THE EXPANDING POLITY: PATTERNS OF THE TERRITORIAL
EXPANSION OF THE POST-CLASSIC SEÑORIO OF TLAPA-
TLACHINOLLAN IN THE MIXTECA-NAHUATL-TLAPANECA REGION
OF GUERRERO.

A Thesis in Anthropology

By

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Abstract
The purpose of this dissertation is to study issues associated with the territorial expansion of the *altepetl* of Tlapa-Tlachinollan, a middle size autochthonous Mesoamerica polity located in eastern Guerrero, México. Territorial expansion is defined as the annexation of formerly independent political units into one’s sovereignty by any means possible.

Current interpretations of codices of Azoyú 1 and Azoyú 2 suggest that over a 221 year period (A.D. 1300-1521) Tlapa-Tlachinollan was transformed by different methods from a small political unit covering an area of 48 sq. km. into a complex polity covering an area larger than 4000 sq. km. This study traces the different strategies used by the rulers of Tlapa-Tlachinollan to compete politically and militarily at the regional level. This permits a careful study of a pattern of political domination in the region.

The codices Azoyú 1 and 2 were used in the Spanish courts by 16th century Indian elites to claim political and territorial rights under the colonial system. This leaves some doubt about the historical reliability of the recorded events. The use of several independent sources correlated with archaeological information helps to evaluate the reliability of the primary sources and analyze the sequence and direction of the expansion and the rate of territorial growth of this polity.

Archaeological and ethnohistoric evidence suggest that Tlapa-Tlachinollan’s expansion was designed to control a segment of the trade-route connecting the Pacific coast with Central Mexico. Tlachinollan’s growth followed the lines of minimum political costs and highest expected benefits, conquering weaker neighbors first and bypassing strong ones. The leaders of Tlapa-Tlachinollan were interested in controlling the labor and specific resources of the region which included small but highly productive irrigation lands.

The results of this dissertation support the argument that territorial expansion is a byproduct of the domestic affairs of the expanding polity to meet two fundamental challenges: 1) the quest for security and 2) the pursuit of wealth and satisfaction of their leaders.
# Table of Contents

List of figures ........................................................................................................ viii
List of tables ......................................................................................................... xvii
Acknowledgements ............................................................................................... xviii

## Chapter 1. Introduction

1.1 Mesoamerica as a competitive environment ................................................. 1
1.2 Goals of the thesis .......................................................................................... 4
1.3 The nature of the Mesoamerican polity and inter-polity relations ............... 8
1.4 Study structure ............................................................................................... 15
1.4.1 The ethnohistorical sources ....................................................................... 15
1.4.2 The archaeological data ............................................................................ 26
1.5 Organization of the thesis ............................................................................. 29

## Chapter 2. The Environmental background of the La Montaña and Costa Chica regions of Guerrero

2.1 Regionalization of eastern Guerrero .............................................................. 31
2.2 Physiography ................................................................................................. 44
2.3 Geology .......................................................................................................... 44
2.4 Climate ........................................................................................................... 45
2.5 Rainfall ........................................................................................................... 53
2.6 Hydrology ....................................................................................................... 60
2.7 Soils ................................................................................................................. 62
2.7.1 Regosol ...................................................................................................... 64
2.7.2 Cambisol .................................................................................................... 64
4.4 Territory as a source of conflict ................................................................. 139
4.5 Deviations from the ideal shape of the polity: Von Thünen rings ............. 143
4.6 Patterns of territorial expansion ................................................................. 147
4.6.1 Lateral Concentric-Axial pattern ............................................................. 149
4.6.2 Sprawl pattern ......................................................................................... 150
4.6.3 Infilling pattern ....................................................................................... 150
4.6.4 Coalescence pattern ............................................................................... 151
4.7 Agents of expansion and administration of newly annexed territories ...... 152
4.8 Chapter overview ....................................................................................... 153

Chapter 5. An interpretation of Tlapa-Tlachinollan’s
expansion process and its strategic choices .................................................. 155
5.1 Interpretation as a recreation of the past .................................................... 155
5.2 The pictorial documents of the Mixteca-Tlapaneca-Nahuatl region and their political content ................................................................. 157
5.3 The Geographic setting of the Tlapa-Tlachinollan expansion ..................... 159
5.4 A brief description of the territorial expansion of Tlapa-Tlachinollan ........ 169
5.4.1 Stage 1 (A.D. 1349-1355) ...................................................................... 180
5.4.2 Stage 2 (A.D. 1356-1362) ...................................................................... 182
5.4.3 Stage 3 (A.D. 1412-1418) ...................................................................... 184
5.4.4 Stage 4 (A.D. 1426-1432) ...................................................................... 189
5.4.5 Resistance (A.D. 1433-1439) ................................................................. 190
5.4.6 Stage 5 (A.D. 1440-1446) ..................................................................... 192
5.4.7 Stage 6 (A.D. 1447-1453) ..................................................................... 194
5.4.8 Stage 7 (A.D. 1468-1474) ..................................................................... 198
5.4.9 Stage 8 (A.D. 1475-1481) ..................................................................... 207
5.4.10 Stage 9 (A.D. 1489-1495) ................................................................... 207
5.4.11 Stage 10 (A.D. 1503-1509) ................................................................. 209
5.4.12 Stage 11 (A.D. 1510-1516) ................................................................. 209
5.5 Some remarks on the expansion process .................................................. 211
List of figures.

