were gynomorphic, however one example of male genitalia was found on a figurine at Axotlan that appeared to date to the Middle Formative. Sexual attributes were more prevalent during the Late Formative, and there was more variety in terms of the types present at each site. Breasts accounted for half of the sexual attributes recorded for this period, followed by vulvae, pregnant torsos, pubic triangles, and male genitalia, in that order. Huixtoco and Axotlan had the highest counts and the greatest variety in terms of the attributes that were present. Primary sexual characteristics virtually disappeared after the Late Formative. (Note 3) Breasts and pregnant torsos were still very much in evidence, although they were mostly restricted to Cerro Portezuelo and Teotihuacan; only one pregnant torso was found at Axotlan during the Terminal Formative. All primary and secondary sexual characteristics disappeared by the Early Classic period, and were not utilized again during the Teotihuacan period.

Table 8.2: Counts and Rates of Different Sexual Attributes by Site and Period

Period	Site	Pubic					Total Attributes
		Breasts	Pregnant	Triangle	Vulva	Penis	
Middle Formative	AXT	1	1			1	3
	CPZ	1					1
	HXT	17		1			18
	TEO						
	Total	19	1	1		1	22
	%	86%	5%	5%		5%	100%
Late Formative	AXT	7	3	2			12
	CPZ	1					1
	HXT	28	11	4	16	4	63
	TEO	2					2
	Total	38	14	6	16	4	78
	%	49%	18%	8%	21%	5%	100%
Terminal Formative	AXT		1				1
	CPZ	7	1		1		9
	HXT						
	TEO	23	27				50
	Total	30	29		1		60
	%	50%	48%		2%		100%
Early Classic	AXT						
	CPZ						
	HXT						
	TEO						
	Total						
	%						
Classic	AXT						
	CPZ						
	HXT						
	TEO						
	Total						
	%						

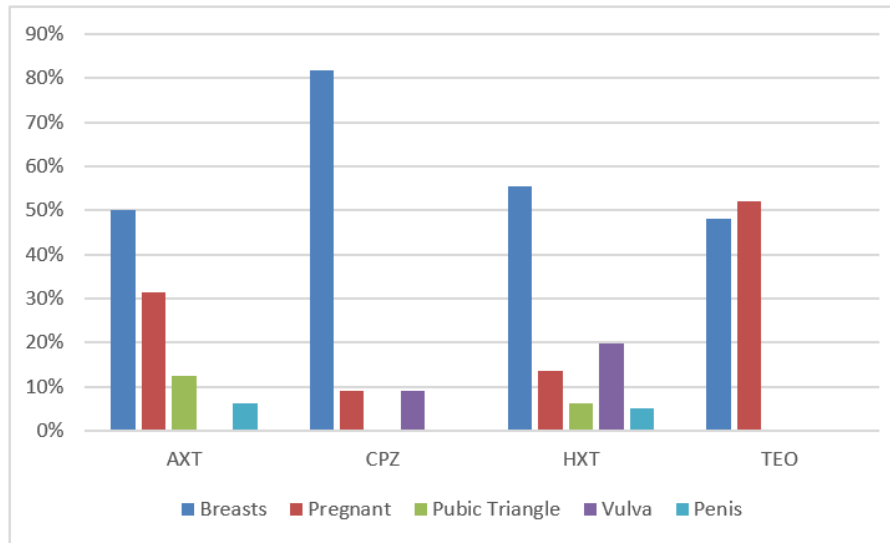
Graph 8.1: Ratios of Sexual Attributes by Period (all sites)



It seems that interest in portraying sexual characteristics, which had never been particularly pronounced at Teotihuacan, ceased as other elements of the Teotihuacan style solidified. The disappearance of sexual attributes on figurines coincided with the emergence of the Teotihuacan figurine style, which I place in the Early Classic period. Furthermore, this change was experienced at all sites investigated in this study. No primary sexual characteristics were displayed on figurines after the Terminal Formative (and quite possibly the Late Formative depending on the correct phasing of one figurine), and all sexual attributes ceased by the Early Classic.

Each site had a unique profile in terms of the most common sexual attributes (Graph 8.2). Teotihuacan's profile was atypical in that there were only two attributes recorded (i.e. breasts and pregnant torsos), yet they occurred in nearly equal numbers. In the rural sites, breasts were the most common attribute, but the ratios of other attributes were observed to vary between sites. Pregnant torsos, for example, were much more common at Axotlan than at Huixtoco or Cerro Portezuelo. Conversely, vulvae were absent at Axotlan, but present at both Cerro Portezuelo and Huixtoco. Pubic triangles were found at both Axotlan and Huixtoco, but not at Cerro Portezuelo. These variable distributions, however, did not prove to be statistically significant. A series of Chi-square tests using site as the independent variable and sexual attributes as the dependent variable returned insignificant results, indicating that even though there was variation by site, it was not statistically significant, and the distribution of sexual attributes cannot be said to be dependent on site.

Graph 8.2: Ratios of Sexual Attributes by Site (all periods)



In addition to the overall rates of occurrence of sexual attributes, I also explored the frequency and nature of co-occurrences of these features on figurines over time. Table 8.3 shows the counts and rates of figurine torsos (by site and period) that displayed combinations of different sexual attributes.

Table 8.3: Counts and Rates of the Co-Occurrence of Sexual Attributes on Figurine Torsos by Site and Period

Period	Site	Breasts		Pregnant		Breasts		Total Co-Occurrence	Torsos with Attributes	Rates of Co-Occurrence
		Breasts Vulva	Breasts Pregnant	Pregnant Vulva	Pregnant Pubic Triangle	Breasts Pubic Triangle				
Middle Formative	AXT		1					1	2	50%
	CPZ								1	
	HXT								18	
	TEO									
Late Formative	AXT		2					3	12	25%
	CPZ								1	
	HXT	5	5	1	3	1		15	48	31%
	TEO								2	
Terminal Formative	AXT								1	
	CPZ		1					1	8	13%
	HXT									
	TEO								50	

Co-occurrence of sexual attributes involved the appearance of more than one sexual attribute on the same torso, and was limited to the Middle through Terminal Formative periods. The majority of the cases occurred in Huixtoco in the Late Formative, where the rate of co-occurrence was 31% of torsos with any sexual attribute, however several examples were found at Axotlan, and one at Cerro Portezuelo. At Huixtoco there were several instances of repeated combinations, suggesting that these may have been the more common types. In the Late Formative period there were 18 examples of co-occurrence, 15 at Huixtoco and three at Axotlan. Breasts were combined with vulvae and pregnant torsos most commonly, followed by other combinations of sexual attributes.

Finally, in the Terminal Formative there was only one case of co-occurrence at Cerro Portezuelo, for the first and last time. As was mentioned earlier, both breasts and pregnant torsos were common sexual attributes at Teotihuacan in the Terminal Formative, but were never observed together on the same torso.

Style and Ornamentation in Representations of Women and Men

This section includes a more detailed discussion of the representations of femaleness and maleness, and femininity and masculinity as themes in the figurine assemblages, and the strategies for depicting said themes as well as changing conventions for doing so over time. In earlier periods, gender identity was communicated through the exhibition of sexual attributes, whereas in later periods, the focus shifted onto increasingly elaborate clothing and decorative accoutrements that reflected social position and standing. Certain features that were observed to change over time provide

clues as to how the general social categories of man and woman were constructed in Teotihuacan society, how this diverged from previous regional cultures, and what these changes tell us about the roles of men and women in domestic ritual and Teotihuacan imperial ideology.

There are a myriad of ways to represent gender and other elements of social identity on figurines. The presence and types of sexual attributes on figurines is one method, but jewelry and clothing are particularly important elements to consider when exploring the construction of gender in figurines. I explored the ways in which sexual attributes and jewelry were combined (or not) over time across sites (Table 8.4). (Note 4)

Table 8.4: Rates of Sexual Attributes, Jewelry, and Combinations on Figurine Torsos by Period (All Sites)

	Sex Attributes	Jewelry	Both	Neither	Total
	Only	Only			
Middle Formative	9	12	12	16	49
%	18%	24%	24%	33%	100%
Late Formative	48	9	11	33	101
%	48%	9%	11%	33%	100%
Terminal Formative	49	165	10	619	843
%	6%	20%	1%	73%	100%

During the Middle and Late Formative period, two-thirds of torsos typically displayed either sexual attributes or jewelry, or sometimes both. Only one third of torsos were completely unornamented. During the Terminal Formative, however, nearly three-quarters of figurine torsos were blank, or without jewelry or sexual attributes. Jewelry

alone was the next most common mode of representation, and torsos that had sexual attributes made up a minority of representations.

The presence of sexual attributes was inversely correlated with the presence of clothing over time, indicating a change in the strategy for constructing and presenting gendered identities on figurines (Graph 8.3, Table 8.5). Although clothing and sexual attributes were not mutually exclusive, neither were they commonly combined. Sexual attributes and clothing only co-occurred on 15 torsos throughout the 1,500 years considered in this study. (Note 5)

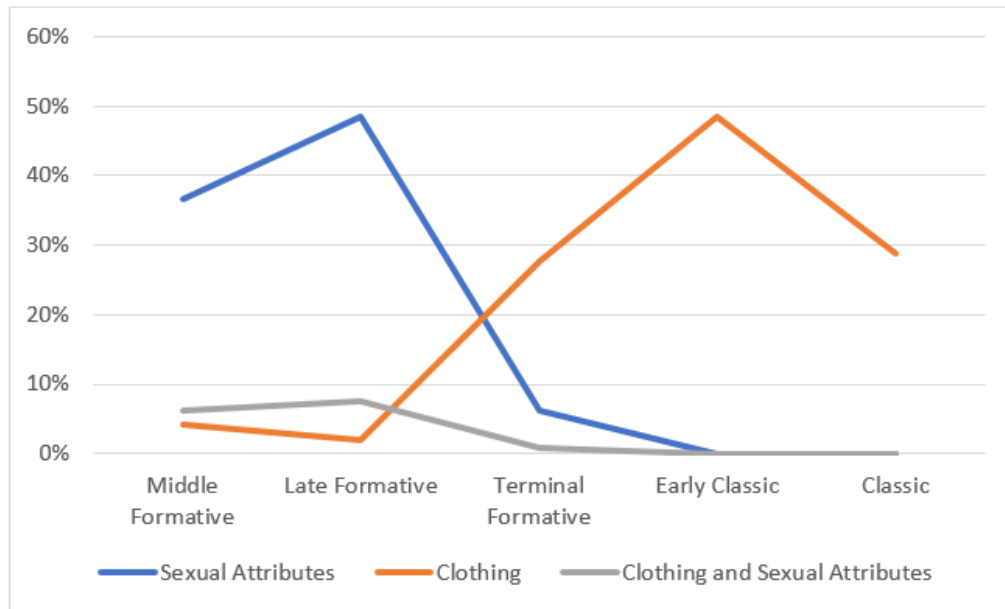
Clothing was present in every period, although it occurred on only 10% of figurines from the Middle and Late Formative periods. Clothing was limited to figurines from Huixtoco during the Middle Formative, and then appeared in low numbers at Axotlan, Huixtoco, and Teotihuacan in the Late Formative. There was no clothing found in the Cerro Portezuelo assemblage until the Terminal Formative. In the Terminal Formative, the overall rate of clothing on Basin of Mexico figurines increased to 29%, and the number continued to grow into the Early Classic, when 49% of figurine torsos wore clothing of some sort. The rate of clothing declined during the Classic to 29%, but this was largely due to the high rates of articulated and warrior figurines, which never wore clothing. Flat, molded figurines that do not fall into another specific type invariably wore clothing. If articulated and warrior figurines are omitted from the calculations, then the rate of clothed figurines during the Classic period increases to three-quarters (76%), and the remaining quarter is mostly highly fragmented figurines that may have been

wearing clothing originally, but either the clothing did not survive, or the torso was broken in such a way that only an unclothed portion such as the chest survived.

Table 8.5: Counts and Rates of Sexual Attributes and Clothing on Figurines by Site and Period

Period	Site	Sexual Attributes	Clothing	Clothing and Sexual Attributes	None/Unknown	Total Torsos
Middle Formative	AXT	2			16	18
	CPZ	1			1	2
	HXT	15	2	3	9	29
	TEO					
	Total	18	2	3	26	49
	%	37%	4%	6%	53%	100%
Late Formative	AXT	7	1	2	11	21
	CPZ	1			1	2
	HXT	42	1	5	31	79
	TEO	1		1	1	3
	Total	51	2	8	44	105
	%	49%	2%	8%	42%	100%
Terminal Formative	AXT	1	9		13	23
	CPZ	7	7	1	18	33
	HXT					0
	TEO	45	218	6	518	787
	Total	53	234	7	549	843
	%	6%	28%	1%	65%	100%
Early Classic	AXT		27		14	41
	CPZ		7		6	13
	HXT					0
	TEO		170		196	366
	Total		204		216	420
	%	49%		51%	100%	
Classic	AXT		42		14	56
	CPZ		8		2	10
	HXT		2		1	3
	TEO		129		430	559
	Total		181		447	628
	%	29%		71%	100%	

Graph 8.3: Rates of Sexual Attributes and Clothing on Figurines Over Time (all sites)



These numbers attest to a gradual and steady transformation in the way social categories were depicted in figurine assemblages over the course of a millennium and a half. Sexual attributes, which had been common on figurines prior to the Terminal Formative, started to give way to clothing in the same period, which continued to grow in popularity. At Teotihuacan, it does not appear that clothing was particularly common during the Patlachique phase, but it certainly was during Tzacualli and beyond. Apart from the two popular Classic figurine types that never wore clothing (articulated and warriors), all others were typically clothed.

Changing Ratios of Women and Men Over Time

In addition to waning sexual attributes and increasing clothing on figurines over time, there were also significant fluctuations in the rates of representations of men and

women across the periods under investigation. If we consider both female sexual characteristics and feminine garments together as varying strategies of depicting women, and male sexual attributes and typical masculine garments as strategies of depicting men (Table 8.6), then we can track the respective frequencies of representations of men and women in figurine assemblages over time (Table 8.7). This informs us about the changing uses of figurines and gradual shifts in ritual practice and gender ideology in the Basin of Mexico. As discussed in Chapter 6, feminine clothing styles were *huipils* (long dress-like tunics) or skirts, and *quechquemits*. Masculine clothing styles were belts, loincloths (or *maxlatls*), and tunics and capes with variable levels of ornamentation.