Figure 1.1. Location of eastern Guerrero.................................................................5
Figure 1.2. Meeting of subordinate Tlatoque with lords of Tlachinollan.............14
Figure 1.3. Folio 1 obverse of the Codex Azoyú 1....................................................17
Figure 1.4. Folio 17 obverse of the Codex Azoyú 2...............................................17
Figure 1.5. Partial view of the Lienzo of Tlapa. ......................................................19
Figure 1.6. Palimpsest of Veinte Mazorcas...............................................................19
Figure 1.7. Lienzo de Chiepetlan 1......................................................................22
Figure 1.8. Areas of archaeological survey. ............................................................27
Figure 2.1. Orography of the State of Guerrero......................................................33
Figure 2.2. Distribution of the main linguistic groups of eastern Guerrero. ............33
Figure 2.3. The La Montaña region, according to INI researchers..........................34
Figure 2.4. The La Montaña subregions .................................................................34
Figure 2.5. Hypsometry of the Montaña Region.....................................................36
Figure 2.6. The Costa Chica and the Montaña regions..........................................38
Figure 2.7. Schematic representation of the Montaña and Costa Chica regions. ...38
Figure 2.8. Flows of resources and goods between symbiotic regions..................41
Figure 2.9. Schematic functional regions ...............................................................42
Figure 2.10. Study region .....................................................................................43
Figure 2.11. Eastern Guerrero’s Physiography.......................................................43
Figure 2.12. Geological events in the Montaña and Costa Chica regions.............46
Figure 2.13. Rock formation processes in the Montaña and Costa Chica..............47
Figure 2.14. Geological map of the study area.......................................................49
Figure 2.15. Minimum night time temperatures, May to October.......................51
Figure 2.16. Maximum day temperatures, May to October.................................52
Figure 2.17. Ecological zones based on air temperature .......................................53
Figure 2.18. Dry season distribution in the Montaña and Costa Chica.................56
Figure 2.19. Correlation between orography with rainfall and air temperature .......57
Figure 2.20. Rainfall distribution.................................................................58
Figure 2.21. Availability of rainfall during the rainy season...................59
Figure 2.22. Principal drainage of Eastern Guerrero.................................59
Figure 2.23. Spatial distribution of soil types.............................................65
Figure 2.24. Distribution of vegetation and land use...............................68
Figure 2.25. Natural Vegetation in Eastern Guerrero.................................69
Figure 2.26. Pine and Oak forest in Metlatonoc........................................70
Figure 2.27. Thorny Low Deciduous Seasonal Forest around Tlapa..........70
Figure 2.28. Low deciduous forest along the dirt road Tlapa-Zoyatlan.......71
Figure 2.29. Secondary vegetation along the Costa Chica.......................71
Figure 2.30. Distribution of towns and villages in the study region.........73
Figure 2.31. Distribution of towns and villages........................................73
Figure 2.32. Spatial distribution of population densities........................74
Figure 2.33. Percentual distribution of total maize production................77
Figure 2.34. Average available agricultural land per household................78
Figure 2.35. Areas of major maize production in Eastern Guerrero..........78
Figure 2.36. Maize production by irrigation during the dry season........80
Figure 2.37. Canal irrigation system along the Tlapaneco river...............82
Figure 2.38. Retention walls protecting the irrigation fields......................84
Figure 2.39. Retention walls protecting the agricultural fields...................84
Figure 2.40. Trompezon fields in an early stage of soil accumulation.......85
Figure 2.41. Trompezon fields in a mature stage of soil accumulation.......85
Figure 3.1. Teotihuacan Style Mask............................................................93
Figure 3.2. Stelae 1 from Texmelincan, Guerrero......................................93
Figure 3.3. Approximate area where Yope Indians were reported...........97
Figure 3.4. Geographic escalation of the conflict....................................97
Figure 3.5. Province of Yope Indians.......................................................103
Figure 3.6. A Yope Indian from Acapulco................................................103
Figure 3.7. A Yope marriage.................................................................104
Figure 3.8. Yope punishment for adultery..............................................104
Figure 3.9. Tributary province of Tlapa. ...............................................................107
Figure 3.10. Ethnic landscape of Tlapa during the 16th century.....................109
Figure 3.11. Chert projectile point and chert flakes. .....................................109
Figure 3.12. Site of Totomixtlahuaca-Piedra Pinta.........................................112
Figure 3.13. Spatial distribution of possible Preclassic sites...........................113
Figure 3.14. Preclassic black incised ceramic. ............................................113
Figure 3.15. Preclassic clay mask from Conhuaxo-Los Amargos..................114
Figure 3.16. Preclassic stone mask from San Luis Acatlan............................114
Figure 3.17. Spatial distribution of Preclassic archaeological sites ................116
Figure 3.18. Teotihuacan Style censer..........................................................116
Figure 3.19. Spatial distribution of Teotihuacan style censers.......................118
Figure 3.20. Classic sculptures of Cochoapa-Yu Kivi....................................118
Figure 3.21. Serpent head from Azoyu Tenconahuale...................................119
Figure 3.22. Carved slab from Piedra Labrada..............................................119
Figure 3.23. Serpent head from Texmelincan.............................................120
Figure 3.24. Serpent head from Huitzapula.................................................120
Figure 3.25. Ball court ring from Temalacacingo. .......................................121
Figure 3.26. Stelae A from Coracero, Cualac..............................................121
Figure 3.27. Fragment of a year sign from Huamuxtitlan...............................122
Figure 3.28. Tlaloc sculpture from nearby Chilpancingo.............................122
Figure 3.29. Carved slab from Huamuxtitlan..............................................124
Figure 3.30. Slab from Texmelincan seemingly Epiclassic............................124
Figure 3.31. Spatial distribution of Classic Period archeological sites.............125
Figure 3.32a Post Classic Potsherds..............................................................125
Figure 3.32b. Post Classic Potsherds...............................................................125
Figure 3.33. Post Classic Potsherds: sample of Aztec wares...........................127
Figure 3.34. Post Classic Potsherds: Yeztla-Naranjo.....................................127
Figure 3.35. Post-Classic settlement pattern in Eastern Guerrero..................129
Figure 4.1 Ideal structure of a pre-industrial polity......................................145
Figure 4.2 Ideal morphology of polities’ boundaries. ...........................................145
Figure 4.3 Morphological distortion of the ideal structure of polity. ....................148
Figure 4.4 Theoretical spatial patterns of political expansion. .............................148
Figure 5.1. Geographical location of the main political units. ...............................160
Figure 5.2a. Place names of the Aztec Province of Tlapa. ..................................162
Figure 5.2b. Place names of the Aztec Province of Tlapa. ...................................163
Figure 5.3. Place names of the Aztec Province of Quiauhteopan. .........................164
Figure 5.4. Place names of the Aztec Province of Yoaltepec. ............................165
Figure 5.5. Place names of the Aztec Province of Tlalcozauhtitlan. .................166
Figure 5.6. Geographical location of the Pueblos. ............................................168
Figure 5.7a. Place names depicted in the Codex Azoyú 1. ...............................170
Figure 5.7b. Place names depicted in the Codex Azoyú 1. ..................................171
Figure 5.7c. Place names depicted in the Codex Azoyú 1. ..................................172
Figure 5.7d. Place names depicted in the Codex Azoyú 1. ..................................173
Figure 5.7e. Place names depicted in the Codex Azoyú 1. ..................................174
Figure 5.7f. Place names depicted in the Codex Azoyú 1. ..................................175
Figure 5.7g. Place names depicted in the Codex Azoyú 1. ..................................176
Figure 5.8. Some place names recorded in the Palimpsest of 20 Mazorcas. .........177
Figure 5.9. Some place names recorded in the Lienzo of Chiepetlan 1. ..............178
Figure 5.10. Spatial location of the place names depicted. ...............................179
Figure 5.11. Approximate area under the control of Tlachinollan. ......................181
Figure 5.12. First stage of expansion, A.D. 1349-1355. .....................................181
Figure 5.13. Folio 9, Codex Azoyú 1. ...............................................................183
Figure 5.14. Second stage of expansion, A.D. 1356-1362. ...............................183
Figure 5.15. Lord Lizard makes offerings to the gods. .....................................185
Figure 5.16. Third stage of expansion, A.D. 1412-1418. ..................................185
Figure 5.17. Strategic marriage alliance. .........................................................187
Figure 5.18. Fourth stage of expansion, A.D. 1426-1432. ................................187
Figure 5.19. Folio 3,D, Codex Azoyú 1.............................................................191
Figure 5.20. Resisting a possible Aztec encroachment. .................................191
Figure 5.21. Fifth stage of expansion, A.D. 1440-1446. .................................................193
Figure 5.22. Tlachinollan was unexpectedly raided in A.D.1447. ...............................193
Figure 5.23. Sixth stage of expansion, A.D. 1447-1453..................................................195
Figure 5.24. War of Tlachinollan against the northern Nahuatl villages......................195
Figure 5.25. Meeting between Lord Rain and the Aztec ambassador. .........................197
Figure 5.26. Aztec titles received by Lord Rain.............................................................197
Figure 5.27. Lord Rain is shown as the first Tlapanec lord to pay tribute.....................197
Figure 5.28. Division of the 16 and 17th century scenes............................................199
Figure 5.29. Early 16th century layer of the Palimpsest of 20 Mazorcas. ......................200
Figure 5.30. Lord Rain is challenged in Huiltepec......................................................201
Figure 5.31. Depiction of factional struggles.................................................................201
Figure 5.32. Polities that allied Tlachinollan.................................................................202
Figure 5.33. Polities that allied Yoallan-Cuitlapa..........................................................202
Figure 5.34. A battle took place in a field near Atlamajalcingo del Monte. ..................204
Figure 5.35. Folio 25 Codex Azoyu 1. ..........................................................205
Figure 5.36. Seventh stage of expansion, A.D. 1468-1474. .........................................206
Figure 5.37. Eighth stage of expansion, A.D. 1475-1481. ............................................206
Figure 5.38. Ninth stage of expansion, A.D. 1489-1495. .............................................208
Figure 5.39. Tenth stage of expansion, A.D. 1503-1509...............................................208
Figure 5.40. Eleventh stage of expansion, A.D. 1510-1516............................................210
Figure 5.41. Geographical location of the Pueblos........................................................213
Figure 5.42. Thünen rings.........................................................................................217
Figure 5.43. Sequence of conflicts according to the codices......................................219
Figure 5.44. Scenario of uneconomic, non-planned sequences of conflict. .................220
Figure 5.45. Different stages of expansion.................................................................220
Figure 5.46. Different stages of expansion.................................................................224
Figure 5.47. Shifts in the mean center...........................................................................224
Figure 5.48. Area of territorial acquisition during each stage .....................................227
Figure 5.49. Annual rate of expansion........................................................................229
Figure 5.50. Ideal shape of Tlachinollan. ...............................................................229
Figure 5.51. Comparison between the ideal shape. .................................................231
Figure 5.52. Comparison between the ideal shape. ..................................................231
Figure 6.1. Important Postclassic sites not mentioned in the codices. .....................242
Figure 6.2. Distribution of Postclassic sites...............................................................242
Figure 6.3. Distribution of Postclassic sites...............................................................245
Figure 6.4. Concentration of sites weighted by area size. ........................................245
Figure 6.5. Concentration of sites weighted by area size. ........................................246
Figure 6.6. Distribution of irrigation fields...............................................................246
Figure 6.7. Distribution of agricultural fields.........................................................250
Figure 6.8. Frequency of agricultural fields.............................................................251
Figure 6.9. Dendritic tributary system. .....................................................................253
Figure 6.10. Results of the q value. .........................................................................259
Figure 6.11. Results of the q value. ..........................................................................260
Figure 6.12. Results of the q value. ..........................................................................261
Figure 6.13. Several views of the Chiepetepec-Tlancualtepec. ...............................264
Figure 6.14. Fortress of Aquilpa-Teteltipa, Guerrero. ..............................................265
Figure 6.15. Fortress of Axoxuca-Mirador, Guerrero. ..............................................265
Figure 6.16. Fortress of Cuauhtepetl and Quiquimimiteopan. ...............................266
Figure 6.17. Fortress of Cozcatenango, Guerrero.....................................................266
Figure 6.18. Fortress of Ahuacatitlan, Guerrero.......................................................267
Figure 6.19. Fortress of Alpuyeca-El Mirador and Alpuyeca-Las Minas ...............267
Figure 6.20. Fortress of Huamuxtitlan-Los Cuartos .............................................268
Figure 6.21. Fortress of Huamuxtitlan-Plaza Vieja ................................................268
Figure 6.22. Fortress of Huiplla and Tlalyahualco ..................................................269
Figure 6.23. Distribution of fortified settlements. .....................................................269
Figure 6.24. Tlachinollan’s regal ritual core. ............................................................270
Figure 6.25. Viewshed of strongholds. ...................................................................272
Figure 6.26. Viewshed of strongholds. ....................................................................272
Figure 6.27. Decorated gourds form eastern Guerrero. ...........................................274
Figure 6.28. Location of present day villages.........................................................274
Figure 6.29. Modern ceramic forms. .................................................................275
Figure 6.30. Distribution of ceramic Type 1. .......................................................276
Figure 6.31. Distribution of ceramic Type 2. .......................................................278
Figure 6.32. Distribution of ceramic Type 3. .......................................................278
Figure 6.33. Distribution of ceramic Type 14. .......................................................279
Figure 6.34. Distribution of ceramic types. .........................................................279
Figure 6.35. Intersection of the ceramic type T1BGB............................................281
Figure 6.36. Relative size of both regal-ritual cores of Tlachinollan. ...............284
Figure 6.37. Tototepec’s regal ritual core............................................................285
Figure 6.38. Teteltipa’s regal ritual core .............................................................285
Figure 6.39. Ocoapan’s regal ritual core..............................................................287
Figure 6.40. Location of the stronghold of Tlazalan. ......................................287
Figure 6.41. Yoso None’s regal-ritual core. .........................................................288
Figure 6.42. Tlaxco’s regal-ritual core.................................................................288
Figure 6.43. Atlixtac’s regal-ritual core...............................................................290
Figure 6.44. Quechultenango’s architectural core. ............................................290
Figure 6.45. Totomixtlahuaca’s 16th century Agustin church............................291
Figure 6.46. Yoallan’s regal-ritual core...............................................................291
Figure 6.47. Partial view of Texmelincan’s regal-ritual core.............................293
Figure 6.48. Huitzapula’s regal-ritual core..........................................................293
Figure 6.49. Ixcateopan’s regal-ritual core..........................................................294
Figure 6.50. Alpuyeca’s regal-ritual core.............................................................294
Figure 6.51. Chiepetepec’s regal-ritual core.........................................................296
Figure 6.52. Alcozauca’s regal-ritual core............................................................296
Figure A-1. Site plan and location of Ahuatepec Ejido........................................310
Figure A-2. Location of Artes y Oficios site.........................................................312
Figure A-3. Location of Atlamajac.................................................................313
Figure A-4. Location of Atlamajalcingo del Rio.............................................315
Figure A-5. Location of Terrazas 1, Terrazas 2 and Seminario. ...........................316
Figure A-6. Location of Axoxuca Mirador. ..........................................................318
Figure A-7. Location of Campo La Lumbre. ...........................................................321
Figure A-8. Regal-ritual core of Cerro Quemado. .................................................322
Figure A-9. Tecpan, Plaza and Ballcourt of Cerro Quemando.............................323
Figure A-10. Location of Cerro Quemado, Aserradero ........................................326
Figure A-11. Location of Caltitlan-Aldama #8. .....................................................327
Figure A-12. Location of Colonia Constitucion and Juana Najera sites..................328
Figure A-13. Location of the sites of Colonia Contlalco 1 ......................................330
Figure A-14. Sectors of Contlaco. .......................................................................331
Figure A-15. Location of the main structures ......................................................332
Figure A-16. Tecpan of Contlalco. ......................................................................334
Figure A-17. Eastern Sector of Contlalco .............................................................335
Figure A-18. Sector Plaza Cumbre of Contlalco ...................................................337
Figure A-19. Sector Contlalco Loma 3 ..................................................................338
Figure A-20. Different sectors of the site of Contlalco. .........................................339
Figure A-21. Location of La Soledad. .................................................................343
Figure A-22. Main structures of Alpuyeca-Las Minas ...........................................346
Figure A-23. Main structures of Coyahualco-Cuateteltzin ...................................348
Figure A-24. Main structures of Huamuxtitlan-Los Cuartos ...............................350
Figure A-25. Main structures of Huamuxtitlan-Tecoapa .....................................352
Figure A-26. Main structures of Ixcateopan .........................................................353
Figure A-27. Location of Xocotla-Buena Vista ..................................................355
Figure A-28. Location of Huipila .......................................................................356
Figure A-29. Plan view of Igualita-Yoallan .........................................................358
Figure A-30. Location of Mezcala .......................................................................359
Figure A-31. Site plan of Alcozauca .................................................................361
Figure A-32. Site plan of Aquilpa-Teteltipa .........................................................363
Figure A-33. Location of the site of Atlixtac ........................................................364
Figure A-34. Site plan of Chiepetepec-Tlancualtepec .......................................366
Figure A-35. Site plan of Chiepetlan-Cuauhtepetl ................................................367
Figure A-36. Site plan of Chiepetlan-Quiquimimiteopan. ..................................369
Figure A-37. Site plan of Huitzapula ..................................................................370
Figure A-38. Site plan of Ahuacatitlan ...............................................................372
Figure A-39. Site plan of Ocuapan .....................................................................373
Figure A-40. Location of Olinala .........................................................................375
Figure A-41. Location of Tenango Tepexi ............................................................376
Figure A-42. Site Plan of Texmelincan ................................................................378
Figure A-43. Location of Tlaxco ..........................................................................379
Figure A-44. Ruins of the 16th century church in Totomixtlahuaca .....................381
Figure A-45. Plan site of Tototepec-Cerro Machete (Yu Cuchú) ..........................382
Figure A-46. Plan site of Yoso None, Tototepec-Pueblo Viejo ............................384
List of tables.

Table 2.1. Surface covered by each type of rock. .................................................48
Table 2.2. Surface covered by different type of rock. .........................................48
Table 2.3. Yearly volume of runoff per basin for the study area............................63
Table 5.1. Mean middle distance to the nearest neighbor. .................................216
Table 5.2 Stages of expansion and sequence of conflicts.......................................219
Table 5.3. Area of territorial acquisition during each stage. ..................................227
Table 6.1. List of towns with similar names...........................................................237
Table 6.2. List of towns that were randomly chosen.............................................241
Table 6.3. Results of the q value for the regression lines of each scenario.........253
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Gerardo Gutiérrez
Chapter 1. Introduction.