Table 8.6: Counts and Rates of Sexual Attributes and Gendered Clothing on Figurine Torsos by Site and Period

Period	Site	Female		Female Attributes and Clothing	Male Sexual Attributes	Masculine Clothing	None/Unknown	Total Torsos
		Sexual Attributes	Feminine Clothing					
Middle Formative	AXT	1			1		16	18
	CPZ	1					1	2
	HXT	15		3		2	9	29
	TEO							
	Total	17	3	1	2	26	49	
	%	35%	6%	2%	4%	53%	100%	
Late Formative	AXT	7		2		1	11	21
	CPZ	1					1	2
	HXT	37		5	4		33	79
	TEO	1		1			1	3
	Total	46	8	4	1	46	105	
	%	44%	8%	4%	1%	44%	100%	
Terminal Formative	AXT	1				9	13	23
	CPZ	7	1	1		6	18	33
	HXT							
	TEO	45	14	5		210	513	787
	Total	53	15	6		225	544	843
	%	6%	2%	1%	27%	65%	100%	
Early Classic	AXT			22		3	13	38
	CPZ			6		1	6	13
	HXT							
	TEO			119		32	191	342
	Total			147		36	210	393
	%		37%		9%	53%	100%	
Classic	AXT			6		39	11	56
	CPZ			2		6	2	10
	HXT			1		1	1	3
	TEO			20		171	359	550
	Total			29		217	373	619
	%		5%		35%	60%	100%	

Table 8.7: Counts and Rates of Gendered Figurine Torsos by Site and Period

Period	Site	Female/ Women	Male/ Men	Unknown	Total
Middle Formative	AXT	1	1	16	18
	CPZ	1	0	1	2
	HXT	18	2	9	29
	TEO	0	0	0	0
	Total	20	3	26	49
	%	41%	6%	53%	100%
Late Formative	AXT	9	1	11	21
	CPZ	1	0	1	2
	HXT	42	4	33	79
	TEO	2	0	1	3
	Total	54	5	46	105
	%	51%	5%	44%	100%
Terminal Formative	AXT	1	9	13	23
	CPZ	9	6	18	33
	HXT	0	0	0	0
	TEO	64	210	513	787
	Total	74	225	544	843
	%	9%	27%	65%	100%
Early Classic	AXT	22	3	13	38
	CPZ	6	1	6	13
	HXT	0	0	0	0
	TEO	119	32	191	342
	Total	147	36	210	393
	%	37%	9%	53%	100%
Classic	AXT	6	39	11	56
	CPZ	2	6	2	10
	HXT	1	1	1	3
	TEO	20	171	359	550
	Total	29	217	373	619
	%	5%	35%	60%	100%

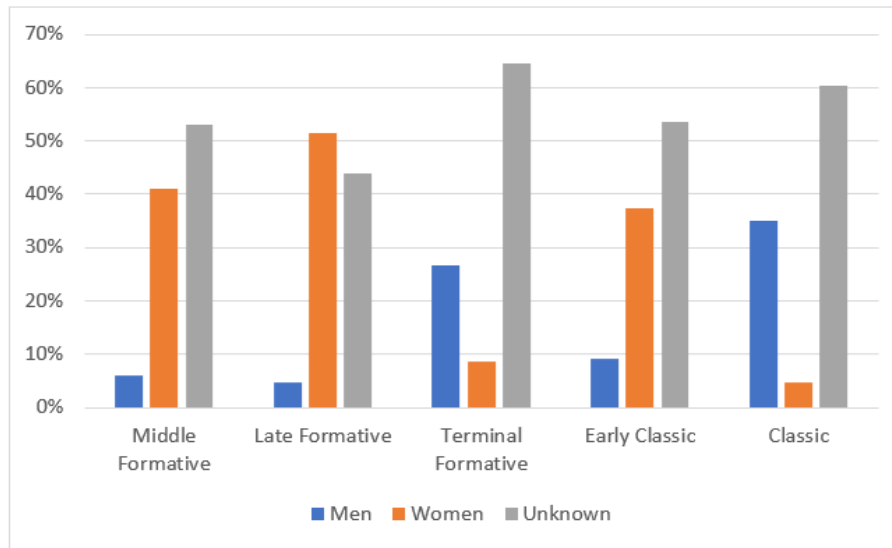
Middle and Late Formative assemblages were heavily skewed towards women, the representations of which primarily relied on sexual attributes to convey their identities as women (Tables 8.6-8.7, Graph 8.4). Representations of men made up 6% of the Middle Formative and 5% of the Late Formative regional assemblages, however half of

Middle Formative and nearly half of Late Formative figurines did not have readily identifiable sexual attributes or clothing. Therefore, while representations of women were common, so too were figurines where gender or sex was not made explicit, at least to etic observers. It could be that figurines lacking these attributes would have been recognized as masculine, and if we do tentatively assign them to the masculine category, then women and men both account for roughly half of the assemblages. However, it is equally plausible that they were not representations of men either, and I remained conservative in assigning gender to these figurines. The intentional absence of both clothing and sexual attributes is interesting, and may have but should not automatically be assumed to represent masculinity.

In the Terminal Formative, the preceding preference for representations of women over men was reversed and different strategies were employed for depicting women and men. Women continued to be marked by their sexual attributes, but only secondary attributes, and men were marked by their clothing. Terminal Formative representations of men (27%) were more common than those of women (9%), but both men and women were less common than figurines whose gender or sex was unknown (65%) (Fig. 8.9). In addition, the Terminal Formative was the only period in which a Chi-test showed that there was a relationship between site and the distribution of male and female figurines (Appendix U). Representations of men were far more common at Axotlan and Teotihuacan, while more figurines from Cerro Portezuelo were representations of women. Thus, whatever cultural transformation that was being reflected in the preponderance of males and females in figurines appears not to have reached, or was not

accepted by, all Basin communities simultaneously. Cerro Portezuelo continued for a while to produce or consume more images of women while other sites such as Axotlan more closely followed Teotihuacan's example.

Graph 8.4: Rates of Gendered and Unknown Figurines by Period (all sites)



In the Early Classic period there was another reversal in the ratio of representations of men and women. Once again, the majority of the figurines where gender could be assigned were judged to be representations of women (37%), and men (9%) made up a clear minority of the images. Representations of women were highly standardized in terms of form during this period, and experienced very little change after this point. Women were fully clothed and had standardized jewelry, which varied in only minor details. Masculine figurines wore increasingly ornamented belts and loincloths, but their torsos were predominantly nude, which together with breakage has no doubt contributed to their low counts in this period. Similar to the previous period, however, figurines without any clearly gendered clothing (53%) were in the majority. (Note 6)

During the Classic period, the balance swung back in favor of representations of men (35%), and representations of women (5%) were only a small minority.

Representations of women were especially infrequent at Teotihuacan (4%), but they were much higher at Axotlan (11%) and Cerro Portezuelo (20%). Although a Chi-test did not indicate that there was a statistically significant difference in the rates of distribution, the higher ratios of women in the rural sites is an intriguing pattern that is suggestive of incomplete emulation of Teotihuacan figurine practices.

The florescence of multiple functional and stylistic types that occurred during the end of the Early Classic and continued into the Classic seems to have left depictions of women behind. Multiple types and subtypes of Classic figurines wore masculine clothing, or no clothing at all, but clearly recognizable images of women—figures wearing a *quechquemitl* and *huipil*—occurred in only two forms: a flat, standing version, and a less common kneeling version, similar but not identical to the form of half-conicals (Figs. 8.9-8.10). Again, the majority of figurines did not wear gendered items of clothing, and so have been put in an "unknown" category. Most of these figurines, however, were articulated and warrior figurines, and while my inclination is to think of warrior figurines as representing men, I remained conservative with assigning gender categories to figurines based on speculation. The fact remains that even if most figurines did not clearly reference gender categories, images of women became a small minority among the diffuse types of Classic figurines. When the paucity of images of women is compared to the proliferation of images of females and women in the Middle and Late Formative,

and particularly the Early Classic, their low numbers during the Classic represents a striking change.

One possible reason for the higher rate of men at Teotihuacan during the Terminal Formative (preceding the brief switch back to higher numbers of women in the Early Classic) is that Teotihuacan figurine makers never seemed particularly interested in representing sexual attributes. The attributes that did occur were only ever breasts and pregnant torsos, and interestingly, these two attributes were never combined. Essentially, not only were sexual characteristics unpopular among early Teotihuacanos, traditional elements of feminine dress only started to appear in figurine form during the Terminal Formative, and did not become widespread until the Early Classic. And so the Terminal Formative may have been a time when, while elements of the Teotihuacan stylistic canon were crystallizing, Teotihuacanos were largely uninterested with the depiction of biological femaleness, but did not yet have a widely-accepted strategy for depicting femininity or women in figurine form. And so, when feminine dress became an agreed upon method of portraying women in figurine form, the characteristic fully clothed Early Classic woman became a popular type.

Representations of Women and Femininity Over Time

The inclusion of sexual attributes on figurine torsos was a common way of denoting gender during the Formative periods, particularly in the case of representations of women. From the Middle through Terminal Formative periods, nude female bodies were a common feature of figurine assemblages in the Basin. But these were not

schematized nor essentialized depictions of the female body. The figurines were never reduced to their sexual attributes, and the attributes were always proportional to other body elements. And there was variety in the selection and combination of attributes and other decorative elements. Many wore jewelry, although it was not a constant feature, and heads (when they survived) had expressive faces and wore a number of different headdresses. And the sexual attributes themselves were not consistent in their presence, arrangement, or combination with other attributes. Although these depictions frequently reference femininity, I argue that they should be read as "women" and not "Woman" (cf. Bahrani 2001). They were presented as social bodies, and variations within the social category of women abound.

A different interpretation that should also be considered is that these female figurines represented stages in the female reproductive cycle: adolescence, pregnancy, lactation, etc. The combination and recombination of sexual attributes such as pregnant torsos, vulvae, breasts, and pubic triangles could imply that rather than a static female body being represented over and over, figurines were reflecting a series of life stages of women. Cyphers Guillén (1993) encountered a similar situation in the Middle Formative figurine assemblage from the site of Chalcatzingo in the state of Morelos, Mexico, and interpreted this as evidence of these figurines being used in women's life-cycle rituals. Cyphers Guillén linked these rites of passage to broader issues of economic exchange and the accumulation of social power by households at Chalcatzingo. Many of the Middle and Late Formative figurines from the rural Basin of Mexico assemblages do reflect similar concerns through the emphasis of female sexual attributes on many of them, and they

may indeed have been involved in women's rituals and rites of passage linked to biological and social maturation and reproduction. I am inclined to think that this is generally too simplistic of a conclusion for the current study, however, as it discounts the portion of the assemblages made up of masculine figurines and figurines of indeterminate gender.

In previous sections I discussed the changes to form that occurred in feminine figurines around the transition from the Formative to Classic periods, namely that sexual attributes were replaced by feminine styles of dress, which represented an entirely different method of constructing femininity in figurine form. However, a mother and child motif was a noticeable retention from previous periods, and virtually the only commonality between Formative and Classic period depictions of women.

Figures 8.6 to 8.8 show different iterations of the mother and child motif throughout time, beginning in the Formative. The first row of images shows two Late Formative figurines from Huitxoco. The figurine on the left is an adult woman (with breasts and an incised vulva) holding a child in her left arm, whose body has been broken off at the chest. The two pictures to the right show a woman (with breasts and applied vulva) holding a nursing infant, also in her left arm. The next picture shows the only potential example of an early Teotihuacan figurine holding a child, most likely dating to the Miccaotli phase. Although badly broken, the figurine appears to depict a seated woman in feminine dress, holding a child on her lap that is also likely wearing a *quechquemitl* and *huipil*. The bottom row shows three molded Classic period examples of standing women holding small children on their left sides. These figurines come from

Teotihuacan and Axotlan, and there is a strong stylistic similarity between one of the Teotihuacan examples and the figurine from Axotlan, although they clearly came from different molds. The two figurines from Teotihuacan diverged in terms of dress and the positioning of the child. The figurine on the left wore an additional tied cloak, and instead of seeing the child's leg wrap around the mother's hips, instead there were two crossed arms hanging over her left shoulder, implying that the child was tied on or holding on to the mother's back. On every example of a woman and child in this study, from the Late Formative to Classic period, the child always appeared on the left side, indicating that there was a significance to the siding of this gesture.



Figure 8.6: Two Late Formative figurines from Huixtoco of a woman holding a child. Middle and right images show the infant nursing



Figure 8.7: Early Classic TMP figurine, possibly of a seated woman holding a child to the side



Figure 8.8: Classic period flat figurines of a woman in a *quechquemilt* and *huipil*, holding a child (two from Teotihuacan on left, Axotlan on right)

The mother and child motif persisted from the Late Formative through Classic periods (and was also found in later Aztec figurines). Even though sexual attributes were replaced by cultural ones, including clothing and increasingly elaborate jewelry, the image of a mother and child was a recurring feature, albeit in a minority of cases. In fact, Classic women carried children only approximately 10% of the time, or 3 out of 29 cases. Figures 8.9 and 8.10 show examples of the Classic period women figurines without children.



Figure 8.9: Classic female figurine from Axotlan (left), Cerro Portezuelo (center), and Huixtoco (right)



Figure 8.10: Classic kneeling torsos of women from Teotihuacan (left and center), and Axotlan (right)

From the Early Classic onward, *quechquemits* and *huipils* were standard dress for woman, and had seemingly become the only visual language for denoting femininity in figurines. Furthermore, and in further contrast to masculine figurines, in some cases women's bodies were quite literally their clothing. A common way of forming the typical Miccaotli and Tlamimilolpa standing women was to make a simple coil body and then

attach thin sheets of clay to form the clothing. However, many Early Classic women lacked any internal body and were simply constructed from the clay clothing itself.

Figurines wearing feminine clothing did not, for the most part, differentiate into distinct types during the Classic, although two different mold made forms wore the feminine outfit: a flat standing figurine, and a kneeling figurine (Figs. 8.9-8.10).

Furthermore, stylistic elaboration on their clothing was minimal; sometimes a cape was added, but the combination of a simple *huipil* and *quechquemilt* were requisites. (Note 7)

Finally, a minority of these figurines depicted women holding infants or children (and only on figurines from Axotlan and Teotihuacan). Beyond these domains of variation, however, Teotihuacan representations of women were remarkably standardized during the Early Classic and there was very little alteration made during the Classic period.

One caveat to this assessment is that none of the Classic period feminine bodies in this study retained their heads. It is possible that the headdresses that co-occurred with the standard feminine costume varied widely, and were an important element in communicating social meaning and subject matter. That is, the body and corresponding costume may not have been the most important part of the figurine for signaling social status, identity, and so on. Yet that in itself is an interesting change from previous periods, and contrasts with contemporary depictions of masculine figures, discussed below.

Representations of Men and Masculinity Over Time

The Middle Formative and the period of transition to the Late Formative were the only times when sexual attributes were used to signal masculinity in figurines. The examples in this study with male sexual attributes did not wear much in the way of jewelry or additional embellishment or details. The Middle Formative example from Axotlan had evidence of an eroded collar, but there was no jewelry on the four later examples. Two were burnished, while the others were not, and two had relatively proportional arms and legs, whereas the remaining three had truncated limbs, or stubs suggesting the presence of limbs (Figure 8.5).

Male sexual attributes were not present in the majority of the Late Formative assemblage, and neither was clothing (Figure 8.11). The rate of female torsos marked by sexual attributes reached almost 50% of the assemblage, and while the number of torsos that could be identified as male fell sharply (due to no identifying attributes or clothing), the difference was made up by torsos that could not be confidently classified either way, and easily could have been recognized as male.



Figure 8.11: Late Formative figurines from Huixtoco (left) and Axotlan (right), women and potential men in seated position

In the Terminal Formative, clothing such as belts and loincloths became increasingly common and elaborate (Fig. 8.12). The increase in male-associated clothing during the Terminal Formative is interesting in light of the fact that sexual attributes were still the preferred method of signaling femininity in the regional assemblages. The contrast between clothed and nude figures and the division along gender lines was at its most extreme during this period.



Figure 8.12: Terminal Formative Axotlan, Teotihuacan (two right)

Masculine attire continued to become increasingly elaborate during the Early Classic. Belts and loincloths carried extra ornamentation in the form of looped appliques, and some figurines wore punctilated applied clothing resembling pants (Figure 8.13). Although masculine attire increased in elaboration, it was not as well represented in the assemblages; the number of figurines wearing masculine clothing was quite low during the Early Classic compared to those wearing feminine attire or none at all. It could be that the poor state of preservation affected the numbers, and since masculine attire was frequently applied and confined to the waist, less of it may have survived than feminine clothing. It is equally likely, however, that clothing was not as important in marking masculine figures as it was in feminine figures, or that if clothing signaled class,

occupation, or group affiliation, then a lack of clothing relayed information about one of these more salient social categories. In either case, there were many Early Classic examples of torsos that clearly lacked any clothing (i.e. there were no breakage scars signaling that they once wore clothing).



Figure 8.13: Early Classic Teotihuacan torsos with clothing



Figure 8.14: Classic Teotihuacan torsos with clothing

Masculine figurines diversified into many types during the Classic period, and mold technology facilitated the elaborate designs and ornamentation observed in masculine clothing. Each figurine type had its own internal rules for determining dress,

but there was variation within them. Half-conical figurines, for example, appear to have typically worn a long, belted tunic and a cape (Fig. 8.14, center). Many versions were rendered in rather simple detail, while others had added tassels or belts, different types of jewelry, and there were even feather-patterned varieties (see Chapter 5).

Figure 8.14 shows three examples of different Classic figurine types wearing different forms of male clothing. A typical half-conical figurine is shown in the middle, flanked on both sides by other less common figurine types (that are currently not in one of the several well documented types). Each of these three figurines is dressed in different outfits, each with at least one unique garment. Both the figurines on the left and right wear tied loincloths, but the figurine on the left has no shirt or tunic and wears an unusual skull necklace, whereas the figurine on the right does not seem to be wearing much jewelry, but does wear a shirt, signaled by the uneven surface. And neither outfit on either figurine resembles the outfits on the half-conical variety. Masculine clothing (and figurine types) diversified in both quantity and qualitative properties, and it is difficult to compare across types since each type adhered to its own representational rules.

In summary, physical markers of biological sex were used sparingly and only for a rather short period of time to connote masculinity in figurines. Male sexual attributes stopped appearing by the middle of the Late Formative, and they never occurred at all within the Teotihuacan assemblage. Across the Basin, clothing gradually came to be used as a marker of masculinity, but only in relatively small numbers prior to the Classic period. Masculine garments increased in number and diversified in style during the Classic period, and appeared on many distinct figurine types. In this way, masculine

garments no longer signaled masculinity itself, but a wider range of social categories, where gender was only a facet of a more important social identity.

Discussion

Given the connections that have been made between art objects such as figurines and the discursive production of gendered identities, diachronic changes in the regional figurine assemblages point to a transformation in the constructive process of gender, domestic ritual, and figurine practices in Basin of Mexico society. The emergence of Teotihuacan as a cultural and political power in the Basin transformed the social landscape, and had measurable effects on artistic expression, ritual activity, and figurine culture.

For centuries, emphasizing femininity through signs of biological femaleness was a priority of figurine makers in communities across the Basin of Mexico. There was some variability, however, in terms of the gynomorphic attributes that were common at each site, and the ways in which they were combined with other features. The variability in distribution points to subtle differences in regional figurine traditions across the Basin of Mexico in the Middle and Late Formative periods. Although there was sufficient contact between different areas of the Basin for the same Hay-Vaillant types to appear in multiple sites removed by distances of up to 60 kilometers, there was also subregional variation between figurine assemblages.

The Teotihuacan tradition was largely uninterested in depicting sexual features, perhaps because they were not the determining factor in how social difference was

ascribed. The majority of Teotihuacan period figurines can be interpreted as depictions of gender identity through a culturally informed lens, as the culturally produced ornaments and costumes that adorned the body became more relevant signs of gendered identities and social positions than nude bodies. The transformation in strategies used to signal gender took place during the rapid urbanization of the city, and likely reflect the rapid stratification of Teotihuacan society.

Few Formative figurine conventions survived the Terminal Formative period when Teotihuacan society emerged, but a notable exception to this was the mother and child motif that survived into the Classic period, which provides weak support for Hypothesis 2d. The transition to fully clothed representations of women was a further and final departure from Formative figurine traditions. Representations of women became relatively fixed during the Early Classic—sexual attributes had disappeared by this period and feminine figurines were invariably fully clothed, in contrast to masculine and unspecified figurines. Over the next several centuries, representations of women became far less common and received very little stylistic modification in comparison to the types representing men, which flourished in number, diversified in type, and developed stylistically.

Teotihuacan is known to have been an active manufacturer of multiple types of figurines, which were found together in domestic ritual contexts in Teotihuacan apartment compounds. No longer were common "people" the subject of domestic ritual but rather the glorification of various aspects of Teotihuacan's ideological apparatus. As Teotihuacan grew to be the preeminent power in the Basin of Mexico and Teotihuacan

society became increasingly stratified, feminine figurines became increasingly standardized and rare. In the rural sites, however, Classic images of women occurred at somewhat higher frequencies than in the urban core, signaling that perhaps not all elements of Teotihuacan culture were expressed to the same extent in the rural periphery.

Although feminine figurine bodies had been spaces of artistic variation and experimentation in Formative figurine traditions, in Classic state-level society, the feminine body was static and highly standardized. Feminine bodies were rendered in a different visual language, which prioritized simplicity over the ostentation of contemporary masculine figures. Masculine bodies were now the spaces for adornment and elaboration. Even if detail was later added in paint, there would still be a marked difference between women's bodies and men's bodies in the Teotihuacan figurine canon. The resulting visual effect, which both mediated and reflected human construction and perception of the social world, was one of gendered difference. Classic period masculine figurines did not commonly reduce to "Man" the way that feminine figurines did appear to reduce to "Woman." If the increasingly elaborate costumes of Classic period masculine figurines at Teotihuacan reflect increasing social differentiation, then the simple and infrequent bodies of feminine figurines may reflect a lessened social or ritual standing, or at the very least a reorientation of domestic ritual towards different aspects of culture.

The increasing importance of ostentatious costumes on figurines during the Teotihuacan period reflects a stratified society in which people were acutely aware of social class and group affiliation. Class, occupation, and social group affiliation may indeed have been some of the more important elements of social identity, and

Teotihuacan period figurines reflect an increasing concern for such matters. On the other hand, the near disappearance of images of women during the height of Teotihuacan shows that women were increasingly invisible in material culture, and the discrepancy in the rates of masculine and feminine figures indicates important differences in the way men and women were seen as social and ritual actors in Teotihuacan society.

In Classic period Teotihuacan, women were unpopular subjects in every form of representational art. (Note 8) They were infrequent subjects in both figurine form as well as mural paintings, which was a departure from Early Classic conventions as well as the entirety of the Formative periods. This does not necessarily mean that Teotihuacan society was structured around a gender hierarchy in which women were second-class citizens; in fact, one of the most puzzling aspects of the body of Teotihuacan representational art is the apparent lack of images of rulers, and scholars would hesitate to claim that there was nobody wielding political authority in Teotihuacan, even though the nature of Teotihuacan rulership is still a subject for debate. Furthermore, the state-sponsored CDD workshop (see Chapter 5) seems to have produced molded women figurines in at least some numbers, however warrior figurines, half-conicals, bound, and other types seem to have been produced in much greater numbers, and results from Chapter 5 demonstrated that they were consumed in much higher numbers across the city. By involving itself in the production of feminine, masculine, and indeterminate figurines, Teotihuacan took an active role in shaping dominant gender ideology in Basin of Mexico society.

Conclusion

Across the Basin, the decline in images of women during the Classic period, and their replacement with a number of figurine types that seem to index social status, militarism, and occupations of political or religious importance, indicates that domestic ritual was gradually reoriented away from practices and beliefs that had been important in Basin communities for centuries, and towards the glorification of various aspects of imperial power. Women and men living in urban and rural Teotihuacan society likely served a number of social, religious, and economic roles, both within and outside of the household, that were dependent on status, age, location, and other factors, and which were no doubt sufficiently varied and complex that much of it may never be adequately reconstructed by archaeologists. Regardless of what women's and men's roles in society were, however, their role as the focal points and/or performers of domestic rituals seems to have undergone a drastic transformation during the Teotihuacan period, and in the Classic period in particular.

The changes observed in the Basin of Mexico figure assemblages related to gendered depictions of humans in figurine form is evidence of a general societal transformation that occurred alongside the emergence of Teotihuacan. The emergence of this expansive state-level society seems to have had strong and lasting effects on the gender ideologies of communities residing in the region. The cultural impact of Teotihuacan's expansion has important implications for our understanding of how the early state emerged, how hierarchical state-level societies in general affect the

populations that they come to rule, and how institutions articulate with the smaller scale processes that constitute human life.

Chapter 8, in part, has been submitted for publication of the material as it may appear in the Cambridge Archaeological Journal, 2017, Hagerman, Kiri L. The dissertation author was the primary investigator and author of this paper.

Chapter 8 Notes

(1) Females at Axotlan, for example, were far less likely to have associated grave goods than females at La Ventilla 3, who were in turn nearly as likely to have grave goods as the males within the same compound (La Ventilla 3). Given the variation between locations, it would be inappropriate to characterize women's positions in Teotihuacan society as generally inferior to men. Clayton proposes that gendered social roles and activities at Axotlan may have more rigidly mapped onto biological sex, whereas at La Ventilla 3 the gender-based division of labor may not have been as dichotomous (2009: 258). Inter-gender status divisions were further complicated by findings from the other locales. At Tlajinga 33, Clayton (2009) reports that the grave offerings of males and females were equally likely to contain obsidian, which suggests equal participation in certain sustaining economic activities, yet in general female graves were less likely to contain non-perishable offerings than male burials. Finally, the average number of objects per burial was also observed to vary between males and females and between locales. On average, females at Axotlan and Tlajinga 33 had significantly fewer grave offerings per burial, while at La Ventilla 3, the counts were nearly equal, and at Tlailotlacan 6, females had significantly more offerings per burial than males, although they were still less likely to have any offerings than males. The bodily position and direction of individuals was also seen to vary within sexes, between sexes, and between locales, indicating a very complex mortuary pattern that did not necessarily conform to one standard for men and women across space (Clayton 2009).

(2) The sample sizes at Cerro Portezuelo and Teotihuacan were too small to determine whether there was a reliable pattern of high occurrence during the Middle and Late Formative at either of these sites.

(3) There was one figurine torso at Cerro Portezuelo with a primary sexual attribute that I tentatively assigned to the Terminal Formative, but stylistically it did not closely resemble any period and so I admit the dating of this figurine was speculative. It could be that it dated to the Late Formative instead, meaning that all primary attributes ceased by the Terminal Formative.

(4) Beginning with jewelry, I calculated the rates of sexual attributes alone, jewelry alone, both, and neither on figurines by period. In the Middle Formative, each category was well represented. Neither sexual attributes nor jewelry was the most common form of representation, followed by figurines that had both jewelry and sexual attributes, and jewelry alone. Sexual attributes alone was the least common theme in representation. In the Late Formative, sexual attributes only was by far the most common mode of representation, followed by neither jewelry nor sexual attributes. Jewelry only and both jewelry and sexual attributes were less well represented than in the previous period. Although jewelry did occur on torsos in multiple sites, the emphasis on figurine bodies seems to have been on sexual attributes, or no forms of adornment at all. During the Terminal Formative, the neither sexual attributes nor jewelry category continued to rise, representing 73% of all torsos for this period. Sexual attributes decreased dramatically

(6%), as did the co-occurrence of both jewelry and sexual attributes (1%). Jewelry alone was the second most common mode of representation during this period (20%). The most notable difference when compared to previous periods was the dramatic decrease of sexual attributes. The rates of jewelry rose slightly, but plain bodies lacking in jewelry and sexual attributes were by far the most common.

(5) And on four of these the only clothing present was appliqued balls on the shoulders, which could be argued as some other type of decoration rather than clothing.

(6) These figurines were usually highly fragmented, and so may have originally had clothing, but others were clearly made without any clothing. Whether these were early warrior prototypes or simply conical figurines without clothing is unknown, as is the motivation for variably clothing some figurines but not others.

(7) Sometimes the bottom hem of the *quechquemitl* came to a point in the center of the figurine while in others it made a flat, straight line across the torso. I did not differentiate between the two, however, during data collection, and it is unclear which style was more common. Both the pointed and straight hem varieties occur in handmade Early Classic and mold made Classic versions of the figurines, so it is unlikely that we are observing a simple chronological separation between the two styles.

(8) Naturalistic portraiture was absent at Teotihuacan. In mural scenes on the walls of elite apartment compounds and in temples, humans were usually shown participating in religious activities and were only ever depicted as subordinate to deities—not to each other. De Lucia (2008: 21) interprets this as a lack of evidence for any kind of gender hierarchy in mural art. To the best of my knowledge, however, there are only two potential examples of human women in Classic period mural art at Teotihuacan. These two examples come from a mural at the Tepantitla compound, where two figures are engaged in a scattering ritual or offering on either side of an abstracted central figure—likely a deity. The two figures appear to be dressed in skirts and cloaks, but there is no clear sign of a *quechquemil*. Many other human figures in murals wear loincloths (in addition to other ceremonial garb), although the volume of other items of clothing can sometimes make them appear skirt-like. And so, it is quite possible that these two figures were women, or at least wearing feminine clothing, however the vast majority of human figures in mural art across the city from the Temple of Agriculture to various apartment compounds were men. These figures are identified as men due to their dress—many wear loincloths and have either naked upper bodies or wear additional garments such as cloaks and tunics. While there may not be evidence of an explicit gender hierarchy in Teotihuacan mural art, the near-absence of women from these scenes is, I think, quite telling.

Several larger figures in the murals of multiple compounds have been interpreted as possibly feminine, and these figures tend to be lumped together into the catch-all category of the 'Great Goddess', and should not necessarily be thought of as examples of

women. An increasingly large importance has been ascribed to the 'Great Goddess' at Teotihuacan, who can supposedly be seen in the Tetitla compound murals and perhaps Tepantitla as well, and in the form of a basalt colossus wearing a skirt and *quechquemiltl* (Pasztory 1997: 87-89, Fig. 6.3). Some scholars have questioned both the significance of the Great Goddess in Teotihuacan society and whether in fact it is correct to ascribe a feminine gender to many of these mural representations at all (Paulinyi 2006; De Lucia 2008; Mandell 2015). Paulinyi (2006) charts the historical development of the 'Great Goddess' in Teotihuacan studies and critiques what he sees as a trend of conflating different features and reifying assumptions about the identity and nature of this deity, which poses a hindrance to iconographical studies of the Teotihuacan supernatural world. Mandell (2015) argues that the suite of attributes that have been associated with the Great Goddess figure in the Tepantitla mural are better understood as an amalgamation of feminine and masculine traits, producing a 'mixed-gender.' Mixed or non-binary genders have been explored by scholars in other Mesoamerican cultures, supporting the idea that the 'Great Goddess' figure in Teotihuacan imagery is not necessarily feminine (Mandell 2015: 43-44).

Arguments about the identity of the 'Great Goddess' aside, human women were not nearly as well represented as men in Teotihuacan mural art. In the event that some deities did have feminine attributes, the majority of representations in Teotihuacan mural art depict men or abstracted deities engaged in ritual activity or military processions (De Lucia 2008: 22). This disparity is also observed in the contemporary Classic period figurine assemblage.

**CONCLUSION: DIACHRONIC VARIATION IN REGIONAL FIGURINE
ASSEMBLAGES AND THE IMPLICATIONS FOR OUR UNDERSTANDING OF
THE TEOTIHUACAN POLITY**

The comparison of four figurine assemblages from the Basin of Mexico revealed interesting transformations in features of regional figurine traditions and ritual practices over a millennium and a half. Changes can be observed that eventually permeated all of the sites in this study, such as the adoption of a shared Teotihuacan style, and progressive increases in clothing and ornamentation on figurines. Nonetheless, there were noticeable differences in style, subject matter, and in the distribution of specific figurine types between the three rural figurine assemblages examined and that of the urban center of Teotihuacan. These differences indicate probable differences in the political, economic, and cultural relationships between these sites and Teotihuacan.