“Los españoles designaban a cada uno de estos pueblos con término de “república”, que puede ser válido hoy para mencionarlos y caracterizarlos. Cada pueblo es, de hecho, como una pequeña república, enemistada con las restantes por disputas varias, en las cuales predominan las que se vinculan con las cuestiones de la tierra, que aquí son muy escasas...”
(Julio De La Fuente 1965:31-32).

1.1 Mesoamerica as a competitive environment.

When the Spaniards first arrived in Central and Southern Mexico during the first quarter of the 16th century, they found dozens of very complex political systems organized around defined and defended territories. These autonomous political-territorial units were governed by dynastic sovereign rulers within state-level structures that varied in their degree of centralization. Strong competition existed for the political control of people and land among different ruling dynasties which affected the balance of power among the participant polities1 in the region. Archaeological research has found evidence of cyclical processes of centralization by mighty polities, which conglomerated smaller and weak neighbors as tributary subjects, followed by political breakdown and territorial fragmentation (Sanders and Price 1968).

The interval between the political breakdown of the Classic civilizations and rise of the Aztec empire2 over six centuries saw the rise and fall of militaristic states in Central and Southern Mexico. During the Epiclassic period (A.D. 750-950) a number of large polities sprang up to fill the political vacuum left by the fall of

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1 Following Renfrew (1986:2), I will be using the neutral term “polity” to designate an autonomous socio-political unit, without suggesting any specific scale of organization or degree of complexity. Thus a polity can be an empire, a state, a chiefdom, a tribe or even a band, with the condition that such socio-political unit is not subject to the jurisdiction of a higher power, possess a territory, a population and a socially recognized mechanism of decision making.

2 Also known as the Triple Alliance of Tenochtitlan, Texcoco and Tlacoapa. I will use the term Aztec to refer to the Nahuatl speaking people related to these three kingdoms.
Teotihuacan. Impressive urban centers were found at Xochicalco, Teotenango and Cacaxtla. These were mountaintop centers whose fortifications and iconography attest to the prevalence of warfare. In the tenth century Tula also emerged as an important competitor (Wolf 1959; Piña Chan 1967; Diehl and Berlo 1989). Nevertheless, these states were unable to expand their territories in the same manner as did the large Classic states of Teotihuacan or Monte Albán (Blanton et al. 1992).

Endemic warfare and competition among small and middle size polities continued throughout the Postclassic period (A.D. 950-1521). Political control by individual polities was limited to smaller areas. Nevertheless, by the fifteenth century several polities had succeeded in establishing more powerful states consisting of networks of conquered political units. The most known cases in the literature are Texcoco and Azcapotzalco, in the Basin of Mexico; Cuauhnahuac, in Morelos; Tlaxcala, Cholula and Huexotzingo in the valley of Puebla; Tututepec in the Mixteca coast; and the Tarascans in Michoacan. In A.D. 1428, a confederation of three political units composed by Tenochtitlan, Texcoco and Tlacoapa overthrew the Tepanec rulers of Azcapotzalco. Tenochtitlan became the dominant partner of this modular sovereignty, which soon began a systematic militaristic expansion to incorporate almost a half of the Mesoamerican territory into its realm. The Tarasco state in Michoacan was the only polity comparable in size and power to Tenochtitlan.

The formation of the Aztec Empire in Mesoamerica is a fascinating problem that has attracted scholarly attention for several decades. As a result, we now understand how expansion was carried out, the sequence of conquests, territorial extent, its administrative nature and tributary system (Davies 1968, 1987; Zantwijk 1984; Hassig 1998; Barlow 1992; Berdan and Rieff Anawalt 1992; Berdan et al. 1996; Carrasco 1999; Silverstein 2000). In part this interest in the Aztec expansion is due to the existence of an enormous corpus of written sources in Nahuatl and Spanish as well as pictorial codices (see Carrasco 1999:9-15). However, the size and complexity of the Aztec and Tarascan empires had not occurred since the rise and fall of the Classic civilizations.
The most common political and territorial units of Mesoamerica were smaller in size and administrative complexity. I think that most of Mesoamerica was packed with small polities the size of modern municipalities in Central and Southern Mexico (50-300 sq km.). These units were composed of groups of large and small villages and hamlets distributed around a larger settlement from where the native rulers organized the political and economic life of anywhere from 5-35,000 people. From time to time one of these polities was able to subjugate a neighbor increasing its size, wealth, and complexity. In the same way they often confederated to defend themselves from a common foe.

I believe these small polities are the basic unit of expansion and competition. They were the embryos as well as the modular components of whatever larger or more complex polity had existed throughout the history of Mesoamerica. After the conquest of Central and Southern Mexico, the Spaniards tried to re-organize these former polities into Spanish-like administrative entities, called *Pueblos de Indios*, *República de Indios* or *Pueblos por sí*. These words referred to these previous ethnic Mesoamerican polities or complex confederations of political units (Gibson 1964; García Martínez 1987).

Unfortunately political competition at this level of territorial and political organization has not received enough attention in either ethnohistorical or archaeological studies. I think this bias is caused: 1) by the scarcity of available ethnohistorical sources for most of these territorial units; and 2) the majority of the programs of Postclassic archaeological research have focused on problems related to the expansion of the Triple Alliance. This is understandable since once these polities were annexed to the Aztec political sphere it is probable that hostilities decreased, and therefore are more difficult to detect archaeologically.
1.2 Goals of the thesis.

The purpose of this dissertation is to study issues associated with the territorial expansion of one of these small autochthonous political units of Mesoamerica. I want to explore the motives behind expansion and the dynamics of political relations with its neighbors. I will try to identify some of the strategies used by Measoamerican rulers and how political expansion was undertaken. This research provides the opportunity to analyze an episode of political centralization, when a single polity extends its boundaries to incorporate others.

The polity selected for this study is the kingdom of Tlapa-Tlachinollan, which is located in eastern Guerrero, along the western border with the state of Oaxaca (figure 1.1). This polity was selected because it provides a good example of territorial expansion in which a small political unit covering an area of 48 sq. km. enlarged to become a complex polity covering an area larger than 4000 sq. km. in a period of 221 years (A.D. 1300-1521). During this process the kingdom of Tlapa-Tlachinollan used a variety of strategies ranging from gift giving, matrimonial alliances, political intimidation, and military force to subject between 9 and 11 neighboring political units containing around 100 villages (Relación de los Obispados 1904).

This polity remained independent from the Aztec Empire for most of its history (A.D. 1300-1461), starting a successful program of expansion with their own strategies and local resources. In A.D. 1461 their leaders negotiated a profitable pact with the Aztecs in which they agreed to share a part of their tributary revenues with Tenochtitlan in exchange for Aztec help in their conquests. This deal avoided direct war with the Aztecs for 25 years and helped to double the size of the polity. Finally due to internal struggles and succession conflicts that weakened its internal cohesion, the polity succumbed to the Aztec Empire in A.D. 1486. It continued its expansion until A.D. 1510-1516, but this time obeying Aztec commands.

Eastern Guerrero was a very attractive region to undertake this research because it has a rich ethnohistorical tradition: some 25 ancient pictorial documents have been found in the area (Villela 1996). This provided the opportunity to study a
Figure 1.1. Location of eastern Guerrero.
corpus of local native documents without relying exclusively on the Aztec and Spanish sources from Central Mexico, which is the case for many other regions of Mesoamerica. Although preliminary studies have been written for most of these sources, nobody has attempted a synthetic analysis of this information together with archaeological data to analyze the ascendancy of the Tlapa-Tlachinollan polity.

The most important group of documents of eastern Guerrero were found in the small town of Azoyú along the Pacific coast of Guerrero. Ever since their discovery in 1940, the codices of Azoyú attracted the attention of several researchers (Toscano 1943; Vega Sosa 1991). One remarkable aspect of these codices is their step-by-step description of the territorial expansion of the Tlapa-Tlachinollan polity over its neighbors\(^3\). This information permits a careful study of a pattern of political domination in the region. The combined narration of the codices of Azoyú 1 and 2 along with the Palimpsest of Veinte Mazorcas and the Lienzo of Chiepetlan 1 tell us that the dynasty of Tlachinollan was founded in the year 3 Ollin of the Tlapanec calendar (A.D. 1300). The polity remained largely static during its first 50 years and only accumulated limited power in a series of small regional conflicts. Things changed dramatically, however, in the year 11 Movement (A.D. 1412), when the Lord Lizard managed to arrange a strategic alliance with the powerful lineage of Cuitlapan and his successor Lord Calandra Lark-Arrow was able to unify the main political centers of the valley of Tlapa under his rule in the year 7 Wind (A.D. 1421). Afterwards Tlachinollan experienced fifty years of autonomous expansion and centralization of power at the expense of its neighboring polities, and another fifty years of expansion as a client state of the Aztec Empire. By A.D. 1510, Tlapa-Tlachinollan had formed and consolidated a large kingdom in the Mixteca-Tlapaneca

\(^3\) Tlachinollan was the correct name of this native political unit. Tlapa was the name of small village located in the valley close to Tlachinollan in the valley of Tlapa. Tlapa acquired dominance in the regional settlement system after A.D. 1461 when an Aztec tribute collector (Calpixque) settled there, and it became an important administrative center after A.D. 1486, when Tlachinollan was officially conquered by the Aztecs (see chapter 5). During this dissertation I will use the term Tlachinollan to name the political unit before A.D. 1486 and Tlapa or Tlapa-Tlachinollan after that date.
region of Guerrero through marriage alliances and military domination of rival polities. At its peak of expansion the Tlapa-Tlachinollan rulers controlled a territory of approximately 4,000-5,000 sq. km. containing more than 150,000 inhabitants.

Thus, in this thesis I plan to reveal the strategies used by the lords of Tlapa-Tlachinollan to meet the administrative and economic demands associated with bringing new groups and territories under their domination. I will focus on how this process was carried out and will attempt to reconstruct the sequence, direction, and the rate of territorial growth through the analysis of the actual geographic position of the conquered polities and their relative size and power.

A variety of theoretical approaches can be used to explain why polities start programs of expansion. These theories range from Carneiro’s population model to factionalism (Carneiro 1970; Sanders and Price 1968; Feinman 1991). In any case it has been assumed that territorial expansion through inter-polity conquest is an integral part of the process of state and empire formation (Algaze 1993; Spencer 1998; Doyle 1986).

In this dissertation I assume that the interaction between independent political units in a context of regional competition is a product of the give and take of intrapolity, domestic affairs. From this point of view territorial expansion is a byproduct of the domestic affairs of the expanding polity to meet two fundamental challenges: 1) the quest for security and 2) the pursuit of wealth and satisfaction of their leaders. Relations between polities and between leaders are driven by strategic considerations. The actions leaders take to influence events in the regional arena are motivated by personal welfare (Bueno de Mesquita 1996, 1997, 2002).

I understand that territorial expansion is the process of annexing previously politically independent or vacant areas into one’s political domain. It is the incorporation of people and territory through the overthrow or subjugation of rival leaders by any method. In part this investigation is an inquiry into Mesoamerican geopolitics, which I conceive of as the study of Prehispanic polities as spatial phenomena with a view to understanding the geographical bases of
their leaders’ power. Hence leaders’ behavior is examined against the background of such characteristics as territory, location, resources, population, economic activity and political structure (Parker 1988:168).

The polity of Tlapa-Tlachinollan was a multi-ethnic, predominantly Mixtec and Tlapanec entity, which provides the opportunity to observe a process of expansionism in a polity in which the Nahuatl element was not dominant. Interethnic relations in this kingdom were complex, but the modular nature of the Mesoamerican polity could deal well with this complexity. This is because the political allegiance of individuals and kin groups was to a ruling lineage and not a nation or ethnic group. There was no nationalism as it understood today in terms of people with the same language and customs living in the same territory and owning loyalty to an idealized motherland or fatherland. Mesoamerican rulers exercised power indiscriminately over people of different languages and ethnicities.

1.3 The nature of the mesoamerican polity and inter-polity relations.

Understanding the nature of the Mesomerican political unit provides a framework to interpret political interaction and competition in eastern Guerrero. For this I rely on research by Lockhart (1992) and García Martinez (1987) who have established that the main political and social unit in central and southern Mexico, before Spanish contact, was the altepetl or native state. The literal meaning of this word is in atl, in tepetl (the waters, the mountains) and refers to the organization of people holding sway over a given territory. The minimum requirements for an altepetl in pre-conquest time are a territory, a set of named constituent parts arranged in a rotational sequence of labor obligations according to their hierarchy, and a dynastic ruler or tlatoani. An established altepetl would have a main temple which was the symbol of its sovereignty, as well as some sort of central market. The territorial extent of polities in central and southern Mexico was highly variable. The smallest territory might be only a few square kilometers (one village and its hinterland). The largest entities to be called altepetl were actually confederations of
mutually autonomous units that shared political duties and benefits among
themselves.

The constituent parts of the *altepetl* are known as *calpolli* (big house), a kind
of kin group defined on the basis of a common ancestor. Lockhart has noted that even
if the notion of semi-independent subgroups of the *altepetl* is found everywhere, the
word *calpolli* itself is much less common than the term Tlaxilacalli, a corporate group
with a fixed territory. Perhaps the nearest colonial Spanish word for this term
(Tlaxilacalli) is *barrio*, representing a segment of a *pueblo*\(^4\). Each one of these sub-
units had its own leader called *teuctocatl* (*teuctlatoani*; Lordly Name). Each held a
portion of the *altepetl* territory, exclusively for the use of its members. The *calpolli* or
tlaxilacalli was a microcosm of the *altepetl*. They were divided into wards composed
of twenty to one hundred or more households. Each of these wards had a leader
responsible for land allocation, tax collection, and the like. As equal and separate
entities, the *calpolli* would contribute separately and more or less equally to common
obligations of the *altepetl*. In case of tribute, each would separately deliver its part of
a general levy in maize or other products to the designated common place of
collection. In time of war, each contributed a fighting unit under its own leadership.
For ongoing *altepetl* duties involving either draft labor or the delivery of products
throughout the year, a scheme of rotation was necessary. The fixed order of labor
rotation of the *calpolli* was the life blood of the *altepetl* (Lockhart 1992:16). Once in
operation, the important thing about it was the sequence, which repeated indefinitely.
It was at the same time a ranking and order of precedence from first to last\(^5\).

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\(^4\) A Pueblo in its widest meaning is: an autonomous, territorial, corporate, political unit, and not the self-contained single locality or town. With the exception of a few really enormous centers like Mexico-Tenochtitlan, Cholula and other major agglomerations of population, it is difficult to apply an urban-rural dichotomy to the different Tlaxilacalli that constituted the *altepetl*.

\(^5\) I have had the opportunity to observe this cyclical and hierarchical system in action in the Zapotec town of Yagila, in the Sierra de Juárez, Oaxaca. Yagila itself is a subordinated *agencia* of the municipality of Ixtlan. The incorporated town is divided in three *barrios*: *Barrio Primero* (first quarter), *Barrio Segundo* (second quarter) and *Barrio Tercero* (third quarter). Each *barrio* has a variable number of *ciudadanos* (citizens) who are obligated to fulfill communal work (*tequio*) one day per week, from the age of 13 years old. In special cases the communal work may increase in frequency
An altepetl existed where and only where there was a tlatoani. Yet despite standing above the various calpolli, the tlatoani was himself based in an individual calpolli where he served as teuctlatoani. The palace of the tlatoani was called Tecpan. It is here that nobles from all the Calpoleque (plural of calpolli) gathered there to pay court and calpolli commoners rotated in service. Rulership was dynastic and hereditary within a given line, but the rules of inheritance varied from one polity to the next. Once established, a given polity could be said to posses a given tlatocayotl or rulership (García Martinez 1987; Lockhart 1992).

Other focal points of the altepetl were the market and the temple of the principal god. The market was closely associated with the tlatoani who taxed and regulated it. The palace, temple and market would ordinarily be located near one another. Nevertheless, any central urban cluster that might exist would not constitute a separate jurisdiction, but would fall into the areas of some of the constituent calpoleque, so that it was the calpolli each separately and as a part of the overall rotation, not some “city,” that contributed to and benefited from altepetl operations. This is the “modular-like structure” model of the political unit (Lockhart 1992) in opposition to the “cabecera-sujeto” (Head town-subject village) model proposed by Gibson (1964).

to twice per week (double tequio). The Barrio Primero is the oldest quarter and the one with more citizens (70), and is located in the center of the town, where the original settlement was first founded. It contained the most important buildings of the town: the agencia municipal, the school and the church. The Barrio Segundo is located to the south and the Barrio Tercero to the north of the first quarter, and both have more or less the same number of citizens (around 50 each one). There is at least one citizen per household, but that number is variable, depending on the number of unmarried male children older than 13 years of age in each household. If there are no males in the household, a woman has to fulfill the tequio. In a cabildo meeting the authorities and citizens of the town decided to build a new agencia. To finish it soon, the majority of the citizens agreed to work double tequio. The citizens of Barrio Primero started the work, being replaced the next day by those of Barrio Segundo, and the third day by the citizens of Barrio Tercero. The fourth day, Barrio Primero returned to work and the fifth day it was again replaced by Barrio Segundo and so on. Because they were in a rush to finish the new building, they decided not to rest any day until the work was done. Thus, the seventh day (Sunday) Barrio Primero was again doing tequio and the cycle started all over.

6 Hirth (2000) has applied this model with good results to interpret the urban structure of Xochicalco.
Just as symmetrical cellular organization extended downward and inward to a host of subdivisions of the calpolli, so it extended upward and outward to encompass configurations larger and more complex than the simple or one-tlatoani altepetl. With some exceptions, the composite state was basically an enlargement of the simple altepetl, differing only in that it lacked a single tlatoani for the whole. At the head of these confederations were the Tlatoque (plural of tlatoani) of the constituent parts; each ruler received all the tribute of his subjects and none from the other constituents. The composite state needed to reinforce its unity. One important way such unity was attained was through repeated dynastic intermarriage, with the result that various Tlatoque of a composite altepetl were often close blood relatives, and a person might succeed to rulership in a Tlayacatl\textsuperscript{7} other than one in which he was born (Lockhart 1992:21). Pre-conquest empires were conglomerations in which some altepetl were dominant and some were subordinate, but the unit either giving or receiving tribute was always the altepetl. While empires and even large ethnic confederations came and went, the smaller constituent states tended to survive in some form through the centuries. Essentially, in a complex ethnic state, whole altepetl played the same role and tributary obligation that calpolli played in the simple state. A set of altepeme (plural) numerically arranged and ranked in order of precedence and rotation constituted a large state, which itself was considered and called an altepetl. When the Spaniards became aware of these sovereign units within larger states, they often called them parciaidades or partes.

During the 14th and 16th centuries, ethnohistoric sources in Eastern Guerrero list the existence of some 35 different polities distributed across an area of approximately 15,000 square kilometers. Within this area these polities differed from one another in terms of their respective power. Some of the ruling lineages managed to control larger areas and acquired more prestige than others. The most important one was the tlatocayotl or the dynasty that ruled in the altepetl of Tlachinollan.

\textsuperscript{7} The constituent altepetl of a tightly knit composite state was called Tlayacatl.
beginning around A.D. 1300. The Tlatoque or rulers of this *altepetl* were baptized under the Spanish rule and took the last names of Alvarado and Cortés, after the Spanish conquistadors Pedro de Alvarado and Hernando Cortés. The Alvarado-Cortés dynasty seems to have been a Mixtec and Tlapanec lineage with roots in the ancient ruling families of the polities of Yoallan, Acatepec, Huittepec and Tlapa-Tlachinollan. It also later incorporated Nahuatl ties to the broader Mexica Empire. Between A.D. 1349 to 1516 this dynasty was able to spread through a large portion of eastern Guerrero.

An even older and equally prestigious lineage was the one that ruled the Tlapanec region of Teocuitlapan, Huitzapultla, Zapotitlan Tablas, and Malinaltepec, high in the mountains of the Sierra Madre del Sur. This was the lineage of the *Quahiscalera* or *Tlahuiscalera* (Dawn), which can be traced back to the ancient rulers of Texmelican, an Epiclassic site in the region (Dehouve 1995:51). Under Spanish rule, this dynasty took the last name of Temilitzin.

In Colonial documents⁸ we can observe that most of the caciques of the region linked themselves to either the Alvarado or Temilitzin lineages. In any case, repeated dynastic intermarrying was the rule. For example, the rulers of Tlapa-Tlachinollan claimed to be related to the Tlahuiscalera lineage in the Lienzo of Tlapa. I must note here that even if two *altepetl* had the same dynastic line, that does not imply the political subordination of one *altepetl* to another. The modular structure of the system gave great autonomy to each polity and most of the time a dependence relation was manifested only through tribute collection and minor personal services, without any kind of intervention in other domestic affairs. Nevertheless, it is likely that polities with the same ruling lineage were more able to cooperate to defend themselves against *altepe'me* ruled by a different dynasty. But it is also likely that *señoríos* with

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the same genealogical line also fought each other in cases of dynastic breakdowns or contested successions.

Thus it is important to understand that the territorial expansion of Tlapa-Tlachinollan consisted of the modular annexation of other regional competing altepeme into and under its sphere of command. With the exception of some highly productive irrigation lands, the leaders of Tlapa-Tlachinollan were more interested in controlling the labor and specific resources of the region than the whole territory. At the eve of the Spanish conquest, Tlapa-Tlachinollan had evolved into a highly complex native state structured in two main Parcialidades: Tlachinollan and Caltitlan. Each Parcialidad had political control over 20 subject villages, which were directly linked to the Parcialidades of Tlapa without intermediaries.

Through warfare, marital alliances, display of force and diplomacy the lords of Tlachinollan also subjugated eight other previously independent polities with their own dynastic lineages and subject villages. The lords of these altepeme (Atlixtac, Atlamaxac, Yoallan, Ichcateopan, Petlacala, Tenango, Totomixtlahuaca and Cuitlapan) recognized the leaders of Tlachinollan as the principal rulers of all the region and paid tribute and services to them (figure 1.2). The political leadership of Tlachinollan was recorded in several native codices as well as Spanish accounts like the Relación de los Obispados and the Suma de Visitas.
Figure 1.2. Top: Meeting of subordinate Tlatoque with lords of Tlachinollan (Codex Azoyú 2); Bottom: geographical location of the main political units subordinate to Tlapa.

Note: All maps are based on the Cartas Topográficas Acapulco and Chilpancingo, scale 1:250,000, INEGI, Mexico.
1.4 **Study structure.**

In this dissertation I describe and analyze how Tlapa-Tlachinollan came to control a large chunk of eastern Guerrero. In this research I combine the historical information contained in five pictorial documents with the archaeological data I collected during a settlement pattern survey in the Mixteca region of Guerrero, México (1999, 2000 and 2001).

The challenge in this study is how to deal with Tlachinollan’s expansion using both ethnohistorical and archaeological information. Basically I want to compare the information given in both sources to explain why and how Tlapa expanded. I decided to analyze these sources independently of one another. The first step was a historiographic analysis of the available documents, trying to understand why they were written and what purpose they fulfilled. This helped to assess the accuracy of the information depicted on them and their possible political biases. The historical reconstruction of the territorial expansion of Tlapa-Tlachinollan provides a hypothetical framework to be contrasted with the archaeological information. This is followed in turn by a discussion and analysis of archaeological settlement patterns to see if they confirm or contradict the patterns suggested by the ethnohistoric sources.