The degree of similarity in figurine styles across the Basin of Mexico by the end of the Early Classic is indicative of the extent to which there was a shared ritual material culture, and varying degrees of association with Teotihuacan religious and political culture. Beyond Gell's (1998) ideas of protraction and retention as ways of linking figurine traditions and viewing objects as traditional or innovative, his idea of style being contextualized in collective consciousness is a helpful way of conceptualizing the social implications of a shared regional style. Teotihuacan period figurines were remarkable in the strength of their stylistic and functional ties to their contemporaries across the Basin. The introduction of the mold to figurine production may have been particularly important in the preservation of form and style across distance during the Classic period, but even

before its introduction, there was a shared figurine style by the Early Classic period. A figurine executed in a particular style and form was indexical of all other figurines within that type, and minor variations aside, the trueness of type seems to have been a priority that was shared not only within the city, but in certain sites across the Basin of Mexico. This fact speaks to a shared culture of figurine production and use in the Basin, and an intentional uniformity in style and practice during the Early Classic and Classic periods.

With a few notable exceptions, Axotlan figurine styles closely emulated core styles, which by proxy indicates a strong similarity between key aspects of domestic ritual practiced at this rural site and contemporary practices in domestic quarters of Teotihuacan. Although not significantly farther away from Teotihuacan than Axotlan, Cerro Portezuelo and Huixtoco had figurine assemblages that indicated a prolonged history of contact with Teotihuacan, but did not indicate a particularly strong system of shared ritual practices during the apogee of the polity. The variable degree of acceptance and replication of Teotihuacan ritual practices at these rural sites indicates different strategies and intensities of control between the core and communities in the hinterland, and in conjunction with other sources of data, reflects the course of expansion of a regional power that used both indirect and direct methods of influence over the course of its history.

Regarding the initial hypotheses for this project outlined at the end of Chapter 1, the data supports several of them, which I will discuss here and throughout the conclusion. In terms of the sociospatial variation observed within the urban assemblage, Hypothesis 1b proved correct in that there was a fair amount of variation within the urban

assemblage, both in terms of figurine consumption between different locals and variation within the figurine types themselves (Chp. 5). In the wider Basin, both the style and subject matter of figurines changed over time in the figurine assemblages from the Middle Formative through Classic periods, which supports Hypothesis 2b. Technically, the retention of the woman and child motif (Chp. 8) into the Classic period could support Hypothesis 2d, however in the overwhelming majority of the figurine assemblages, earlier subject matter was entirely replaced by new figurines forms and themes.

As Teotihuacan emerged as a powerful center, rural figurine assemblages quickly adopted figurines in the new Teotihuacan style (Chp. 6). Some of these figurines likely came directly from Teotihuacan, especially in the earlier periods, however paste color profiles in the southern sites were distinct enough to indicate that not all figurines were products of Teotihuacan (Chp. 7), which supports Hypothesis 3d. Finally, although Teotihuacan-style figurines and figurine types were virtually the only figurines used in the Basin after the Terminal Formative period, both the dissimilarities in paste color profiles and the stylistic variation on certain Classic period types at Axotlan support Hypothesis 4d, which predicted that figurine assemblages across the Basin were composed of a mix of figurines that were similar to and distinct from figurines produced in the core. Variations in the proportion of certain figurine types between sites could also support Hypothesis 4e, the implications of which are that even though rural communities were culturally affected by Teotihuacan and the core style was desirable and reproduced, local beliefs were also potentially maintained. This scenario lends support to the theory that Teotihuacan operated as an empire. Some aspects of imperial culture may have been

actively spread, while rural populations were also left to continue certain local practices and customs that were not seen as actively detrimental to imperial interests. These ideas are discussed more fully in the following sections.

The Variable Relationships Between Rural Sites and Teotihuacan

When the regional assemblages are compared and contrasted to each other across time, a pattern of transmission emerges with Teotihuacan as the epicenter of innovation in figurine style. Beginning in the Terminal Formative, certain elements that would later come to characterize figurines in the Teotihuacan style emerged in small numbers in the city. Wide band headdresses and quechquemits, for example, first emerged in significant numbers at Teotihuacan during the Terminal Formative period. Only one potentially contemporary example of each was found outside of the city (in Axotlan). In the subsequent period, these clothing elements appeared on figurines in sites around the Basin. Similarly, during the Early Classic, early versions of different figurine styles and functional types that were hallmarks of the Classic Teotihuacan figurine corpus started to appear in the city, but were not yet present in the rural sites. In the Classic period, however, all of these types appeared in at least one of the rural sites, and some functional classes appeared at all sites.

Both examples seem to be clear cases of transmission. Whether these clothing elements and functional types were original innovations of Teotihuacan artisans or were borrowed from another source, it is clear that they occurred at Teotihuacan before appearing in the rural sites under investigation. Yet Teotihuacan figurines appeared at

hinterland sites before the Early Classic. Both the Axotlan and Cerro Portezuelo collections had examples of Terminal Formative Teotihuacan-style figurines. This indicates that even before Teotihuacan reached state-level complexity, figurines from the city had already started circulating in the Basin of Mexico, and that Teotihuacan had a sort of cultural currency and prestige that rural communities in the Basin thought worthy of emulation during the polity's ascendance.

Although Teotihuacan's presence was felt in the rural hinterland across the Basin of Mexico, figurine analysis suggests that it is unlikely that Axotlan, Cerro Portezuelo, and Huixtoco served similar roles in the Teotihuacan imperial apparatus or shared a common sense of identity. Axotlan's figurine assemblage reproduced many of the important aspects of Teotihuacan's assemblage, and even consumed figurines that appear linked to official imperial imagery at a higher rate than they occurred in the TMP assemblage. Furthermore, several of the Classic Teotihuacan types at Axotlan bore extra decorative features not commonly seen at Teotihuacan, which is evidence for local production, and can be interpreted as both emulation and local innovation. The local production of Teotihuacan functional classes and figurine types suggests a rather tight adherence to Teotihuacano identity, practices, and values. The figurine assemblages at Cerro Portezuelo and Huixtoco, however, do not attest to a similarly strong cultural relationship between these sites and Teotihuacan. In part, this may be due to the methods of collection that produced these assemblages, but there are also qualitative and quantitative differences that set these assemblages apart from those at Teotihuacan and Axotlan.

Axotlan

Apart from the Teotihuacan-style Terminal Formative figurines in the assemblage, there was no further evidence recovered from the excavation of Axotlan for a Terminal Formative occupation. The excavations—as extensive as they were—were not able to explore the limits of the site. It is possible that occupation at Axotlan proceeded uninterrupted from the Late Formative to the Early Classic when Tlamimilolpa-style apartment compounds were built, and excavations simply did not explore the relevant areas of the site, or that these structures were destroyed millennia ago. The presence of Tzacualli phase figurines at the site can be taken as evidence for the movement of Teotihuacan figurines into rural sites in the Basin of Mexico, and a continuous occupation at the site.

A second possibility is that these Tzacualli figurines found at Axotlan are not indicative of a Terminal Formative occupation of the site at all, but were relics or heirlooms transported to the site by individuals during the onset of Early Classic occupation. Although this possibility cannot be completely ruled out, it is less persuasive since there is no compelling evidence that Teotihuacan figurines were kept as heirlooms, or that early Teotihuacan figurines were curated by later Teotihuacanos. Indeed the most frequent assumption is that they were used until they broke and then discarded, and there is only limited evidence for caching or preserving them. Curation of figurines is a well-attested practice during the Postclassic period, and it has been given special attention at the site of Xaltocan (Overholtzer and Stoner 2011). Postclassic inhabitants of the Basin collected Teotihuacan and Formative figurine fragments, however there is no evidence

that this practice dated back to the Terminal Formative. Curation is a possibility, but I am not aware of any examples of this practice dating to the Teotihuacan period (i.e. Terminal Formative-Classic periods).

For these reasons, I interpret the presence of Tzacualli figurines as evidence that there may indeed have been a Terminal Formative occupation of the site of Axotlan. The break in occupation suggested by ceramics is not supported by the figurine data. It is not entirely clear where the Tzacualli phase figurines were retrieved from in the excavation. Excavations did explore off-structure and beneath Early Classic floors, and so it is possible that the figurines were recovered from outside or beneath the apartment compound. The Terminal Formative occupation may have been quite small and obliterated by later settlement, but these figurines suggest that there was at least a small Terminal Formative occupation with a connection to Teotihuacan. The nature of that connection, however, is uncertain, although it is striking that the first potential evidence we have of connectivity to the core comes in the form of ritually important objects.

Before utilitarian objects mirroring urban types or prestigious trade goods that come to be controlled by the urban core appeared at Axotlan, figurines in the Teotihuacan style began to appear. If the presence of a significant number of Terminal Formative figurines at the site is indeed evidence for some sort of cultural or economic relationship between Axotlan and Teotihuacan, then the increasing number of Teotihuacan-style figurines into the Early Classic and Classic periods would indicate a strengthening relationship over time. The full range of Classic Teotihuacan types were represented at Axotlan, some of them in surprisingly high numbers. In particular, the high rates of half-

conical and enthroned figurines, and the comparatively lower rates of articulated and warrior figurines signal a domestic ritual complex at Axotlan that was closely aligned with urban practices, but seems to have valued specific types more highly than residents of the urban center.

The different ratios of Classic figurine types at the site together with some of the stylistic embellishments on articulated, bound, and fat god figurines point to a degree of ideological and political independence from the city of Teotihuacan, at least in terms of figurine production. The similarity between half of the articulated torsos to those produced at the site of Azcapotzalco suggests that Axotlanos were receiving figurines from several sites in the Basin of Mexico, or modeling their own on two different regional styles. However, given that Azcapotzalco is thought to have been a regional center subordinate to Teotihuacan, a lateral relationship with Azcapotzalco does not necessarily undermine the strength of the cultural or economic ties between Axotlan and Teotihuacan.

If indeed I am correct in presuming that both the enthroned and half-conical types are indexical of imperial power and authority, then their high numbers in a peripheral site may indicate that Teotihuacan was projecting power, especially in areas where they had active interests. The simultaneously low rate of warrior figurines supports this narrative, where Axotlanos were active participants in cultural and religious expressions, but the Teotihuacan heartland viewed them as subjects rather than partners, and they were not recipients of some of the more inclusive aspects of Teotihuacan military ideology.

The proposal that Axotlan was a colony established by Teotihuacanos (e.g. García Chávez et al. 2015) potentially complicates this scenario. Although the Terminal Formative figurines at Axotlan support the idea of at least a small population during that time and not a complete depopulation at the end of the Late Formative, during the Early Classic and Classic Axotlan may have been increasingly populated by people who had traveled from the city and their descendants. If this was the case, then we are not looking at a uniform cultural push into an ethnically non-Teotihuacan hinterland, but rather an ethnically Teotihuacano community maintaining their identity through domestic ritual practice.

Cerro Portezuelo

The figurines from Cerro Portezuelo suggest a strong initial relationship with Teotihuacan and a decreased interest in emulating the figurine practices of urban Teotihuacan by the Classic period. Cerro Portezuelo had a similar number of Terminal Formative figurines as did Axotlan, but it was the only site outside of Teotihuacan that had what appeared to be Patlachique-phase figurines. In addition to that, several of the Terminal Formative figurines were made of an orange paste that was highly unusual for contemporary figurines from the northern Basin, suggesting that several may have been local copies of core styles. Terminal Formative Teotihuacan style figurines were making their way to Cerro Portezuelo, if not also being produced locally, in sufficient numbers to indicate at least moderate interest in Teotihuacan figurines and perhaps corresponding customs and practices.

The number of Early Classic Teotihuacan-style figurines was half of the Terminal Formative number, and many of these also appeared to be either local products, or at least not direct imports from Teotihuacan. Although the subject matter was the same, they diverged stylistically from contemporaneous figurines at Teotihuacan and Axotlan. There were slightly more Classic than Early Classic figurines at Cerro Portezuelo, and while all major Teotihuacan Classic types were found in the Cerro Portezuelo assemblage (either by the current study, or a record of them exists), they occurred in low rates. Articulated figurines were the most common Teotihuacan type at Cerro Portezuelo and there were only five fragments (14% of the Classic assemblage). Especially when compared to Axotlan, the residents of Cerro Portezuelo seem to have been initially more interested in Teotihuacan figurine styles at the beginning of the Teotihuacan period, and interest in them waned through the Classic.

Cerro Portezuelo is thought to have been politically subordinate to the Teotihuacan polity throughout the Classic period, although its lateral economic ties to other sites in the Basin (Nichols 2016; Nichols et al. 2013; Branstetter-Hardesty 1978) and key differences in its ritual ceramic assemblage suggest a less intense cultural and economic connection with the core (Clayton 2013). This is to some degree reflected in the figurine assemblage from the site, which does not resemble that of a community with strong cultural ties to Teotihuacan. This is supported by the work of others (e.g. Clayton 2013; Nichols et al. 2013) who have documented Cerro Portezuelo's lateral economic ties to other sites in the Basin during the Teotihuacan period, and the conspicuous absence of other important elements of Teotihuacan domestic ritual such as candeleros.

The fact that excavations did not target domestic structures is a problem for the comparison of Cerro Portezuelo to other rural sites, and it is entirely possible that horizontal excavation of domestic contexts at Cerro Portezuelo would have yielded an assemblage that more closely resembled that of Axotlan. On the other hand, if Cerro Portezuelo had strong political ties to Teotihuacan then we might expect to see more ostentatious indications of this relationship in the very civic-ceremonial contexts that were excavated at the site and this is not the case. Given the limitations of the data, we may draw the provisional conclusion that residents of Cerro Portezuelo were in contact with Teotihuacan, and while there was some interest in Teotihuacan styles and goods, the residents do not seem to have been overly concerned with faithfully reproducing all aspects of Teotihuacan ideological culture in the rural hinterland.

Huixtoco

Even less is known about Huixtoco's relationship to Teotihuacan. The excavation of the site was not extensive, although it did unearth evidence for a sizable Formative occupation and evidence for a Teotihuacan-period occupation of unknown size. García Chávez et al. (2015: 427) excavated Miccaotli architecture and parts of one Teotihuacan-style Tlamimilolpa phase apartment compound and suggest that there may have been at least four similar compounds at the site. The excavators note that while Terminal Formative and Early Classic Teotihuacan ceramics were present, later Teotihuacan ceramic phases seem to have been absent, suggesting a population decline and perhaps complete abandonment of the site during the Classic. Nevertheless, Teotihuacan style

figurines were present from all Teotihuacan periods, albeit in very small numbers. Huixtoco had very few Terminal Formative figurine fragments, all of which were body fragments, but the counts increased slightly in the Classic period, which conflicts with the narrative of site abandonment. Many of the examples of Teotihuacan period figurines that were recovered were stylistically congruent with examples from Teotihuacan, with the notable exception of the two hybrid heads discussed in Chapter 6. These mold-made heads were hybrids of warrior figurine heads that were augmented with additional handmade decorative elements that would have been inappropriate in the core, suggesting local production. This was an elaboration that was not observed at any other sites during the Classic period. The hybridization of different features indicates not only that these figurines were likely made outside of the Teotihuacan Valley, but also that the person who made these figurines was either only passingly familiar with core styles, or was uninterested in faithfully reproducing them.

In either event, the generally low counts of Teotihuacan period figurines at Huixtoco, combined with these two examples of hybrid designs and the general underrepresentation of standard Teotihuacan Classic types—only four articulated and one enthroned fragment were found, and no bound, "fat god", half-conical, or warrior fragments—points to a population in this site that was not overly concerned with consuming or producing Teotihuacan figurines. Not all urban apartment compounds appear to have been uniform in their usage of figurines, however, and low counts of Teotihuacan-style figurines does not prove that these people did not think of themselves as Teotihuacanos. Manzanilla (1996: 239) mentions that the excavation of the

Oztoyalualco apartment compound in Teotihuacan only recovered 132 figurine fragments, which is a surprisingly low count for an entire apartment compound. In contrast, several compounds at the nearby site of Maquixco Bajo in the Teotihuacan Valley had over 2,100 fragments from the same period (Kolb 1995). The intensity of figurine use is known to vary within the urban limits of Teotihuacan, however, and even though a total of 21 figurine fragments from the Teotihuacan period is a very low count, since the whole apartment compound was not excavated in its entirety, it cannot be conclusively said that figurine consumption was below that of urban compounds.