1.4.1 **The ethnohistorical sources.**

The pictorial documents that I am studying are the codices Azoyú 1, Azoyú 2; Lienzo Genealógico de Tlapa-Azoyú, Lienzo of Chiepetlan 1, and the Palimpsest of Veinte Mazorcas. These documents contain the basic information about Tlapa-Tlachinollan expansion and provide an outline to understand the inter-polity regional interaction. I provide here a brief summary of each document based on the descriptions provided by John Glass and Donald Robertson (1975); and Blanca Jiménez and Samuel Villela (1998).
1) The Codex Azoyú no. 1 (figure 1.3) is classified as a historical, genealogical, and cartographic-historical document. It was probably painted in Tlapa, Guerrero around A.D. 1565. It is painted on both sides on amatl paper and is structured as a screenfold. It has 38 leaves (20.5 x 23 cm.). This document together with the Codex Azoyú no. 2 and Lienzo Genealógico de Tlapa-Azoyú were discovered in the pueblo of Azoyú in 1940.

On each of the 38 folios of the obverse are drawings of historical episodes and seven years dates. The total of 266 years are represented, possibly equivalent to A.D. 1300-1565 on a correlation that equates 3 Ehecatl (Tlapanec) on folio 32, the first year in which Spaniards appear in 3 Callí (Aztec) or A.D. 1521. The year-bearer days used in the dates are one day earlier than those used in the normal or Aztec calendar and the accompanying numbers are 2-14 rather than 1-13.

At one end of the reverse side is a genealogy on six pages in the style of the obverse. Five pages at the other end of the reverse are in a much later and possibly 17th century style and contain a map showing persons and boundaries with explanatory Nahuatl texts. The style of this addition is reminiscent of the additions to Palimpsest of Veinte Mazorcas. The 27 intermediate pages of the reverse are blank.

This document was first interpreted by Salvador Toscano (1943) and Constanza Vega Sosa published it in 1991 together with a comprehensive interpretation. In this dissertation I have followed Vegas Sosa’s interpretation as the primary baseline of my study. Nevertheless, I have made more extensive comments on the political events depicted from folio 16 to folio 32 and corrected the identification of some place names. I provide a deeper context of all the events associated with the conquest of Yoallan in folio 25 and the dramatic effects resulting from the pact of Lord Rain with the Aztecs in A.D. 1461. I also have changed some of the provisional names that Vega Sosa used to identify some rulers on the basis of their names in Latin characters in the Lienzo Genealógico de Tlapa-Azoyú. All these changes to the original interpretation are explained in chapter 5.
Figure 1.3. Folio 1 obverse of Codex Azoyú 1 (Vega Sosa 1991).

Figure 1.4. Folio 17 obverse of Codex Azoyú 2 (MNA-INAH).
2) The Codex Azoyú no. 2 (figure 1.4) is a historical and economic (tribute) document painted in Tlapa, Guerrero circa 1565. It was painted on both sides in amatl paper and structured as a screenfold of 15 folios of 22 x 27 cm.

The obverse is similar in content, style, and format to the obverse of Codex Azoyú no. 1, but it has eight rather than seven dates per page. It has been considered a version of folios 19-38 of the latter manuscript. It spans the period believed to be A.D. 1429-1564. Two leaves corresponding to folios 10 and 11 of the obverse are missing.

The paintings on the reverse (“Nómina de Tributos de Tlapa y su Señorio al Imperio Mexicano”; “Códice Humboldt”) which begin on the back of folio 8 of the obverse are concerned with tribute. Humboldt Fragment 1 is a continuation of the manuscript.

This document has not been published and in this research I am using a set of slides provided by the Museo Nacional de Antropología (MNA-INAH). This document complements the information contained in the Codex Azoyú 1 by filling up some gaps, particularly in folio 5 obverse which represents the beginning of a Mixtec-Tlapanec rebellion against Lord Rain after his treaty with the Aztecs in A.D. 1461 (see chapter 5). It also provided a complementary source to correct the identification of the place names of Codex Azoyú 1.

3) Lienzo de Tlapa or Lienzo Genealógico de Tlapa-Azoyú (figure 1.5). This Lienzo has been briefly described by both Toscano (1943) and Glass (1964), but has not been properly published. I am using a set of slides provided by the MNA-INAH. This document was painted on cotton cloth (285 x 76 cm), probably in Tlapa, Guerrero, during the 16th century.

It depicts the drawings of about 97 Indians and four place glyphs (Tlapa, Huiltepec, Acatepec, and Yoallan-Igualita). The 37 couples in the lower part of the lienzo are arranged in vertical columns and have hieroglyphic and Nahuatl names in Latin characters; those in the upper portion have Spanish names. This document was
Figure 1.5. Partial view of the Lienzo of Tlapa (MNA-INAH).

Figure 1.6. Palimpsest of Veinte Mazorcas (Jimenez and Villela 1998:135, foto 3).
very useful for reconstructing the intricate marriage alliances of Tlapa-Tlachinollan with other polities. It specially clarified the blood ties of Tlachinollan rulers to the polities of Cuitlapan and Yoallan (see chapter 5). It also provided the correct names of the Lords of Tlachinollan.

4) **Palimpsest of Veinte Mazorcas** (figure 1.6). This is a cartographic-historical document painted on *amatl* paper (76 x 51 cm). It was painted in 16th century in the region of Tlapa, Guerrero. Nevertheless, the exact town in which it was painted is uncertain.

Robert Barlow (1948) published its first interpretation. The document depicts 15 pictographic place names of political units in the Tlapa region in the fashion of the Aztec Matricula de Tributos. It also depicts the names of 21 rulers. Later additions in a different style include drawings of Spaniards, Colonial caciques, churches and glosses in Mixtec and Nahuatl which make the document difficult to read. Barlow identified some of the place names and proposed that they made reference to the province of Tlapa in the Codex Mendoza. He thought that a central figure in the codex, represented by a hill, water and a corncob with 20 marks, was the place name of a political unit called 20 Mazorcas (20 Corncobs). For Barlow this *altepetl* ruled all over the area of Tlapa and the other place names represented subordinated colonies. He also thought that one of the rulers named Aztaxelli send two ambassadors with prisoners to Tlaxiaco, Oaxaca.

Dehouve (1995:67) traced this document back to a legal process in A.D. 1620, in which Bernardino de Villafuerte tried to claim the Cacicazgo of Ixcateopan, Itzcuinatoicac, Chimaltepec and Ixpuchtla. Dehouve believes that it was in this moment that the late colonial drawings were painted, but she is not sure of the real provenance of the document. Jiménez and Villela (1998:87) support that this Lienzo was part of the Cacicazgo of Ixquinatoyaque and Ixcateopan; unfortunately they do not explain their reasons clearly.
Barlow’s interpretation is valuable, but I will present here an alternative reading. I believe that the place name that Barlow called Veinte Mazorcas is actually a combination of the glyph called Atlamajac (Donde se Divide el Agua; Peñafiel 1885; Colín 1966) with Tepetl (Cerro or Monte), which suggests that this is the glyph for the *pueblo* of Atlamajalcingo del Monte, a dependent of the Señorio of Yoallan. I disagree that this pueblo was the dominant polity of the area. What the document is actually depicting is a battle that took place near this place (see chapter 5). I propose that this document is depicting the conquest of Yoallan by Lord Rain of Tlapa-Tlachinollan, an event that is depicted in the folio 25 of Codex Azoyú 1 and folio 6 obverse of Codex Azoyú 2. This proposition is based on the depiction of the capture of the ruler called Chalchihuitl (Jade Bead) by a warrior named Bird (Palimpsest of Veinte Mazorcas), and the depiction of the same lord in a mortuary bundle during the conquest of Yoallan in Codex Azoyú 1 (folio 25). Codex Azoyú 2 confirms that Chalchihuitl (Jade Bead) was the lord of Yoallan (folio 6, obverse). The personages that are shown simultaneously in the Palimpsest and other documents are: Lord Rain (Azoyú 1, Azoyú 2, Lienzo de Tlapa, Lienzo de Chiepetlan 1); Lord Monkey (Azoyú 2; Lienzo de Tlapa); Lord Chalchihuitl (Azoyú 1, Azoyú 2); Lord Fish-Feathers (Azoyú 1). All these personages are linked to a chronological frame of 21 years according to the Codex of Azoyú 1 (A.D. 1461-1482; see chapter 5).

5) *Lienzo de Chiepetlan* 1 (figure 1.7). This is a cartographic-historical document painted on cotton cloth (172 x 207 cm). It was painted in 16\textsuperscript{th} century in the town of Chiepetlan, municipality of Tlapa.

It was published and interpreted by Joaquín Galarza (1972). It contains a local account of the Aztec expansion in eastern Guerrero and the participation of the local Nahuatl villages in the conquest of the Province of Tlapa. It is very valuable as an independent source to understand the strategies used by the Aztecs to take over Tlapa. It provides detailed geographic information about the location of important
Figure 1.7. Lienzo de Chiepetlan 1 (Galarza 1972: photo A).
place-names and suggestes a military frontier between Nahuatl and Tlapanec-Mixtec villages along the Zizintla river. I agree with Galarza’s interpretation.

6) Other Sources. The codices of Azoyú were painted to fulfill the political needs of Tlachinollan’s colonial caciques. They were written to be used in Spanish courts to prove the ancient rights of the Alvarado-Cortés lineage to the cacicazgo of Tlapa, and thus they are to be considered documents of political propaganda. The fact that at least 5 pictorial documents provide information about Tlachinollan’s conquests helps to re-create a close account of what may have actually happened in the region during the 15th century. Unfortunately these documents do not prove the conquests happened, or that they happened as depicted in the documents.

Critical analysis was needed to evaluate the historical accuracy of such annals. During 2000, I undertook two months of archival research in the Archivo General de la Nación (AGN) in Mexico City. Guided by the former archival researches of Dehouve (1995) and Rubí (1998), I examined a variety of sixteenth and seventeenth and eighteenth century documents addressing territorial controversies and land litigations made by the local señoríos during the creation of Spanish-like Indian municipalities. This documentary research provided me with an independent historical means for evaluating the legitimacy of territorial claims made by Tlapa-Tlachinollan in its pictorial documents because the Spaniards organized the initial administrative jurisdiction based upon individual, already existing Prehispanic polities.

Especially valuable were the documents AGN, Tierras, vol. 445, exp. 49; and AGN, Tierras, vol.1869, exp. 310. These documents relate to the struggles between

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several branches of the Alvarado family to gain the possession of the Cacicazgo of Alcozauca. The exact limits of the Señorio were mentioned which allowed me to reconstruct the approximate territorial size of Alcozauca, Yoallan and Atlamaxac. It also provided support for the inference that succession conflicts and factional struggles within the dominant lineage caused inter-polity conflict (in this case between the Cacique of Calihuala with the Cacique of Alcozauca, both grandsons of the former Cacique Pedro de Alvarado).

…Don Pedro de Albarado… disfruto un Casicasgo de competente consideración en este partido, pero habiendo tenido por hijos legítimos del matrimonio que celebró con Doña Teresa de Guzman a Don Miguel de Albarado, y a Don Juan de Albarado Padre legítimo de mi parte, por cuya razón debía el mayor de estos que lo fue el dicho Don Miguel haber sucedido en el Casicasgo, y en su falta Don Juan, padre de mi parte, no sucedió así, porque habiendo su abuelo Don Pedro tenido un huerto nombrado Juan de la Noya, este sabiendo la ninguna instrucción que tenían los legítimos sucesores del casicasgo, y favorecido de algunas personas de facultades, y respectos, ocultó los títulos primordiales del, y se entró de propia autoridad a poser las tierras de que se compone…(AGN, Tierras, vol. 1869, exp. 3).

The control over the tribute and labor of commoners was the objective of these disputes. Interestingly both sides made extensive use of pictorial documents and maps to legitimize and support their claims. Don Pedro de Alvaro y Terrazas possessed 12 pictorial documents as part of the official documentation of the Cacicazgo of Alcozauca (Dehouve 1995:145). Support from Spanish officials was obtained through grants of land, showing the real value of the territory to obtain political allegiance.
The documents AGN, Indios, vol. 19, exp. 575 (bis)-576, provide an idea of the territorial size of Cuitlapan, and how land conflicts promoted the seizure and destruction of pictorial evidence by different factional groups.