Given the tantalizing hints at ritual diversity in the urban population, it is quite possible that there were similar divisions in rural settlements as well. Excavations at Huixtoco did reveal Teotihuacan-style domestic architecture, and so perhaps what we are observing at Huixtoco is not a reduced interest in figurines because of a non-Teotihuacano social identity, but ritual diversity in the Basin population much as there was ritual diversity in the core itself. It may be impossible to determine the exact causes of the differences in the Huixtoco assemblage, though the low counts of Teotihuacan style figurines and the unusual cases of experimentation lead me to believe that the residents of Huixtoco may not have thought of themselves as aligned with Teotihuacan to the same degree that Axotlanos likely did.

The presence of Teotihuacan style architecture, ceramics, burial practices, and figurines at Huixtoco point to a political and economic relationship with the core. The appearance of these features indicates direct intervention by Teotihuacan during the Early Classic period. The figurines partially point to a cultural affinity with the core, but less

intense than other sites such as Axotlan, and one that was not necessarily maintained through similar domestic ritual behaviors.

Understanding the Nature of Teotihuacan's Influence

The analysis of the figurine assemblages from the sites of Axotlan, Cerro Portezuelo, Huixtoco, and Teotihuacan, which span almost 1,500 years, helps us to better understand the social and political dynamics of a region in flux. Based on the results of this study as well as the research of many other scholars, we know that the Basin of Mexico has a long history of being a highly interconnected region, where Formative communities were connected to each other by lateral social and economic ties well before the rise of state-level societies. The nature of the relationships between communities were likely variable, and alliances grew, persisted, and waned in the face of many cultural and environmental factors.

The Axotlan assemblage more closely mirrored the TMP assemblage in terms of the full representation of the Teotihuacan figurine tradition. Cerro Portezuelo also appears to have had the full range Teotihuacan figurine types, but just barely. The counts of Teotihuacan style figurines were highest during the Terminal Formative and decreased after that, possibly indicating a reduced interest in acquiring, making, or using figurines in the Teotihuacan style. Of the three rural sites, Huixtoco had the smallest number of Teotihuacan Classic figurines, and the fewest Classic types. Perhaps at Axotlan, figurines in the Teotihuacan style served as a symbolic connection to the core of the state, allowing residents to maintain their Teotihuacano identity and remain connected to ancestor

populations in the city, whereas in Cerro Portezuelo and Huixtoco, Teotihuacan figurines were prestige or novelty items that were desirable to own, but not because they played a fundamental role in performing their cultural or religious identity.

But what was Teotihuacan's role in all of this? Were figurines being deliberately made by urban workshops for gifting or trading them to rural communities? If so, was it because of purely economic reasons—were they in high demand in the hinterland—or was there a different purpose in mind? Can we know whether state actors were deliberately spreading and wielding the dominant imperial ideological system, and corresponding ritual and religious behavior, as a means of assimilating rural populations and extending the reach of Teotihuacan?

One difficulty in making sense of these findings is that it is difficult to say whether the appearance of Teotihuacan figurines in rural sites represents a "push" of Teotihuacan ideology, ritual, and culture into the hinterland, or a "pull" by people in rural sites who desired Teotihuacan goods or imitations of them, perhaps because they were seen as novel, exotic, or prestigious. Either case would indicate an increased cultural connection between rural sites and the emerging core, and the movement of goods is evidence of these interactions, however one scenario describes deliberate ideological expansion while the other is perhaps more passive diffusion.

Another difficulty lies in separating two different scenarios for transmission: the transmission of ideas and artifacts from a central point to outlying areas (involving stable populations), versus the dispersal of people and their goods from a central point to outlying areas. How do we distinguish between goods moving to new people and people

(and their goods) moving to new places? This is a particular challenge when working with only one class of material culture, such as figurines. In an ideal situation, the former possibility would be evidenced by blending traditions and hybridity in form, style, or subject matter in the outlying location (Pauketat 2001: 14), and the latter could be evidenced by coexisting yet separate styles and material traditions, or sudden replacement of local materials with new ones. Unfortunately, the temporal resolution that is possible with these figurines is not fine-grained enough to settle this debate. That being said, however, the presence of Teotihuacan ritual artifacts before other types of ceramics at Axotlan and Cerro Portezuelo suggests the initial movement of goods only, rather than early migrations of people with their goods, which could be an indication of an active promotion of Teotihuacan ideology and ritual practices across the countryside in the period leading up to the expansion of Teotihuacan's direct control over areas of the Basin.

At both Axotlan and Cerro Portezuelo it seems that Teotihuacan-style figurines began appearing in greater numbers than any other type of ceramic goods from Teotihuacan during the Terminal Formative. Recall that at Axotlan, excavations recovered no Teotihuacan-period ceramics prior to the Tlamimilolpa phase, but there were nearly 70 Terminal Formative figurine fragments. At Cerro Portezuelo, we know that during the Terminal Formative only a few ceramics were brought in from the Teotihuacan Valley, and residents of the site were maintaining lateral economic ties with other sites in the southern Basin (Nichols et al. 2013: 54). The count of Terminal Formative figurines at Cerro Portezuelo, however, was nearly equal to the count at Axotlan. This can be interpreted as evidence for the spread of Teotihuacan ritual artifacts

in greater quantities than mundane or utilitarian wares in the period leading up to Teotihuacan's territorial expansion and consolidation. It strongly suggests, but does not conclusively prove, that there was an intentional ideological imposition from the core to hinterland sites.

Ideological assimilation may have been an early strategy used by Teotihuacan elites to attract immigrants to the city, as well as to shore up support in the incipient empire's sustaining hinterland. The exchange and movement of goods in the Terminal Formative period that are visible in the archaeological record seems to have been limited to figurines, which strongly suggests that cosmopolitan ideas and ideologies were circulating in the hinterland, and that these artifacts and the ideas they embodied were interesting enough to rural populations that there was a desire for these objects. The continuation of Teotihuacan figurine types in all of the sites considered here argues for at least partial acceptance of core practices and ritual customs. Control over the hinterland appears to have been achieved informally and/or accompanied by influence and the spread of Teotihuacan ideology and associated artifacts, which began in advance of more definitive signs of imperial control, such as the appearance of Teotihuacan style domestic architecture and trade goods.

A difficulty raised by Sinopoli (2001: 462) in her discussion of the archaeology of empires is in distinguishing between horizons and actual hegemony. The ubiquity of Teotihuacan material culture in the Basin of Mexico during the Classic period does indeed appear to present a similar scenario: are we looking at a cultural horizon, or the residues of a hierarchical, even imperial, polity? I argue that the early appearance of

Teotihuacan-style figurines in advance of other aspects of material culture is prime evidence for hegemony over horizon, to borrow Sinopoli's phrasing, and that the earlier spread of these domestic ritual objects was an intentional strategy on the part of Teotihuacan, which was eyeing regions in the Basin of Mexico with anticipation.

Teotihuacan made an early ideological push into the hinterland, but it was not actively maintained to the same degree in all places over the following centuries. The variability in the extent to which rural communities mirrored Teotihuacan practices is informative, and we can reject with increasing confidence the idea that Teotihuacan controlled a culturally homogeneous hinterland that included the entire Basin of Mexico. The differences between the figurine assemblages from the three rural sites in the Classic period alternately indicate either that: 1) full ideological and cultural assimilation was not necessary for the desired level of cooperation from rural communities; 2) not all communities were equally enthusiastic practitioners of Teotihuacan domestic ritual involving figurines; or 3) ideological expansion was an earlier method of regional aggregation that was not maintained after Teotihuacan's initial expansion.

Teotihuacan as a Hegemonic and Imperial Polity

The results of this study are consistent with early Teotihuacan being characterized as a hegemonic political formation. This conclusion is supported by the figurine analysis that shows Terminal Formative figurines appearing in rural communities as much as a century before other elements of Teotihuacan material culture. Patlachique and Tzacualli phase figurines appeared in sites in the hinterland long before other elements of

Teotihuacan material culture appeared; Teotihuacan style architecture and pottery did not appear in Axotlan and Huixtoco until the Early Classic. I suggest, therefore, that Teotihuacan's hinterland may have come together initially due to the cultural and ideological influences emanating from the city in the form of domestic ritual objects—an example of indirect control, suggesting that Teotihuacan was extending itself largely through hegemonic means.

Initial expansion must be followed by some effort at consolidation, or else an expansive political formation will not last (Sinopoli 1994, 2001). There is no evidence that communities in the Basin of Mexico were coerced through force, and in fact military themes in Teotihuacan imagery escalated during the later part of the city's history, suggesting that it may not have been a central component of Teotihuacan's initial expansion. We do not know if military conquest was a chief strategy used during Teotihuacan's expansion or consolidation, although it remains a distinct possibility. Nevertheless, Teotihuacan style architecture and trade goods appeared in rural sites in the Basin of Mexico in the Early Classic period, indicating that the relationship between Teotihuacan and certain rural sites was changing, and Teotihuacan's influence was becoming more direct.

Axotlan's affiliation with Teotihuacan only increased over time. In addition to using Teotihuacan style figurines, Teotihuacan-style architecture, pottery, mortuary practices, and other important elements of ritual material culture such as composite censers were revealed during excavation (Clayton 2009, 2011). Although Teotihuacan style architecture and trade goods appeared in the south as well, there appears to have

been a qualitative difference in the cultural affinity between sites in this region and Teotihuacan. No Teotihuacan-style architecture was discovered at Cerro Portezuelo, and Teotihuacan-style figurine usage declined over time at the site. Conversely, Teotihuacan architecture and trade goods were found at Huixtoco, and although Teotihuacan-style figurines were found from all periods, Classic fragments were more numerous than Early Classic and Terminal Formative fragments.

The emergence of Teotihuacan had a significant impact on social relations and domestic ritual practices in communities across the Basin of Mexico, which can be observed in the the subject matter expressed in the regional assemblages. The Teotihuacan figurine style brought with it changes in personal ornamentation, dress, and the ratios of men and women depicted in figurine form. Although none of the rural sites had figurine assemblages that completely mirrored the TMP assemblage (in terms of figurine type frequencies), all assemblages went through considerable changes after the emergence of Teotihuacan. In not a single site did previous figurine traditions continue unaffected, and although the mother and child motif survived into the Classic period, representations of men, women, and other social categories were unmistakably changed through exposure to Teotihuacan culture.

Some of the biggest transformations occurred during the Classic period when figurine types diversified, personal ornamentation on figurines was at its most elaborate, and images of women decreased in all sites, and particularly at Teotihuacan. The beginning of these changes in figurine function and ornamentation was contemporary to the regional building program that occurred in sites such as Axotlan and Huixtoco, and

these were likely related developments. The Classic period figurine tradition appeared to be oriented towards a state-centric ideology (Chp. 8), which I interpret as the strengthening of a legitimating imperial ideology.

While hegemony and imperialism are seen by some as directly opposed strategies for expansionary states (e.g. Doyle 1986), others are comfortable seeing the two strategies as sequential, or as different strategies used in different circumstances, especially in Mesoamerica (e.g. Smith and Montiel 2001). Expansive polities may switch their incorporative strategies over time, becoming more or less centralized as the situation may warrant (Luttwak 2016; Sinopoli 2001: 446). In his discussion of the "dynamic model" of state organization, Iannone (2002) advocates for the view that political integration is a dynamic process and states may cycle through periods of increasing or decreasing integration, and behave as more or less centralized polities over time. This is pertinent to Teotihuacan in that it seems to have behaved initially as a hegemonic polity, particularly within the Basin of Mexico, but may have become increasingly centralized and imperial during the Classic period, and in strategically important areas outside of the Basin.

During the Terminal Formative and the first half of the Early Classic as Teotihuacan's population was growing and the city expanding, there is very little evidence beyond the presence of figurines to suggest that Teotihuacan was directly intervening in other communities in the Basin of Mexico. Evidence from the figurine assemblages suggests that Teotihuacan's influence was more indirect, which would support the narrative that Teotihuacan's initial expansion followed a more hegemonic

path. In fact, there is little to link these rural sites to Teotihuacan at all prior to the Tlamimilolpa phase apart from shared domestic ritual paraphernalia. The nature of Teotihuacan's influence may have given way to more centralized, imperial methods of control over time as the polity consolidated its sustaining hinterland in the Basin of Mexico.

The observed pattern of variable cultural ties to Teotihuacan across its hinterland would be well within the parameters of an empire (Smith and Montiel 2001; Sinopoli 1994). Typically, the communities that constitute an empire have variable degrees of autonomy in terms of making economic, political, and cultural decisions (Sinopoli 1994: 162), and so it would be quite normal to find sites that expressed stronger and weaker cultural ties to the core of the empire. This would not in fact serve as evidence that the empire was not present, or that these communities and the surrounding areas were not subordinate to Teotihuacan.

The sites analyzed in the present study are all within a 50km radius, within the inner hinterland designated by Hirth (1978). As such, we might suppose that Teotihuacan's strategies for controlling this area would differ from interventions further afield in strategic extractive colonies and outposts (Manzanilla 2001; Algaze 1993; Santley 1989; Santley et al. 1984), and characterizing both types of relationship is critical in determining whether Teotihuacan was an imperial polity. The data in this study can only speak to a limited region that experienced Teotihuacan's influence, and only a portion of the ways in which hierarchical political formations can extend their influence over surrounding areas.

This project presents evidence of early Teotihuacan-style figurines filtering out into the hinterland communities in the Basin of Mexico, long before anyone would call Teotihuacan an empire. At some sites, ritual activity became increasingly Teotihuacan-centric over time, while at others, interest in emulating core practices seems to have waned as Teotihuacan style architecture appeared, evidence of more direct control over the region. In this sense, the relationships between Teotihuacan and communities in its hinterland became more differentiated over time. Perhaps one contributing factor to the decline and eventual collapse of Teotihuacan was that it did not command universal support from its hinterland in the Basin of Mexico.

Conclusion: The Path to Imperial Formation and Expansion

This dissertation explores the relationships between sites in the Basin of Mexico before, during, and after the rise of Teotihuacan, and how these relationships formed and changed over time. Specifically, my analysis of figurines investigates these extremely complex sociopolitical dynamics through one class of material culture. Figurines alone are not able to definitively answer such questions, but they provide an important perspective, which in conjunction with other modes of investigation, allows us to draw more holistic conclusions about how these people lived, worshiped, and thought about their connections to other people and places in the region.

The picture that emerges from this comparative study is of a region with a moderate degree of heterogeneity in domestic ritual practices. All three of the rural sites analyzed here were very likely politically subordinate to Teotihuacan once it emerged as

a regional power, however we should not think of rural sites in the Basin as simple extensions of Teotihuacan society. Many of them had diverse preexisting histories and practices that set them apart from other rural communities. No doubt the reach and power of Teotihuacan was felt in the hinterland, even by residents of Cerro Portezuelo and Huixtoco in the southern Basin, but full cultural assimilation does not seem to have been a requirement. While some sites such as Axotlan appear to have been populated by people who felt a strong connection to Teotihuacan, residents in others like Cerro Portezuelo and Huixtoco seem to have identified less with the customs and practices of the urban core.

It seems that even within the inner hinterland of the Basin of Mexico, there was not one form of relationship between Teotihuacan and rural communities, nor were these various relationships static over time. The evidence presented here supports characterizing Teotihuacan as a hegemonic polity that initially projected its influence over the Basin of Mexico through indirect means and cultural influence rather than annexation and direct rule. The relationships between the core and rural sites may have intensified over time and transitioned to more direct strategies of control as the projection of Teotihuacan imperial ideology became a secondary strategy. In this case, if its strategy for controlling the hinterland transitioned to a more direct form of intervention and control as Teotihuacan continued to expand, then in the later periods it may be characterized as a territorial polity.

Although a state or empire is not a monolithic institution—but rather an assemblage of people with variously aligning and competing ideas and motivations—our

ability to speak directly about Teotihuacan actors is severely limited due to the nature of surviving evidence. It is currently impossible to speak of the Teotihuacan empire in more specific terms than general references to various institutions and anonymous actors, which surely existed but who cannot be named. Furthermore, the dataset employed in this study cannot definitively prove that Teotihuacan was a hegemonic empire, but it augments our understanding of the progression of Teotihuacan's growth and expansion, the various ways the polity exerted influence over populations within its hinterland, and the ways in which domestic ritual and ideology intersected with politics and statecraft in Teotihuacan.

Future Directions

This project has compared figurines from four sites in the Basin of Mexico to contribute to our growing collective understanding of how Teotihuacan formed in its specific historical and cultural context, and how this increase in political complexity was experienced by people living in rural communities in the region, particularly in regard to their daily religious and ritual practices. My analysis of these artifacts has to date been the largest multi-sited comparative study of Teotihuacan period figurine assemblages, and I hope it will serve as a useful source of information for projects working directly on Mesoamerican figurines and Teotihuacan studies, as well as Mesoamerican archaeology in general. That being said, there are a myriad of opportunities for myself and others to continue to expand on this work, and augment our understanding of Teotihuacan and regional figurine practices.

One of the initial goals for this project which did not come to fruition was to conduct chemical source analysis on the figurines from the rural assemblages in order to study patterns of production and consumption. Figurines no doubt moved around the Basin (and perhaps farther), but it is still unknown to what degree, in which cases, and between what areas. Conducting INAA, XRF, or thin-section petrography on a subset of the figurines analyzed here is the next logical step in this project, and I hope it will become feasible in the very near future.

The selective sampling of grid squares from Teotihuacan was a compromise between needing a comparative urban sample and also sufficient time to analyze the regional assemblages, yet my investigation of sociospatial variation within the urban limits raised more questions than it answered. Future studies would benefit from having a thoroughly analyzed TMP figurine collection, which has been analyzed at a level of detail comparable to this study, both for the sake of comparison as well as an increased understanding of the extent and nature of variations in figurine production, consumption, and use.

Finally, the addition of new regional figurine assemblages from both within and beyond the immediate hinterland in the Basin of Mexico to the comparative framework established here would be extremely beneficial to the advancement of Teotihuacan figurine studies, and Teotihuacan studies in general. These are all future directions that I plan to explore.

APPENDICES

A)

Correlation coefficients for Classic period types.

	<i>Articulated</i>	<i>Bound</i>	<i>Enthroned</i>	<i>Fat God</i>	<i>Half-conical</i>	<i>Warrior</i>
<i>Articulated</i>	1					
<i>Bound</i>	0.2329	1				
<i>Enthroned</i>	-0.0843	0.0632	1			
<i>Fat God</i>	0.0318	0.2530	0.0000	1		
<i>Half-conical</i>	0.5816	0.2985	-0.1116	0.3093	1	
<i>Warrior</i>	0.4533	0.0912	-0.1416	0.2078	0.8412	1

B)

Results of pairwise Pearson's correlations:

Correlation Coefficients for Zone 1 Articulated x Half-conical

Pearson	0.7659606
Spearman	0.6
Kendall	0.6900656

Pearson's coeff (t test)

Alpha	0.05
Tails	2

Pearson's coeff (Fisher)

Rho	0
Alpha	0.05
Tails	2

corr	0.7659606
std err	0.3214438
t	2.3828758
z	1.7502032
p-value	0.0800833
lower	-0.1265104
upper	1.6584316

Correlation Coefficients for Zone 2 Articulated x Half-conical

Pearson	0.9478248
Spearman	0.7356124
Kendall	0.8087361

Pearson's coeff (t test)

Alpha	0.05
Tails	2

Pearson's coeff (Fisher)

Rho	0
Alpha	0.05
Tails	2

corr	0.9478248
std err	0.1127099
t	8.4084212
z	3.044E-05
p-value	0.6879154
lower	1.2077342
upper	0.9878979

Correlation Coefficients for Zone 3 Articulated x Half-conical

Pearson	0.5183409
Spearman	0.730853
Kendall	0.7189571

Pearson's coeff (t test)

Alpha	0.05
Tails	2

Pearson's coeff (Fisher)

Rho	0
Alpha	0.05
Tails	2

corr	0.5183409
std err	0.1866143
t	2.7776058
z	0.0112815
p-value	0.1302553
lower	0.9064266
upper	0.1349784

Correlation Coefficients for Zone 1 Articulated x Warrior

Pearson	0.3243623
Spearman	0.4285714
Kendall	0.3333333

Pearson's coeff (t test)

Alpha	0.05
Tails	2

Pearson's coeff (Fisher)

Rho	0
Alpha	0.05
Tails	2

corr	0.3243623
std err	0.4729665
t	0.686804
p-value	0.5305198
lower	-0.9888031
upper	1.6375271

Correlation Coefficients for Zone 2 Articulated x Warrior

Pearson	0.5932438
Spearman	0.4889489
Kendall	0.6128259

Pearson's coeff (t test)

Alpha	0.05
Tails	2

Pearson's coeff (Fisher)

Rho	0
Alpha	0.05
Tails	2

corr	0.5932438
std err	0.2846188
t	2.0843468
p-value	0.0706362
lower	-0.0630878
upper	1.2495754

corr	0.5932438
std err	0.3333333
z	1.8061388
p-value	0.0708965
lower	-0.0680747
upper	0.8903171

Correlation Coefficients for Zone 3 Articulated x Warrior

Pearson	0.5417234
Spearman	0.78959
Kendall	0.7414694

Pearson's coeff (t test)

Alpha	0.05
Tails	2

Pearson's coeff (Fisher)

Rho	0
Alpha	0.05
Tails	2

corr	0.5417234
std err	0.1834245
t	2.9533859
p-value	0.007987
lower	0.1602712
upper	0.9231756

corr	0.5417234
std err	0.2132007
z	2.7127803
p-value	0.0066725
lower	0.1667563
upper	0.7797972

Correlation Coefficients for Zone 1 Half-conicals x Warriors

Pearson	0.778681
Spearman	0.63666
Kendall	0.5520524

Pearson's coeff (t test)

Alpha	0.05
Tails	2

Pearson's coeff (Fisher)

Rho	0
Alpha	0.05
Tails	2

corr	0.778681
std err	0.31371
t	2.4821679
p-value	0.0680528
lower	-0.0923177
upper	1.6436797

Correlation Coefficients for Zone 2 Half-conicals x Warriors

Pearson	0.6550416
Spearman	0.7479576
Kendall	0.7538191

Pearson's coeff (t test)

Alpha	0.05
Tails	2

Pearson's coeff (Fisher)

Rho	0
Alpha	0.05
Tails	2

corr	0.6550416
std err	0.2671424
t	2.4520314
p-value	0.0388104
lower	0.0380101
upper	1.2710731

Correlation Coefficients for Zone 3 Half-conicals x Warriors

Pearson	0.9425758
Spearman	0.7793976
Kendall	0.7050137

Pearson's coeff (t test)

Alpha	0.05
Tails	2

Pearson's coeff (Fisher)

Rho	0
Alpha	0.05
Tails	2

corr	0.9425758
std err	0.0728831
t	12.932706
p-value	1.609E-11
lower	0.7910071
upper	1.0941445

corr	0.9425758
std err	0.2132007
z	7.873875
p-value	3.438E-15
lower	0.6673772
upper	0.9756631

C)

Chi-square results, and post-hoc Chi-square with Fisher's exact test:

Observed Values					Chi-Square Test					
	Articulated	Half-conical	Warrior		SUMMARY		Alpha		0.05	
Inner	407	35	128		<i>Count</i>	<i>Rows</i>	<i>Cols</i>	<i>df</i>		
Middle	411	17	51		1874	3	3	4		
Outer	619	47	159							
Expected Values					CHI-SQUARE					
	Articulated	Half-conical	Warrior	Total		<i>chi-sq</i>	<i>p-value</i>	<i>x-crit</i>	<i>sig</i>	<i>Cramer V</i>
Inner	437.08111	30.11206	102.80683	570	Pearson's	32.7222	0.00000	9.48773	yes	0.09344
Middle	367.30149	25.304696	86.39381	479	Max likelihood	34.9502	0.00000	9.48773	yes	0.09657
Outer	632.6174	43.583244	148.79936	825						
Total	1437	99	338	1874						

D)

Descriptive statistics and ANOVA results for Half-Conical figurine counts by Zone

	<i>Inner</i>	<i>Middle</i>	<i>Outer</i>
Mean	5.5	1.89	2.09
Standard Error	2.46	0.84	0.74
Median	4	1	1
Mode	0	0	0
Standard Deviation	6.02	2.52	3.49
Sample Variance	36.30	6.36	12.18
Kurtosis	-2.43	4.93	3.98
Skewness	0.38	2.08	2.10
Range	13	8	13
Maximum	13	8	13
Minimum	0	0	0
Sum	33	17	46
Count	6	9	22

ANOVA: Single Factor

DESCRIPTION	Alpha 0.05					
<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Mean</i>	<i>Variance</i>	<i>SS</i>	<i>Std Err</i>
Inner	6	33	5.50	36.30	181.50	1.55
Middle	9	17	1.89	6.36	50.89	1.26
Outer	22	46	2.09	12.18	255.82	0.81

ANOVA

<i>Sources</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P value</i>	<i>F crit</i>
Between Groups	60.71	2	30.36	2.11	0.14	3.28
Within Groups	488.21	34	14.36			
Total	548.92	36	15.25			

E)

Descriptive statistics, ANOVA results, and post-hoc t-tests using a Bonferroni correction for Warrior figurine counts by Zone

	<i>Inner</i>	<i>Middle</i>	<i>Outer</i>
Mean	21.33	5.67	7.18
Standard Error	4.72	1.60	1.91
Median	17	4	3.5
Mode		10	2
Standard Deviation	11.55	4.80	8.97
Sample Variance	133.47	23.00	80.44
Kurtosis	-1.54	-0.69	3.38
Skewness	0.74	0.51	1.94
Range	28	14	33
Maximum	38	14	33
Minimum	10	0	0
Sum	128	51	158
Count	6	9	22

ANOVA: Single Factor

DESCRIPTION	Alpha					0.05
<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Mean</i>	<i>Variance</i>	<i>SS</i>	<i>Std Err</i>
Inner	6	128	21.33	133.47	667.33	3.53
Middle	9	51	5.67	23	184	2.88
Outer	22	158	7.18	80.44	1689.27	1.84

ANOVA

<i>Sources</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P value</i>	<i>F crit</i>
Between Groups	1084.96	2	542.48	7.26	0.00	3.28
Within Groups	2540.61	34	74.72			
Total	3625.57	36	100.71			

T Test: Two Independent Samples for Inner and Middle Zones

SUMMARY					Hyp Mean	0
<i>Groups</i>	<i>Count</i>	<i>Mean</i>	<i>Variance</i>	<i>Cohen d</i>		
Inner	6	21.33333	133.4667			
Middle	9	5.666667	23			
Pooled			65.48718	1.935969		

T TEST: Equal Variances		Alpha		0.016					
	<i>std err</i>	<i>t-stat</i>	<i>df</i>	<i>p-value</i>	<i>t-crit</i>	<i>lower</i>	<i>upper</i>	<i>sig</i>	<i>effect r</i>
One Tail	4.265077	3.673243	13	0.001405	2.401417			yes	0.713652
Two Tail	4.265077	3.673243	13	0.00281	2.767298	3.863925	27.46941	yes	0.713652

T TEST: Unequal Variances		Alpha		0.016					
	<i>std err</i>	<i>t-stat</i>	<i>df</i>	<i>p-value</i>	<i>t-crit</i>	<i>lower</i>	<i>upper</i>	<i>sig</i>	<i>effect r</i>
One Tail	4.97996	3.145942	6.163997	0.009959	2.779929			yes	0.784992
Two Tail	4.97996	3.145942	6.163997	0.019917	3.320219	-0.86789	32.20122	no	0.784992

T Test: Two Independent Samples Inner and Outer Zones

SUMMARY					Hyp Mean	0
<i>Groups</i>	<i>Count</i>	<i>Mean</i>	<i>Variance</i>	<i>Cohen d</i>		
Inner	6	21.33333	133.4667			
Outer	22	7.181818	80.44156			
Pooled			90.63869	1.486436		

T TEST: Equal Variances		Alpha		0.016					
	<i>std err</i>	<i>t-stat</i>	<i>df</i>	<i>p-value</i>	<i>t-crit</i>	<i>lower</i>	<i>upper</i>	<i>sig</i>	<i>effect r</i>
One Tail	4.384791	3.227409	26	0.001683	2.266119			yes	0.534819
Two Tail	4.384791	3.227409	26	0.003366	2.576779	2.852877	25.45015	yes	0.534819

T TEST: Unequal Variances		Alpha		0.016					
	<i>std err</i>	<i>t-stat</i>	<i>df</i>	<i>p-value</i>	<i>t-crit</i>	<i>lower</i>	<i>upper</i>	<i>sig</i>	<i>effect r</i>
One Tail	5.089291	2.780646	6.735517	0.013636	2.669993			yes	0.731053
Two Tail	5.089291	2.780646	6.735517	0.027273	3.15678	-1.91425	30.21728	no	0.731053

F)

Descriptive statistics and ANOVA results for Articulated figurine counts by Zone

	<i>Inner</i>	<i>Middle</i>	<i>Outer</i>
Mean	67.33	45.44	27.95
Standard Error	12.58	14.41	11.00
Median	68.5	29	12.5
Mode			8
Standard Deviation	30.81	43.23	51.59
Sample Variance	949.47	1868.53	2661.19
Kurtosis	0.58	2.40	16.44
Skewness	-0.22	1.47	3.86
Range	91	139	245
Maximum	111	141	245
Minimum	20	2	0
Sum	404	409	615
Count	6	9	22

ANOVA: Single Factor

DESCRIPTION	Alpha 0.05					
<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Mean</i>	<i>Variance</i>	<i>SS</i>	<i>Std Err</i>
Inner	6	404	67.33	949.47	4747.33	19.25
Middle	9	409	45.44	1868.53	14948.22	15.72
Outer	22	615	27.95	2661.19	55884.95	10.05

ANOVA

<i>Sources</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P value</i>	<i>F crit</i>
Between Groups	7868.41	2	3934.20	1.77	0.19	3.28
Within Groups	75580.51	34	2222.96			
Total	83448.92	36	2318.03			

G)
Correlation of Figurine Types by Zone (Torsos only)

Zone 1

	<i>Articulated</i>	<i>Back-bending</i>	<i>Ball Player</i>	<i>Bound</i>	<i>Enthroned</i>	<i>Fat God</i>	<i>Half-conical</i>	<i>Warrior</i>
Articulated	1.000							
Back-bending	0.153	1.000						
Ball Player	--	--	1.000					
Bound	0.664	-0.316	--	1.000				
Enthroned	--	--	--	--	1.000			
Fat God	0.372	-0.293	--	0.926	--	1.000		
Half-conical	0.459	-0.418	--	0.902	--	0.872	1.000	
Warrior	-0.104	-0.343	--	0.452	--	0.586	0.755	1.000

Zone 2

	<i>Articulated</i>	<i>Back-bending</i>	<i>Ball Player</i>	<i>Bound</i>	<i>Enthroned</i>	<i>Fat God</i>	<i>Half-conical</i>	<i>Warrior</i>
Articulated	1.000							
Back-bending	0.109	1.000						
Ball Player	--	--	1.000					
Bound	-0.116	0.134	--	1.000				
Enthroned	0.203	0.535	--	0.250	1.000			
Fat God	--	--	--	--	--	1.000		
Half-conical	0.987	0.206	--	-0.154	0.231	--	1.000	
Warrior	0.871	0.189	--	-0.141	-0.071	--	0.873	1.000