Dehouve’s analysis of the Relato de Teocuitlapa (1995:27,51), provided the most important clue to associate the Tlahuiscalera lineage of Cuitlapan to the archaeological sites of Texmelincan and Huitzapula:

“Yo me llamó Quahiscalera Pili en donde me bauticé Dn Diego Tesmilicin donde sali de Tesmelican y luego Xochitalteuctle y luego que me bauticé yo Dn Joseph Ximenes […] de onde salimos de Tesmelincan Tecican, aora de aquí nos venimos a Teocuitlapan El pueblo del Sr San Lucas en este día Miércoles en dies días de Marzo del año cececuenta aqui empiezo a contar a mis hijos de Teocuitlapan y Huitzapula y Capotitla, Acatepec y empieso a contar el primer lindero […] (Relato de Teocuitlapa)” (Dehouve 1995:51).

Finally in the document AGN, Indios, vol. 34, exp. 140; I found what I was looking for: an independent source in which seven regional colonial caciques recognized that they owed loyalty and obedience to the rulers of Tlachinollan. A partial transcription of this document has been published by Rubí (1998:87):

…exelentisimo señor Gaspar Julio, Marcos Miguel, Thomás Pedro, Pedro Santiago, Agustín de Vargas, Don Thomás Luis, Diego Hernández, Don Gaspar Juan, Luis Santiago, Diego Juan, naturales de las caveseras y pueblo de Tlapa como proceda y aya lugar (compar)recemos ante la grandeza de vuestra exelencia y decimos que la jurisdiccion del dicho pueblo de Tlapa se compone de ocho caveceras y una de ellas recae en los

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governadores naturales por ser los más principales de dicha jurisdicción como con efecto la poseio y tuvo el padre de Diego, Francisco de Peralta casique, al que ha sido gobernador en dicho pueblo de Tlapa y hallase uno de los más principales de dicha jurisdicción y siendo como ha sido costumbre en que dicha cavesera de Tlachinollan recaiga en los que an sido… (Rubí 1998:87).

This document provides independent support for the ascendancy of Tlapa-Tlachinollan’s rulers over the region. This allowed me to use the codices of Azoyú with more confidence, but always with caution. Nevertheless, every future researcher needs to re-analyze the problem and look for more independent sources to have a more accurate and more reliable re-creation of Tlachinollan’s past.

1.4.2 The archaeological data.

Archaeology provides an independent way to test the accuracy of ethnohistorical sources and interpretations through the examination of the material remains where narrated events supposedly took place. Following the methodology used by Byland and Pohl in the Mixteca Oaxaca (1994), I carried out a five month key site survey of eastern Guerrero which covered the territory of the Tlapa-Tlachinollan kingdom (figure 1.8).

Two goals were addressed during the archaeological survey. First, it tested whether towns identified through a cartographic and place-name analysis actually corresponded to those depicted in the documents. Second, I wanted to generate the archaeological map of the region, independent of any ethnohistorical source, and then to see how it coincided with the ethnohistorical information. A field crew visited all the towns with similar place-names to those found in the documents while a second archaeological team systematically surveyed the piedmont of valley of Tlapa (27 sq. km.). In the same fashion it was also decided to systematically survey the piedmont of the valley of Huamuxtitlan (100 sq. km.), to obtain comparative information from an area that resisted Tlachinollan’s expansion. Because I was interested in the key sites of the region, both valleys were surveyed by transects spaced 300 meters apart.
Figure 1.8. Areas of archaeological survey.
The survey area covered towns located both in the Tlapaneco River and the Río Grande de los Yopes basins. Landsat satellite images with a pixel size of 60 m. were used to control and document the survey efforts in the area. Unfortunately I could not obtain better resolution air photos for the area.

Archaeological survey provided information that allowed me to observe if the area had developed a primate settlement system in which Tlachinollan was the primary center. Once the sites were located, a registration form was filled out and detailed maps were generated for each site. Ceramic samples were collected to study the spatial distribution of Postclassic ceramics through trend surface analysis (Smith D. 1975:208). I wanted to know if there were ceramics associated with the sphere of political or economic influence of Tlapa-Tlachinollan.

Theoretically the enlargement of any polity should follow the lines of minimum cost and maximum benefit. Costs should be represented by political and topographic barriers, whereas benefits should be represented by gaining access to agricultural land, tribute and control of trade routes. The expansionist process of Tlapa-Tlachinollan was divided in 11 stages according to the seven year periods embraced in each folio of the Codex Azoyú 1. I wanted to interpret the sequence and direction of Tlapa-Tlachinollan’s expansion on the basis of the size of the opponent sites and the morphology of Tlapa-Tlachinollan territorial shape during each stage of the expansion. I expected that weaker neighbors would be conquered first, while the strongest ones be avoided until the last stages of conquest. The morphology of the polity was compared to an ideal Von Thünen ring model to observe its deviation and infer political costs and strategies used by Tlapa-Tlachinollan’s leaders (see chapter 4).
1.5 Organization of the thesis.

This dissertation is organized in 7 chapters. In the introduction I present the goal of the dissertation which is basically a strategic and geopolitical analysis of the territorial expansion of a middle size polity in a broader Mesoamerican context. The kingdom of Tlapa-Tlachinollan was chosen to undertake this research because the rich ethnohistorical information available and the ability to study an independent expansionist process.

Chapters 2 and 3 provide background information necessary for understanding the character of the region. Chapter 2 provides a detailed summary of the geographic and environmental conditions that provide the framework in which political decisions were made. It explains how the area is divided in two symbiotic regions in which different ecological tiers influence the flow of goods from the coast to the mountains. It describes rainfall patterns in northeastern sector of the region that promoted a packed settlement pattern along the valleys of the Tlapaneco River. Chapter 3 is devoted to a discussion of the unique cultural-historical features of the eastern Guerrero and how it participated in the broader Mesoamerican world. It will explain how the area is composed of four major ethnographic groups: Mixtecos, Tlapanecos, Nahuas and Amuzgos. And it will also describe the archaeological development of the area.

Chapter 4 is a theoretical discussion about territorial expansion as a political and a geographic phenomenon. In this chapter I summarize some of the main theoretical positions that have discussed this problem, including population approaches, factionalism, and geopolitical approaches. I also offer a simple geographic model to study and classify territorial expansion through the study of the size and shape of the polity at different stages of the growth.

Chapter 4 deals with controversial issues related to the forceful methods by which one powerful state dominates another and how territorial expansion has been used as an ideological doctrine to justify aggression, banishment and mass murder of innocent people. I take no responsibility if some of the authors consulted here have
been used in the past, or will be used in the future to justify atrocities. I do not support such doctrines and only focus on the academic approaches to the problem.

I devote chapter 5 to the interpretation and reconstruction of Tlapa-Tlachiollan’s territorial expansion using ethnohistorical sources. I present a hypothetical model of how Tlapa-Tlachinollan solved strategic problems related to its expansion and what factors shaped the process. Sequence, direction and extend of the expansion are topics discussed in this chapter.

I reserve chapter 6 to test the scenarios formulated using pictorial documents. Using archaeological data I apply simple geographic models such as the geographic centroid and rank-size rule to observe deviations against idealized distributions or expected observation in prehispanic settlement patterns in eastern Guerrero.

The dissertation conclusions are found in chapter 7 where I summarize the results of the research and provide final comments to the problem of territorial competition.

The appendix contains the description and maps of the most important archaeological sites of the Post-classic period located during the field research of the project “Arqueología y Ethnohistoria en la Montaña de Guerrero: Patrones de Expansión Territorial de Señorío Postclásico de Tlapa-Tlachinollan”. 
Chapter 2. The Environmental Background of the La Montaña and Costa Chica regions of Guerrero.

“Man and not nature initiates, but nature in large measure controls”
(Mackinder 1999:536)

This chapter provides a detailed description of the geography of eastern Guerrero. It is important to understand that this vast area is composed of two ecological and economic regions: 1) the Montaña and 2) the Costa Chica. Patterns of rainfall and air temperature produce different ecological tiers with different soil and vegetation characteristics that influence the geographic conditions in which local prehispanic rulers operated. Trade corridors were established between these ecological tiers running from the Coast to the Montaña along specific paths. Political units competed to control these trade corridors and to function as middlemen. Knowing the geographic variability of the area provides analytical tools to infer the particular strategies used by the rulers of Tlapa-Tlachinollan during the conquest of specific areas of the region. Population distribution and the productivity of local agricultural methods are also discussed in this chapter.

2.1 Regionalization of eastern Guerrero.

The eastern portion of the Mexican state of Guerrero forms a symbiotic ecological and economic system composed of two main regions. From north to south these two regions are: the Montaña (The Mountain) and the Costa Chica (The Little Coast). This classification is not new and has been used in anthropological papers since the publication of “Mixteca-Nahua-Tlapaneca” by Maurilio Muñoz in 1963. These regional categories were created based on orographic and ethnographic
characteristics. The main orographic features that define these two regions are: 1) the Sierra Madre del Sur mountain range which crosses Guerrero’s territory along its northwest-southeast axis, forming an intricate system of deep gorges, constricted valleys and high mountains over most of Guerrero’s surface, and 2) the narrow coastal plain (Costa Chica) that runs parallel to the Pacific Ocean from Acapulco to the border with the State of Oaxaca (figure 2.1). Ethnographically the Montaña region was characterized by the presence of three Amerindian groups: the Mixtec, the Tlapanec and the Nahuatl. Meanwhile the Costa Chica became the refuge of fugitive African slaves during the colonial era, which have coexisted and mixed with the Amuzgo, Nahuatl, Tlapanec and Mixtec speakers located in this area (figure 2.2).

When early scholars drew the regional limits of the Montaña on a map, using district political jurisdictions, they considered that the Montaña was coterminous with the aggregation of three districts: Álvarez, Morelos and Zaragoza (Muñoz, 1963:21). Twenty municipalities are located within the three districts and include: Chilapa, Ahuacuotzingo, Atlixtac, Copalillo, Zitlala (Álvarez District); Tlapa, Alcozauca, Malinaltepec, Copanatoyac, Atlamajalcingo del Monte, Metlatónoc, Tlacoapa, Tlalixtaquilla, Xalpatlahuac, Zapotitlan Tablas (Morelos District); Huamuxtitlan, Alpoyeca, Cualac, Ollinala and Xochihuehuetlan (Zaragoza District). Together they cover an area of 9,397 sq. km. (figure 2.3).

Matias Alonso (1997:24-43) undertook a deep revision of the early regionalization and compared it with other divisions used by government agencies to implement diverse federal and state programs in Guerrero. To create his classification Matias Alonso used local population’s empirical knowledge of the area together with zonal climatic characteristics, mainly the average annual temperature and rainfall.

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1 The original proposal to create a region named Montaña of Guerrero was stated by Alfonso Fábila and Cesar Tejeda, researchers of the Instituto Nacional Indigenista, after an intensive anthropological reconnaissance of eastern Guerrero in 1954 (Muñoz, 1963:11 and Matias, 1997:24).

2 I used the municipal cartography of the Instituto Nacional de Estadística e Informática (INEGI) to calculate the area of the twenty municipalities. It might be different than the area presented by different authors.
Figure 2.1. Orography of the state of Guerrero.

Figure 2.2. Distribution of the main linguistic groups of eastern Guerrero around 16th century A.D. Partially based on Frederick (1977).
Figure 2.3. The La Montaña region, according to INI researchers (Muñoz, 1963).

Figure 2.4. The La Montaña Subregions According to Matías 1997.
According to his own research, the vast mountainous surface of eastern Guerrero is composed of three sectors: the Tlatzinlan (Low Mountain), the Inacazitlan (Medium Montain) and the Icuatipan (High Mountain). Based on this pragmatic knowledge of the local Nahuatl population, Matias Alonso again used district and municipal borders to redraw the entire Montaña region along these three subdivisions (figure 2.4).

According to Matias Alonso the Montaña Baja (Low Mountain) comprises the municipalities of Ahuacoutzingo, Atlitxac, Copalillo, Chilapa and Zitlala. Following the Köeppen system, this sub region has an Aw climate (Matias, 1997:31). This corresponds to the humid Tierra Caliente (hot land), where average monthly temperatures do not fall below $18^\circ\text{C}$., and lack killing frost (figure 2.5). There is a definite and fairly long dry season in the winter (November-April), and in spring during the subtropical calm influence. In the specific case of the Montaña Baja, the average yearly temperature is less than $26^\circ\text{C}$.