Zone 3

	<i>Articulated</i>	<i>Back-bending</i>	<i>Ball Player</i>	<i>Bound</i>	<i>Enthroned</i>	<i>Fat God</i>	<i>Half-conical</i>	<i>Warrior</i>
Articulated	1.000							
Back-bending	0.069	1.000						
Ball Player	0.024	-0.115	1.000					
Bound	0.214	0.459	-0.053	1.000				
Enthroned	-0.015	-0.210	-0.096	-0.096	1.000			
Fat God	-0.173	-0.250	-0.115	-0.115	0.140	1.000		
Half-conical	0.533	0.490	-0.085	0.697	-0.115	-0.078	1.000	
Warrior	0.601	0.464	-0.142	0.720	-0.136	-0.171	0.926	1.000

H)

Results of Chi-square test of articulated, half-conical, and warrior figurines by status group:

Observed Values		Articulated	Half-Conical	Warrior	Total
High		280	21	98	399
Intermediate1		420	27	77	524
Intermediate2		267	16	57	340
Low		352	20	58	430
Expected Values		Articulated	Half-Conical	Warrior	Total
High		310.857058	19.7968104	68.34613	399
Intermediate1		408.243355	25.99881867	89.75783	524
Intermediate2		264.890727	16.86946249	58.23981	340
Low		335.00886	21.33490845	73.65623	430
Total		1319	84	290	1693

Chi-Square Test		Rows	Cols	df
SUMMARY	Alpha	4	3	6
Count		1693		

CHI-SQUARE		chi-sq	p-value	x-crit	sig	Cramer V
Pearson's		22.5539118	0.00096	12.5915872	yes	0.08161453
Max likelihood		21.4622624	0.00151	12.5915872	yes	0.07961489

When the higher and lower intermediate status groups were combined into one group of intermediate status, the significance of the test increased ($p=0.0002$), but the effect size decreased in strength slightly:

Observed Values		Articulated	Half-Conical	Warrior	Chi-Square Test					
High		280	21	98						
Intermediate		687	43	134						
Low		352	20	58						
Expected Values		Articulated	Half-Conical	Warrior	Total					
High		310.85706	19.7968104	68.3461	399					
Intermediate		673.13408	42.8682812	147.998	864					
Low		335.00886	21.3349084	73.6562	430					
Total		1319	84	290	1693					
					SUMMARY					
					Count	Rows	Cols	df	Alpha	
					1693	3	3	4	0.05	
					CHI-SQUARE					
					Pearson's	chi-sq	p-value	x-crit	sig	Cramer V
					Max likelihood	21.885367	0.0002	9.487729	yes	0.0803958
						20.745766	0.0004	9.487729	yes	0.0782747

D)

An additional Chi-square of untyped conical versus flat figurines further supported Sullivan's findings that conical figurines were more common in high status areas of the city, whereas molded flat figurines were more common in intermediate status areas.

Observed Values		Conical	Flat	Total
High		291	125	416
Inter1		246	206	452
Inter2		154	88	242
Low		219	135	354
Total		910	554	1464

Expected Values		Conical	Flat	Total
High		258.579235	157.420765	416
Inter1		280.956284	171.043716	452
Inter2		150.423497	91.5765027	242
Low		220.040984	133.959016	354
Total		910	554	1464

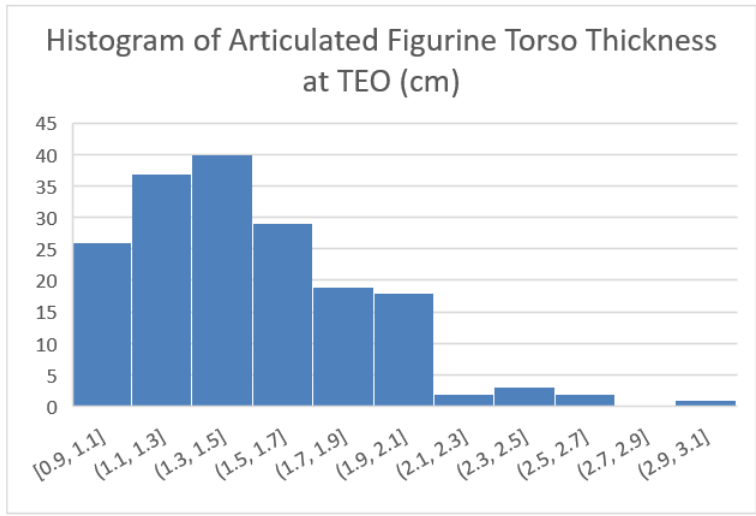
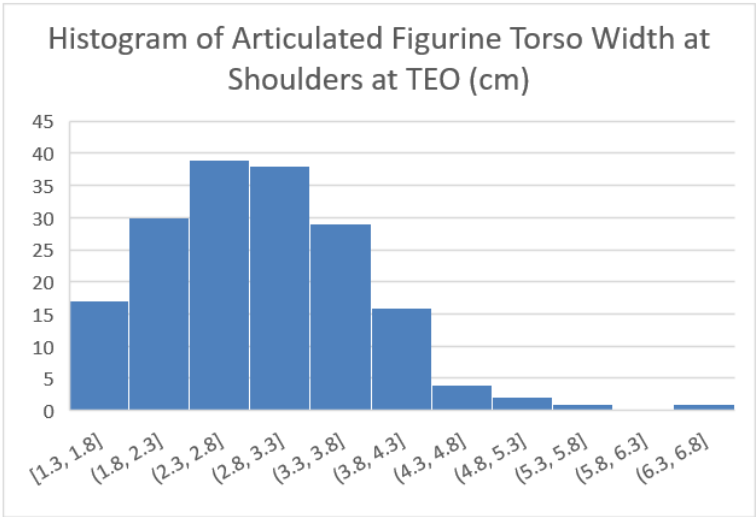
Chi-Square Test				
SUMMARY				
Count	Rows	Cols	Alpha	df
1464	4	2	0.05	3

CHI-SQUARE				
Pearson's	chi-sq	p-value	x-crit	sig
	22.47296	0.0001	7.814728	yes
Max likelihood	22.57671	0.0000	7.814728	yes
				Cramer V
				0.123897
				0.124182

J)

Variance in Complete Articulated Figurine Torso Sizes (cm) at TEO

Length	Width	Thickness
2.29	0.92	0.15



K)

ANOVA: Single Factor for Articulated Torso Width by Zone									
DESCRIPTION					Alpha	0.05			
<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Mean</i>	<i>Variance</i>	<i>SS</i>	<i>Std Err</i>	<i>Lower</i>	<i>Upper</i>	
Zone 1	55	145.1	2.638182	0.513515	27.72982	0.112526	2.412581	2.863783	
Zone 2	38	129.8	3.415789	1.063528	39.35053	0.135376	3.141491	3.690088	
Zone 3	84	244.2	2.907143	0.651756	54.09571	0.091053	2.726042	3.088244	
ANOVA									
<i>Sources</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P value</i>	<i>F crit</i>	<i>RMSSE</i>	<i>Omega Sq</i>	
Between Gr	13.69388	2	6.846942	9.831711	0.00009	3.047906	0.473224	0.090738	
Within Gr	121.1761	174	0.696414						
Total	134.8699	176	0.766306						

T Test: Two Independent Samples for Zone 1 and Zone 2										
SUMMARY					Hyp Mean	0				
<i>Groups</i>	<i>Count</i>	<i>Mean</i>	<i>Variance</i>	<i>Cohen d</i>						
Zone 1	55	2.638182	0.513515							
Zone 2	38	3.415789	1.063528							
Pooled			0.737147	0.905698						
T TEST: Equal Variances					Alpha	0.05				
	<i>std err</i>	<i>t-stat</i>	<i>df</i>	<i>p-value</i>	<i>t-crit</i>	<i>lower</i>	<i>upper</i>	<i>sig</i>	<i>effect r</i>	
One Tail	0.181111	4.293537	91	0.00002	1.661771			yes	0.410429	
Two Tail	0.181111	4.293537	91	0.00004	1.986377	-1.13736	-0.41785	yes	0.410429	
T TEST: Unequal Variances					Alpha	0.05				
	<i>std err</i>	<i>t-stat</i>	<i>df</i>	<i>p-value</i>	<i>t-crit</i>	<i>lower</i>	<i>upper</i>	<i>sig</i>	<i>effect r</i>	
One Tail	0.193195	4.024994	61.14178	0.00008	1.670219			yes	0.457674	
Two Tail	0.193195	4.024994	61.14178	0.00016	1.999624	-1.16392	-0.39129	yes	0.457674	

T Test: Two Independent Samples for Zone 2 and Zone 3									
SUMMARY					Hyp Mean		0		
<i>Groups</i>	<i>Count</i>	<i>Mean</i>	<i>Variance</i>	<i>Cohen d</i>					
Zone 2	38	3.415789	1.063528						
Zone 3	84	2.907143	0.651756						
Pooled			0.778719	0.576403					
T TEST: Equal Variances					Alpha		0.05		
	<i>std err</i>	<i>t-stat</i>	<i>df</i>	<i>p-value</i>	<i>t-crit</i>	<i>lower</i>	<i>upper</i>	<i>sig</i>	<i>effect r</i>
One Tail	0.17252	2.948339	120	0.00192	1.657651			yes	0.259897
Two Tail	0.17252	2.948339	120	0.003841	1.97993	0.16707	0.850224	yes	0.259897
T TEST: Unequal Variances					Alpha		0.05		
	<i>std err</i>	<i>t-stat</i>	<i>df</i>	<i>p-value</i>	<i>t-crit</i>	<i>lower</i>	<i>upper</i>	<i>sig</i>	<i>effect r</i>
One Tail	0.189068	2.690289	58.35925	0.004655	1.671553			yes	0.332168
Two Tail	0.189068	2.690289	58.35925	0.009309	2.001717	0.130187	0.887107	yes	0.332168

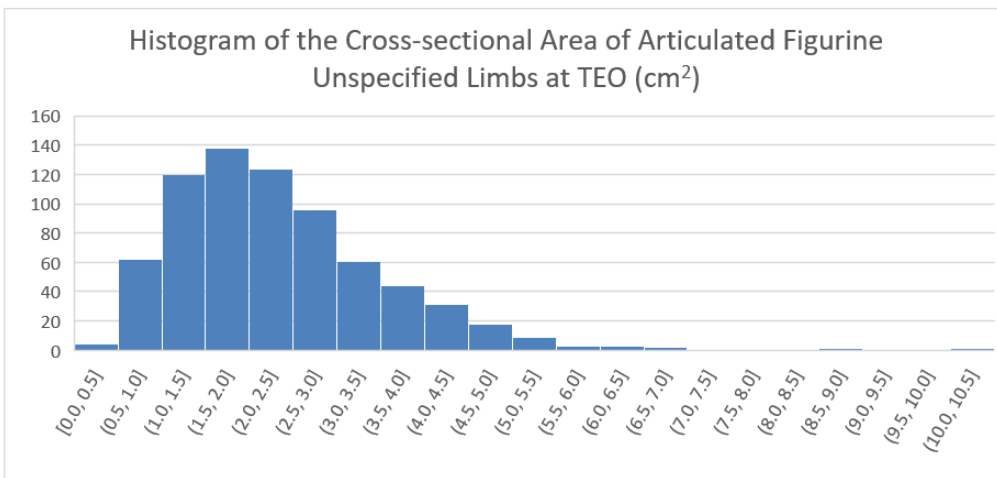
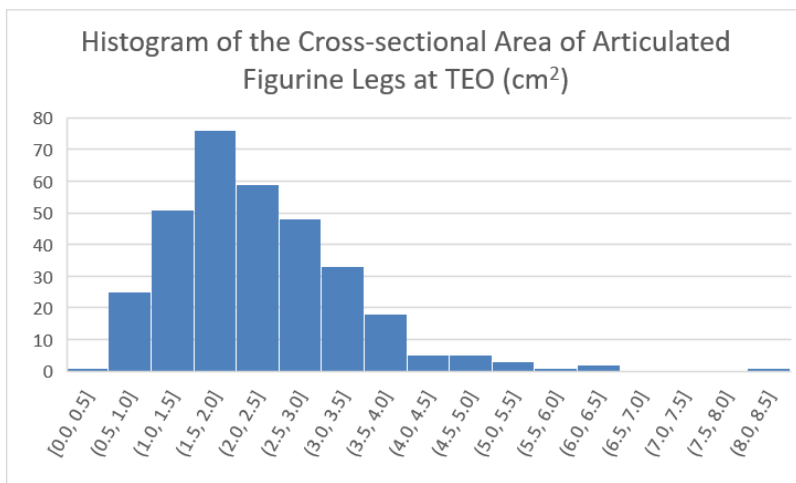
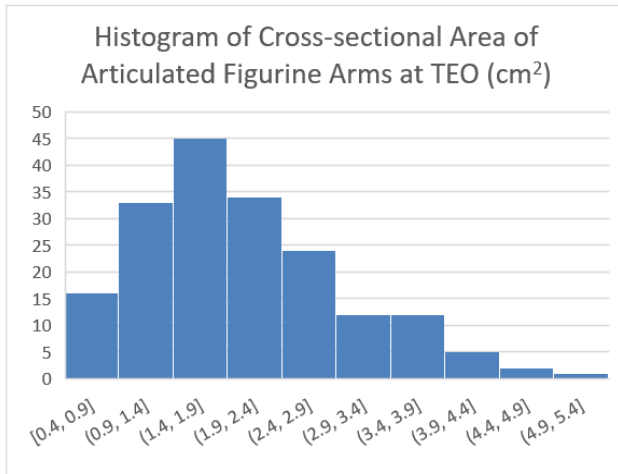
L)

	N1E3	N2E5	N4E2	N5W3	N2W6	N3E2	N5W1	N6W4
Mean	2.79	2.95	2.62	3.65	2.80	3.00	2.49	2.67
SD	0.60	0.67	0.75	0.93	1.10	0.55	0.52	0.80
n	7	33	21	19	11	8	9	7
Range	1.9	3.6	3.1	3.9	4	1.4	1.4	2.1

ANOVA: Single Factor for Articulated Torso Width by Grid Square (N>5)								
DESCRIPTION								
Alpha 0.05								
<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Mean</i>	<i>Variance</i>	<i>SS</i>	<i>Std Err</i>	<i>Lower</i>	<i>Upper</i>
N2E5	33	97.4	2.95152	0.45133	14.4424	0.13593	2.67463	3.2283992
N4E2	21	55	2.61905	0.56062	11.2124	0.1704	2.2636	2.9744948
N5W3	19	69.4	3.65263	0.87263	15.7074	0.17914	3.27626	4.0289982
N2W6	11	30.8	2.8	1.216	12.16	0.23544	2.27541	3.3245947
N3E2	8	24	3	0.3	2.1	0.27608	2.34718	3.6528226
N5W1	9	22.4	2.48889	0.26861	2.14889	0.26029	1.88866	3.0891177
N6W4	7	18.7	2.67143	0.63571	3.81429	0.29514	1.94925	3.3936117
ANOVA								
<i>Sources</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P value</i>	<i>F crit</i>	<i>RMSSE</i>	<i>Omega Sq</i>
Between Groups	14.3972	6	2.39953	3.93522	0.00141	2.18967	0.49249	0.140205
Within Groups	61.5853	101	0.60976					
Total	75.9825	107	0.71012					