The Montaña Media (Medium Mountain) embraces the municipalities of Alcozauc, Alpoyeca, Copanatoyac, Cualac, Huamuxtitlan, Olinala, Tlalixaquilla, Tlapa, Xalpatlahuac and Xochihuehuetlan. It has the same Aw climate, although it is a little colder, with an average yearly temperature less than $20^\circ\text{C}$.

The Montaña Alta (High Mountain) is composed of five municipalities Atlamajalcingo del Monte, Malinaltepec, Metlatonoc, Tlacopa and Zapotitlan Tablas\(^3\). The climate of this sub region is Cw, which means a humid temperate climate. The C climates are determined on the basis of the average temperature of the coldest (above $0^\circ\text{C}$.) and the warmest (above $18^\circ\text{C}$.) months. The Cw is characterized by a distinct winter dry season and summer rains (May-October).

Although Matias Alonso refined the classificatory variables in the regionalization of eastern Guerrero, he did not really modify the boundaries proposed by previous researchers, as one can see in figure 2.4, but simply regrouped the 20

\(^3\) Zapotitlan Tablas split into two Municipios after 1991: Zapotitlan Tablas and Acatepec.
Tierra Caliente (Hot or Low Land), 0 to 1000 meters above sea level.

Tierra Templada (Temperate Land), 1000 to 2000 meters above sea level.

Tierra Fria (Cold or High Land), 2000 to 3000 meters above sea level.

Figure 2.5. Hypsometry of the Montaña Region.
municipalities on the basis of climatic and altitude variables. This kind of regionalization has been useful for government purposes and the Montaña has officially become one of the seven geo-economic regions of Guerrero. Nevertheless, it has several faults. The most basic one is methodological. Although its proponents meant to create a uniform region with shared contiguous cultural and geographical traits, they actually created what the geographers call a “planning” or “programming region.” That is they defined areas on an ad hoc basis for purposes of administration and organization (Hagget et al., 1977:453). In this case they created administrative areas for Amerindian groups in eastern Guerrero.

In this research I divide eastern Guerrero in two main interacting regions based on geographic and ecological features, the Montaña (Highland) and the Costa Chica (Lowland). The Costa Chica region comprises all the area between Acapulco to the border with the State of Oaxaca4, and has an altitude ranging from 0 to 1000 meters. The Montaña represents the area between Chilapa and the border with the State of Oaxaca and has an altitude ranging from 1000-3000 meters msl (figures 2.5 and 2.6). The main stream of the Atoyac-Mezcala-Balsas basin would mark its northern limit. Both, the Costa Chica and the Montaña, regions embrace an area of some 28,000 square kilometers5 (figure 2.7). Of course these parameters are somewhat arbitrary, based on other characteristics that I will soon discuss, otherwise the Montaña region would embrace the entire Sierra Madre del Sur, which would be nonsense.

Besides the hypsometric features that I have described above, I propose that the following cultural and political features characterize the Montaña and Costa Chica region. At the beginning of the 16th century, this vast area contained a variety of the

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4 Actually the Costa Chica is another region created through empirical knowledge and a programming methodology. One considers that it starts to the south of Acapulco because in that point a low projection of the Sierra Madre interrupts the continuity of the Pacific Ocean Coastal Plain, which opens wide again after that point. It is a convention that the Costa Chica ends in the border with the State of Oaxaca, indeed the coastal plain goes on uninterrupted until Central America.

5 This area does not fit with the present day geo-economic regions of the state of Guerrero.
Figure 2.6. The Costa Chica and the Montaña regions based on hypsometric data.

Figure 2.7. Schematic representation of the Montaña and Costa Chica regions.
Mixteco, Tlapaneco and Amuzgo speakers, along with other minor linguistic groups, that disappeared during the Spanish colonization\(^6\). It would also contain a good proportion of the so-called Nahuatl-Coixca speakers. Eastern Guerrero was politically fragmented into dozens of small polities ruled by their own local dynasties. One can count the names of more than 50 of them in the Codices of Azoyú, the Codex of Chiepetlán 1, the Codex Mendoza and the Palimpsest of Veinte Mazorcas (see Chapter 5). It is likely that many more existed, but were not recorded in these pictorial documents. When the Triple Alliance took over eastern Guerrero, it reorganized it into four tributary provinces. Following my proposed regionalization, two of them (Quiauhteopan, and Tlapan) would fit entirely in the Montaña region boundaries. Tlacozauhtitlan and Tepecoacuilco province would fit partially. In a similar fashion, an unspecified number of Mixtec kingdoms between Calihuala and Coycoyan de Flores are included in the Montaña, even if some of them are now under the jurisdiction of the neighboring State of Oaxaca.

One area called Yopecingo was free of Aztec political influence and fell mostly in the Costa Chica region, stretching from Acapulco to the Nexpa River and including Ayutla de los Libres as well as some highland areas around Acatepec and Quechultenango. The Costa Chica also includes the territories of all the polities that existed in the little understood, but independent province of Ayacachtla, which lies between Nexpa and the mighty Mixtec kingdom of Tututepec in Pinotepa Nacional, Oaxaca (Vélez, 1998: 465). As I have mentioned previously, during the Colonial Period the Costa Chica region became the refuge of fugitive African slaves, especially the area around Ometepec and Cuajinicuilapa. This event provides another cultural parameter for the conceptualization of the Costa Chica. Figures 2.5 and 2.6 identify the approximate location of these hypsometric and rainfall patterns which make it possible to subdivide the Montaña region into two sub-regions: 1) the high Montaña and 2) the dry Montaña. The former is defined by the area comprising the

\(^{6}\) Basically the Ayacasteco and the Quatzapoteca (Marino, 1986: 532-533).
main peaks of the Sierra Madre del Sur, with altitudes of 2000 meters of more, which capture most of the humidity that comes from the Pacific Ocean into the mainland. The latter is the area that falls to the north, leeward side of those peaks with altitudes under the 2000 meters, and low rainfall, caused by the rain shadow of the high Montaña. I will explain this phenomenon in more detail later in this chapter.

The most interesting thing about this spatial conceptualization is that it allows the modeling of an inter-regional symbiotic interaction based on the movement of resources and goods through different ecological zones. One can assert that there were two main types of flows in the area: one following the west-east direction, linking several points along the same ecological tier; and a second one oriented in a south-north direction connecting different ecological tiers (figure 2.8). It appears that the latter kind of flow was more important than the former because of the diversity of products that moved between different ecosystems. This creates functional economic regions resting on the ecological factors producing trade corridors connecting ecological tiers from north to south (figure 2.9). It is probable that political competition for the control of several corridors running from the coast to the dry Montaña ensued, especially between polities within the same ecosystem who wanted greater control over inter-regional trade. I propose that one of these corridors ran between Tlapa and the Marquelia’s shoreline and much of the political events that I analyze in this dissertation had a close relationship with the control of this route.

The two regions that I have just proposed embrace such a large area that it becomes difficult to manage. This is even truer for an archaeological study. As a result it is necessary to reduce the study area to a manageable scale. Because my particular concern in this study is the political expansion of Tlapa-Tlachinollan, I will focus my geographic discussion precisely on the kingdom’s functional region and its interaction with its coastal strip, an area of some 19,500 square kilometers. In the remainder of this chapter I describe of the geographic and ecological traits of this area (figure 2.10).
Figure 2.8. Flows of resources and goods between symbiotic regions.
Figure 2.9. Schematic functional regions, linking ecological tiers by trade corridors.
Figure 2.10. Study region.

Province: Sierra Madre del Sur
- Coastal Plain
- Southern Slope
- Mixteca
- Balsas-Mezcala

Sub-provinces

Figure 2.11. Eastern Guerrero’s Physiography.
2.2 Physiography

Eastern Guerrero is situated in the physiographical province of the Sierra Madre del Sur (figure 2.11), comprising the sub-provinces of Balsas-Mezcala, Mixteca or Highlands of Oaxaca, the Pendiente Meridional or Southern Slope and the Coastal Plain (Raisz, 1964; INEGI, Carta Geológica E14-8, 1:250,000). Elevations throughout the Sierra Madre present here a marked northwest-southeast direction with altitudes ranging from 2500 meters, in the mountains to 900 meters in the valleys of Chilpancingo-Quechultenango and Huamuxtitlan. The mountains of this area were formed during the Paleozoic and Mesozoic eras and consist primarily of sedimentary formations. Clastic and nonclastic sediments were then folded by compression forming synclinales and anticlines, which represent the major peaks and valleys. These structural elements have been eroded by seasonal streams, which have carved deep gorges and modeled the mountains. Karstic processes have created some caves in the limestone mountains around the municipality of Atlixtac and Quechultenango.

2.3 Geology.

The oldest rocks in the area were formed in the Precambrian and Paleozoic eras, and were part of the Pangaea era. Early rocks are part of a metamorphic complex composed of schist, quartzite, gneiss and meta-granite which form the Complejo Acatlán (Ortega, 1980). Three separate events of sedimentation took place in the area. The first one is called as the Formación Olinala and took place during the Late Paleozoic; it includes dark lutite with concretions of fine sandstone, limestone and sporadic conglomerates of quartz, (INEGI, Carta Geológica E14-8, 1:250,000). The second sedimentary series dates to the Middle Jurassic and is formed exclusively by quartz and chert. The third deposit was formed during the Early Cretaceous and is composed of sandstone and anhydrite covered by limestone, dolomite and gypsum. These three sedimentary events overlie the metamorphic Acatlán complex.

Intrusive igneous granite-diorite caused contact metamorphism throughout the coastal plain, changing limestone into marble, and creating large deposits of gneiss.
During the Quaternary, conglomerated gravels eroded from metamorphic and igneous rocks covering granite of the Mesozoic. One can see the different rock formation processes and their respective ages in figures 2.12 and 2.13. Metamorphic rocks predominate covering 63% of the study area with more exposures along the Costa Chica. Sedimentary deposits cover 28.94% of the area, with a higher dominance in the Montaña; the igneous rocks cover only 8.17 % of the surface (table 2.1)\(^7\). Gneiss is the most abundant rock, covering a surface of 53%, followed by sandstone-mudstone (17.08%) and schist (5.1%, see table 2.2 and figure 2.14). The metamorphic deposits of this area are the largest ones of central and southern Mexico, and they may have played an important role in the prehispanic economic system as a source of precious stones and gems. Intrusive igneous rocks are represented by granite-diorite that include biotite, amphibole, and granite-quartz, and potash feldspar. The extrusive igneous rocks are represented by rhyolite and intermediate andesite.

2.4 Climate.

The vegetation, natural resources, and human activities of a region are heavily influenced by its climate. Climate is shaped by two important variables air temperature and precipitation. Differences in these two variables are caused by latitudinal and seasonal variation in solar energy and global circulation patterns between zones of low and high atmospheric pressure. Most climate classifications combine information about temperature and precipitation to take into account the interplay between temperature and water availability for vegetation. Such is the case of the Köppen-Geiger-Pohl system of climate classification, which identifies five basic climate types (Strahler and Strahler, 1983:151). According to this system the Costa Chica region, as well as the leeward slope sector of the Montaña region, would

\(^7\) These figures are based on the information contained the INEGI Geological Map Ciudad the México 1:1,000,000. This figures change if a different scale is used, for instance the INEGI map E14-11, 1:250,000, will show large deposits of intrusive granite-diorite along the Costa Chica that are not shown in 1:1000,000 scale.
Figure 2.12. Geological events in the Montaña and Costa Chica regions.

Note: all the geological maps and tables are based on the Carta Geológica, México, 1:1000,000, INEGI.
Figure 2.13. Rock formation processes in the Montaña and Costa Chica regions.

Note: all the geological maps and tables are based on the Carta Geológica, México, 1:1000,000, INEGI.
Table 2.1. Table and graph with the percentage of surface covered by each type of rock.