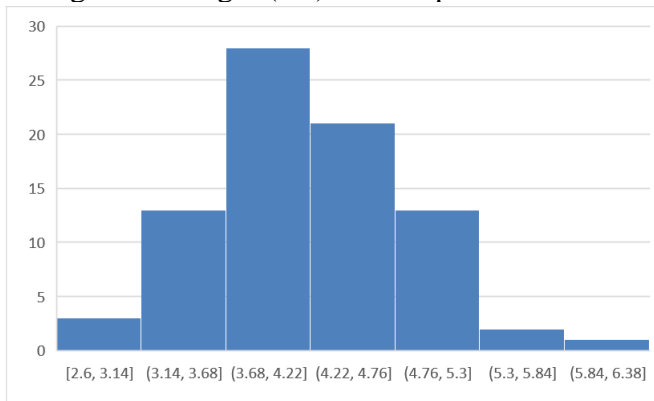
M)

Distribution of articulated limb sizes:

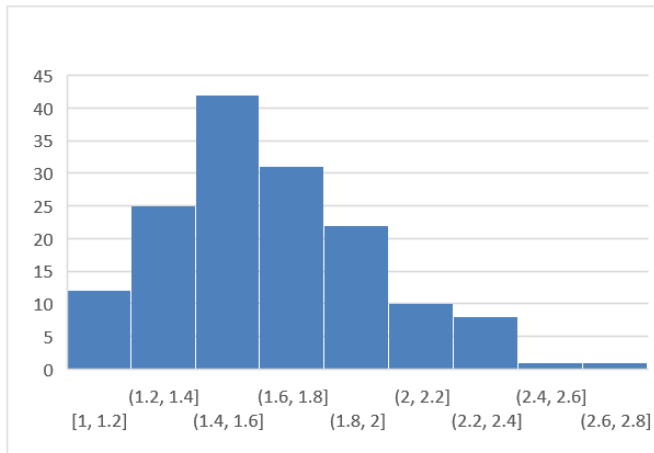


N)

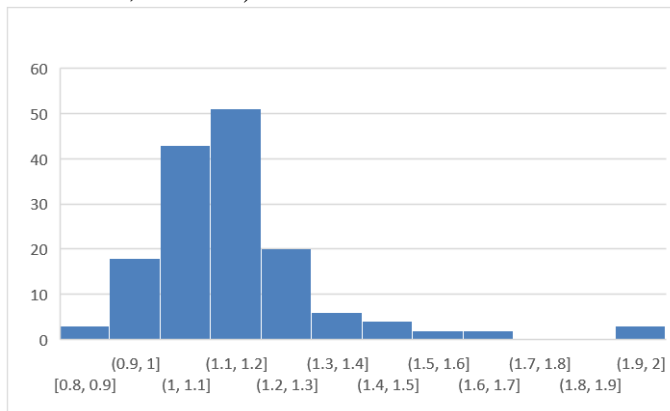
Histogram of length (cm) for complete warrior torsos (n=81, mean=4.2, SD=0.7)



Histogram of width (cm) for complete and partial warrior figurine torsos (n=157, mean=1.7, SD=0.3)



Histogram of thickness (cm) for complete and partial warrior figurine torsos (n=157, mean=1.2, SD=0.2):



O)

Chi-square results for amount of jewelry and degree of chest definition on articulated figurine torsos:

Observed Values		no jewelry jewelry		
no definition	70	22		
slight definition	19	33		
extreme definition	6	28		
Expected Values		no jewelry	jewelry	Total
no definition	49.10112	42.89888		92
slight definition	27.75281	24.24719		52
extreme definition	18.14607	15.85393		34
Total	95	83		178
Fisher Exact Test		p-value 0.00000		
Chi-Square Test				
SUMMARY		Rows	Cols	Alpha
Count	178	3	2	0.05
df				
2				
CHI-SQUARE				
	chi-sq	p-value	x-crit	sig
Pearson's	42.4319	0.00000	5.99146	yes
Max likelihood	44.7778	0.00000	5.99146	yes
				0.50156

Observed Values		no collars	1 collar	2-3 collars	
no definition		70	9	13	
slight definition		19	6	27	
extreme definition		6	4	24	
Expected Values		no collars	1 collar	2-3 collars	Total
no definition		49.101124	9.82022	33.078652	92
slight definition		27.752809	5.55056	18.696629	52
extreme definition		18.146067	3.62921	12.224719	34
Total		95	19	64	178

Chi-Square Test		Rows	Cols	Alpha	df
SUMMARY	Count	178	3	0.05	4
CHI-SQUARE					
	chi-sq	47.146094	p-value	0.00000	x-crit
	Pearson's	47.146094		0.00000	9.48773
	Max likelihood	50.0527556		0.00000	9.48773
					sig
					yes
					yes
					Cramer V
					0.36391
					0.37496

Chi-square results for degree of chest definition and the presence of ribs on articulated figurine torsos:

Observed Values		no definition	slight definition	extreme definition	Total
Visible ribs	2	6	10	18	
No ribs	90	46	24	160	
Expected Values					
Visible ribs	9.303370787	5.258426966	3.438202247	18	
No ribs	82.69662921	46.74157303	30.56179775	160	
Total	92	52	34	178	

Chi-Square Test		Rows	Cols	Alpha	df
SUMMARY	Count	2	3	0.05	2
CHI-SQUARE					
Pearson's	chi-sq	20.4267	p-value	0.00004	sig
Max likelihood	chi-sq	18.9477	p-value	0.00008	sig
				5.99146	yes
				5.99146	yes
				0.33876	
				0.32626	

Fisher Exact Test	
p-value	0.00005

Chi-square results for amount of jewelry and the presence of ribs on articulated figurine torsos:

Observed Values		Visible ribs		No Ribs	Total
0-1 collars	3	111			
2-3 collars	15	49			
Expected Values					
0-1 collars	11.52809	102.472			114
2-3 collars	6.4719101	57.5281			64
Total	18	160			178
Fisher Exact Test					
p-value	0.00002				
Chi-Square Test					
SUMMARY					
Count	178	2	2	2	1
Alpha	0.05				
df					
CHI-SQUARE					
	chi-sq	p-value	x-crit	sig	Cramer V
Pearson's	19.5203	0.00001	3.84146	yes	0.331156
Max likelihood	19.1629	0.00001	3.84146	yes	0.328111
					0.0882883
					0.0882883

Q)

Chi-square and Fisher's Exact Test results for body position of Late Formative figurines at Axotlan and Huixtoco

Observed Values		Seated	Standing
AXT		13	4
HXT		13	43
Expected Values		Seated	Standing
AXT		6.054795	10.94521
HXT		19.94521	36.05479
Total		26	47
		Seated	Standing
		17	56
		73	73

Chi-Square Test		Alpha	0.05
SUMMARY		Count	df
		73	1
		2	2
		2	1

CHI-SQUARE		chi-sq	p-value	x-crit	sig	Cramer V	Odds Ratio
Pearson's		16.12986	0.00006	3.841459	yes	0.470061	10.75
Max likelihood		15.83447	0.00007	3.841459	yes	0.465737	10.75

Fisher Exact Test		p-value
		0.000114

R)

Chi-square results for figurine paste color and site. The low counts for Buff and Red-Brown are within the conditions for a Chi-Square test since they account for fewer than 20% of the total cells.

Observed Values													
	Buff			Orange			Orange- Brown			Reddish- Brown		Tan- Brown	
	Brown	Buff	Orange	Orange	Orange	Brown	Brown	Brown	Tan	Brown	Tan	Brown	
AXT	42	13	22	22	57	1	221	157	221	16	51	157	
CPZ	6	1	11	11	53	9	16	51	16	43	59	51	
HXT	22	3	33	33	83	11	43	59	43	254	8007	59	
TEO	72	57	307	307	1249	87	3547	2688	3547	8007	8921	2688	
Expected Values													
	Buff			Orange			Orange- Brown			Reddish- Brown		Tan- Brown	
	Brown	Buff	Orange	Orange	Orange	Brown	Brown	Brown	Tan	Brown	Total	Tan	
AXT	8.165676	4.255353	21.44928	21.44928	82.92187	6.210515	220.0707	169.9266	220.0707	169.9266	513	169.9266	
CPZ	2.339872	1.21937	6.146284	6.146284	23.76124	1.779621	63.0612	48.69241	63.0612	48.69241	147	48.69241	
HXT	4.043045	2.106939	10.62011	10.62011	41.05683	3.074992	108.9629	84.13519	108.9629	84.13519	254	84.13519	
TEO	127.4514	66.41834	334.7843	334.7843	1294.26	96.93487	3434.905	2652.246	3434.905	2652.246	8007	2652.246	
Total	142	74	373	373	1442	108	3827	2955	3827	2955	8921	2955	

Chi-Square Test

SUMMARY	Count	Rows	Cols	Alpha	x-crit	sig
	8921	4	7	0.05	18	

CHI-SQUARE

	chi-sg	p-value	x-crit	sig
Pearson's	554.2573	0.00000	28.8693	yes
Max likelihood	410.8408	0.00000	28.8693	yes

S)

Chi-square results for paste color distribution by time period at each site.

Axotlan:

Observed Values					
	Brown	Orange	Orange-Brown	Tan	Tan-Brown
Middle Formative	2	4	7	12	6
Late Formative	6	3	6	13	17
Terminal Formative	7	1	10	35	16
Early Classic	6	0	20	59	44
Classic	15	9	10	83	59

Expected Values						
	Brown	Orange	Orange-Brown	Tan	Tan-Brown	Total
Middle Formative	2.48	1.17111	3.651111111	13.9156	9.782222	31
Late Formative	3.6	1.7	5.3	20.2	14.2	45
Terminal Formative	5.52	2.60667	8.126666667	30.9733	21.77333	69
Early Classic	10.32	4.87333	15.19333333	57.9067	40.70667	129
Classic	14.08	6.64889	20.72888889	79.0044	55.53778	176
Total	36	17	53	202	142	450

Chi-Square Test

SUMMARY	Alpha	0.05	
Count	Rows	Cols	df
450	5	5	16

CHI-SQUARE

	chi-sq	p-value	x-crit	sig	Cramer V
Pearson's	36.7542	0.00227	26.2962	yes	0.1429

Observed Values		Orange-Brown	Tan	Tan-Brown	
Middle Formative		7	12	6	
Late Formative		6	13	17	
Terminal Formative		10	35	16	
Early Classic		20	59	44	
Classic		10	83	59	
Expected Values		Orange-Brown	Tan	Tan-Brown	Total
Middle Formative		3.337531486	12.7204	8.94206549	25
Late Formative		4.80604534	18.3174	12.8765743	36
Terminal Formative		8.143576826	31.0378	21.8186398	61
Early Classic		16.42065491	62.5844	43.9949622	123
Classic		20.29219144	77.3401	54.3677582	152
Total		53	202	142	397

Chi-Square Test		Alpha	df
SUMMARY	Count	0.05	8
	Rows	5	3
	Cols	3	8

CHI-SQUARE		chi-sq	p-value	x-crit	sig	Cramer V
Pearson's		17.6838	0.02373	15.5073	yes	0.14924
Max likelihood		18.1243	0.02031	15.5073	yes	0.15108

Teotihuacan:

		Brown	Buff	Orange	Orange-Brown	Reddish-Brown	Tan	Tan-Brown	Yellow-Brown
Observed Values		18	8	60	273	35	732	582	16
Terminal Formative		6	5	32	148	6	424	393	4
Early Classic		20	20	101	425	14	1215	917	29
Classic									
Expected Values		13.8348	10.3761	60.6843	266.0047419	17.29345249	745.505	594.89477	15.40689404
Terminal Formative		8.16925	6.12694	35.8333	157.0724056	10.21156301	440.211	351.27777	9.097574321
Early Classic		21.996	16.497	96.4824	422.9228525	27.4949845	1185.28	945.82747	24.49553164
Classic									
Total		44	33	193	846	55	2371	1892	49

Chi-Square Test

SUMMARY	Count	Rows	Cols	Alpha	df
	5483	3	8	0.05	14

CHI-SQUARE

	chi-sq	p-value	x-crit	sig	Cramer V
Pearson's	42.7516	0.00009	23.6848	yes	0.0624385
Max likelihood	40.8698	0.00019	23.6848	yes	0.0610488

Observed Values		Orange-Brown	Reddish-Brown	Tan	Tan-Brown	
Terminal Formative	273	35	732	582		
Early Classic	148	6	424	393		
Classic	425	14	1215	917		
Expected Values		Orange-Brown	Reddish-Brown	Tan	Tan-Brown	Total
Terminal Formative	265.7265686	17.27536793	744.725	594.2726569	1622	
Early Classic	159.0755229	10.34178931	445.825	355.7575523	971	
Classic	421.1979086	27.38284276	1180.45	941.9697909	2571	
Total	846	55	2371	1892	5164	

Chi-Square Test					
SUMMARY	Alpha	0.05			
Count	Rows	Cols	df		
5164	3	4	6		
CHI-SQUARE					
Pearson's	chi-sq	p-value	x-crit	sig	Cramer V
34.66474812	34.66474812	0.00001	12.59	yes	0.05793
Max likelihood	32.12753153	0.00002	12.59	yes	0.05577

T)

Chi-square results for paste temper type by period for Axotlan and Teotihuacan. The Formative periods have been condensed into the one period "Formative", and Early Classic and Classic into the period "Classic" since there were too many zero and low counts, which would have violated the rules of the Chi-square test.

Axotlan:

Observed Values										Chi-Square Test			
	LBR	sBR	LRS/P	sRS/P	LS/P	SS/P	sB						
Formative	6	118	10	9	1	1	14						
Classic	2	279	3	11	1	9	1						
Expected Values										465	2	7	6
	LBR	sBR	LRS/P	sRS/P	LS/P	SS/P	sB	Total					
Formative	2.735484	135.7484	4.445161	6.83871	0.683871	3.419355	5.129032	159					
Classic	5.264516	261.2516	8.554839	13.16129	1.316129	6.580645	9.870968	306					
Total	8	397	13	20	2	10	15	465					
CHI-SQUARE										chi-sq	p-value	x-crit	sig
Pearson's										47.17131	0.00000	12.59159	yes
Max likelihood										47.01114	0.00000	12.59159	yes
													Cramer V
													0.318502
													0.317961

Teotihuacan:

Chi-Square Test									
Observed Values									
LBR	sBR	LRS/P	sRS/P	LS/P	sS/P	sB			
Formative	196	289	103	58	102	20			
Classic	421	543	253	88	150	54			
Expected Values									
LBR	sBR	LRS/P	sRS/P	LS/P	sS/P	sB	Total		
Formative	195.0371	262.9998	112.5336	46.15141	79.6586	23.39181	1737		
Classic	421.9629	2200.772	569.0002	243.4664	99.84859	172.3414	3758		
Total	617	3218	832	356	146	252	5495		
SUMMARY									
Count	Rows	Cols	Alpha						
5495	2	7	0.05						
CHI-SQUARE									
Pearson's	chi-sq	p-value	x-crit	sig					
Max likelihood	22.61901	0.000935	12.59159	yes					
	22.07245	0.001175	12.59159	yes					
				0.064158					
				0.063378					

U)

Observed Values				Chi-Square Test					
	Women	Men		SUMMARY		Alpha		0.05	
AXT	1	9		<i>Count</i>	<i>Rows</i>	<i>Cols</i>	<i>df</i>		
CPZ	9	6		299	3	2	2		
TEO	64	210							
Expected Values				CHI-SQUARE					
	Women	Men	Total	<i>chi-sq</i>	<i>p-value</i>	<i>x-crit</i>	<i>sig</i>	<i>Cramer V</i>	
AXT	2.47492	7.52508	10	Pearson's 11.4612	0.00325	5.99146	yes	0.19578	
CPZ	3.71237	11.2876	15	Max likeliit 10.0544	0.00656	5.99146	yes	0.18338	
TEO	67.8127	206.187	274						
Total	74	225	299	Fisher Exact Test					
				p-value	0.00509				

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