<table>
<thead>
<tr>
<th>Rock process</th>
<th>Surface Sq Km</th>
<th>% Surface</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metamorphic</td>
<td>12373</td>
<td>63</td>
</tr>
<tr>
<td>Sedimentary</td>
<td>5678</td>
<td>28.94</td>
</tr>
<tr>
<td>Intrusive Igneous</td>
<td>819</td>
<td>4.17</td>
</tr>
<tr>
<td>Extrusive Igneous</td>
<td>749</td>
<td>4</td>
</tr>
</tbody>
</table>

Table 2.2. Table with the percentage of surface covered by different type of rock.

<table>
<thead>
<tr>
<th>Rock</th>
<th>Rock formation process</th>
<th>Surface Sq Km</th>
<th>% Surface</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gneiss</td>
<td>Metamorphic</td>
<td>11150</td>
<td>56.83</td>
</tr>
<tr>
<td>Sandstone-Mudstone</td>
<td>Sedimentary</td>
<td>3350</td>
<td>17.08</td>
</tr>
<tr>
<td>Schist</td>
<td>Metamorphic</td>
<td>1000</td>
<td>5.10</td>
</tr>
<tr>
<td>Acid Intrusive Igneous</td>
<td>Intrusive Igneous</td>
<td>819</td>
<td>4.17</td>
</tr>
<tr>
<td>Soils</td>
<td>Sedimentary</td>
<td>668</td>
<td>3.40</td>
</tr>
<tr>
<td>Lutite-Sandstone</td>
<td>Sedimentary</td>
<td>660</td>
<td>3.36</td>
</tr>
<tr>
<td>Limestone-Lutite-Gypsum</td>
<td>Sedimentary</td>
<td>545</td>
<td>2.78</td>
</tr>
<tr>
<td>Acid Extrusive Igneous</td>
<td>Extrusive Igneous</td>
<td>524</td>
<td>2.67</td>
</tr>
<tr>
<td>Limestone</td>
<td>Sedimentary</td>
<td>442</td>
<td>2.25</td>
</tr>
<tr>
<td>Intermediate Extrusive Igneous</td>
<td>Extrusive Igneous</td>
<td>225</td>
<td>1.15</td>
</tr>
<tr>
<td>Schist-Gneiss</td>
<td>Metamorphic</td>
<td>223</td>
<td>1.14</td>
</tr>
<tr>
<td>Mudstone-Lutite-Sandstone</td>
<td>Sedimentary</td>
<td>13</td>
<td>0.07</td>
</tr>
</tbody>
</table>

Note: all the geological maps and tables are based on the Carta Geológica, México, 1:1000,000, INEGI.
Figure 2.14. Geological map of the study area.

Note: all the geological maps and tables are based on the Carta Geológica, México, 1:1000,000, INEGI.
be classified into the Seasonally Humid Tropical Climates (Aw). While the summits of the Montaña region would fall more into the Highland Climates which denote areas of high altitude where temperatures are cold due to elevation.

More than latitude or seasonality, air temperature variation between the Costa Chica and the Montaña is caused by elevation. This occurs because warm air from the lowland is forced over the mountains by winds blowing from the Pacific Ocean. When it rises, air expands loosing temperature adiabatically. Temperature drops at a rate of about 6.4 °C per 1000 meters. This is why the summit of the Montaña is cooler than its lower leeward sector and the adjacent Costa Chica. During the winter or dry season (November to April), the average minimum temperature at night on the summits of the mountain is 6°C while along the coast the temperature is 15°C. During the day, the average maximum temperature on the coast reaches 33°C while the average maximum temperature in the mountains is 21°C. During the summer rainy season, the average maximum temperature remains the same as it is during winter: 33°C for the coast and 21°C for the mountains. The nights are consistently warmer on the coast (21°C) than they are in the Montaña (9°C). Figures 2.15 and 2.16, display the distribution of temperatures during the day and at night. The warmest temperatures are reached during the day along the Costa Chica and in the deep valleys that cut through the northern sector of the Montaña as part of the Mezcal-Balsas drainage, especially the valley of Tlapa, the Cañada de Huamuxtitlan and the basin of the Río Mixteco. The lowest temperatures at night are observed along the watershed of the Tlapaneco and Río Grande de los Yopes basins. But even here there are striking gradients due to topographic features. For example, while the area around Metlatonoc and Cochoapa Grande towns are in the Tierra Fría, most of their agricultural plots are located in the deep gorges of the area, in what it is considered to be the Tierra Caliente. The same happens at Malinaltepec and Totomixtlahuaca, which are considered to be of the Tierra Caliente because they are located in the bottom of the ravine carved by the Río Grande de los Yopes.
Figure 2.15. Minimum night time temperatures, May to October (rainy season).

Note: all the climate maps and tables are based on the Cartas de Efectos Climáticos, Chilapncingo E14-8 and Acapulco E14-11, 1:250,000. INEGI.
Figure 2.16. Maximum day temperatures, May to October (rainy season).

Note: all the climate maps and tables are based on the Cartas de Efectos Climáticos, Chilapncingo E14-8 and Acapulco E14-11, 1:250,000. INEGI.
When one correlates minimum and maximum temperatures with the agricultural activities, especially plant development, it is possible to delimit the three most important ecological tiers for area: the tierra caliente (hot land), tierra templada (temperate land) and tierra fría (cold land). The tierra caliente encompasses all those areas where maximum temperatures range between 30°C to 36°C and minimum temperatures are between 18°C and 21°C. Cotton, cacao, tomatoes and lots of different fruits are well suited for this tier. Low deciduous and medium sub-deciduous seasonal forests are correlated with the tierra caliente of the Montaña and Costa Chica, depending on rainfall patterns.

Minimum air temperature for tierra templada ranges between 15°C and 18°C at night and reach maximum temperatures of 27°C to 30°C during the day. Montane pine-oak forest predominates in this zone and most of the mesoamerican crops are well adapted for it.

Finally the tierra fría has lows of 9°C-15°C at night, and highs rangings from 21°C to 27°C during the day. Special classes of maize are adapted for these conditions, although their yields are rather poor. European introduced crops like wheat and oats which are better suited for this tier, but the steep slopes of the Montaña make their cultivation unprofitable. The natural vegetation of this ecological zone corresponds to montane forests of pine, pine-oak and fir. Using the information contained in figures 2.15 and 2.16, I have created figure 2.17, where one sees the distribution of the different temperature tiers described above.

2.5 Rainfall.

Rainfall in eastern Guerrero is seasonal and extends from May through October. The dry period corresponds to the cooler months of December through April. During the dry season, the maximum precipitation observed in eastern Guerrero occurs around Metlatonoc, which receives no more than 200 mm during this six month period. It is worse along the coast and in the leeward sector of the Montaña where the mean rainfall ranges between 25 to 50 mm during the six month dry
Note: all the climate maps and tables are based on the Cartas de Efectos Climáticos, Chilapncingo E14-8 and Acapulco E14-11, 1:250,000. INEGI.
season. Cultivated plants cannot thrive with less than 400 mm during the growth cycle. Basically this means that, except for irrigated fields, agriculture becomes impracticable in eastern Guerrero from late November to April. Figure 2.18, illustrates the rainfall distribution on both the Costa Chica and in the Montaña. The Pacific shoreline and in deep valleys like the Cañada de Huamuxtitlán, along the northernmost sector of the Montaña are the driest areas.

Rainfall patterns in both the Costa Chica and the Montaña are strongly correlated with altitudinal factors and the distribution of rain mimics the topography. Moist air from the Pacific Ocean travels from west to east producing precipitation as it rises over the Sierra Madre mountains. As the air rises, it cools by expansion, exceeding the saturation vapor pressure, and precipitation results. After air has moved up the windward side of the mountain and over the top, it descends on the leeward side. As it does, its relative humidity drops significantly and a rain shadow effect is created on the leeward of the mountain (figure 2.19). Figure 2.20 shows the spatial distribution of precipitation during the rainy season in Eastern Guerrero. One can see again that the highest amounts of rainfall, 1700-2000 mm in a six months period, occur on the windward slope of the mountain range between Metlatonoc and the Amuzgo area. On the other hand, the lowest precipitation (700-800 mm.) is reported again in the northeastern sector of the Montaña from Tlapa to Mariscala de Juárez, Oaxaca. Another important factor in rainfall patterns is how the precipitation is distributed during the rainy season. One can see in figure 2.21 that it rains 90-119 days out of 180 days on the summit of the Montaña. This means that it rains 50-60% of the rainy season days compared to only 33-49% of days in the valleys of Tlapa and Huamuxtitlán, and on the windward slope of the mountain. Along the shoreline, it rains only 16-32% of the days. In eastern Guerrero precipitation may take the form of torrential and destructive downpours with 20 to 30 mm per day along the coast and 16 to 18 mm on the high Montaña. Although rain becomes gentler in the dry northern sector of the Montaña (8 to 11 mm per day) it is still torrential when compared to the 1 to 3 mm daily precipitation received by humid midlatitudes.
Figure 2.18. Dry season distribution in the Montaña and Costa Chica.

Note: all the climate maps and tables are based on the Cartas de Efectos Climáticos, Chilapncingo E14-8 and Acapulco E14-11, 1:250,000. INEGI.
Figure 2.19. Correlation between orography with rainfall and air temperature patterns in Eastern Guerrero.
Figure 2.20. Rainfall distribution in the Montaña and Costa Chica, during rainy Season.

Note: all the climate maps and tables are based on the Cartas de Efectos Climáticos, Chilapncingo E14-8 and Acapulco E14-11, 1:250,000. INEGI.
Figure 2.21. Availability of rainfall during the rainy season, May-October.

Note: all the climate maps and tables are based on the Cartas de Efectos Climáticos, Chilapncingo E14-8 and Acapulco E14-11, 1:250,000. INEGI.

Figure 2.22. Principal drainage of Eastern Guerrero.
Sudden storms are the worst possible way to get water. Much of water runs off the land, carrying away large quantities of topsoil. The first heavy drops in a downpour clog the pores of the soil with fine particles washed from the surface. After only a few minutes the soil cannot absorb more than a fraction of the rain. More than two thirds of the water may then run off in sheets and rivulets, which leads to tremendous erosion. This is especially serious in areas of high deforestation, like the municipalities of Metlatonoc, Malinaltepec, Tlacuapa, Atlixtac, Zapotitlan Tablas and San Luis Acatlán.

2.6 Hydrology

The eastern Guerrero hydrological system consists of the evaporated water that winds carry into the Montaña from the Pacific Ocean, the precipitation over land, the evaporation and transpiration from land surfaces, and vegetation, infiltration, and the streamflow back to the Pacific Ocean. A water budget is an accounting of all the inflows and outflows of water in a given system over some time period. Neither the potential evapotranspiration (POTET) or the actual evapotranspiration (ACTET) have been calculated for the eastern Guerrero, but by comparison with other areas of the Pacific’s shoreline along Mexico and Central America (Strahler and Strahler, 1983:162), it appears that at least two-thirds of the rainfall in Eastern Guerrero gets evaporated while only one-third drains into rivers. The system is in water deficit from November to April (POTET is more than precipitation), especially in the dry northern sector of the Montaña, where vegetation has adapted to dryness. May, June and July are the months where soil moisture recharge and from August to September there is a surplus of precipitation caused by tropical cyclones along the Pacific Ocean. With available information it is possible to estimate the year-round precipitation over the 19,500 km² study area and the volume of runoff for the main basins of the Montaña
and Costa Chica\(^8\). During the dry season, the area represented in figure 2.18 receives a total of 1,422,797,500 m\(^3\) of rainfall. Of this amount, around 33% (469,523,175 m\(^3\)) actually become streamflow. During the rainy season (figure 2.20), precipitation increases to an average of 24,089,050,000 m\(^3\), from which around 7,949,386,500 m\(^3\) become streamflow. The most dramatic aspect of these figures is that 94.4% of the total overland flow drains from May to October, while the remaining 5.6% drains from November to April. This means that during the dry season most of the streams dry up or become scanty lines of water that go wild and torrential during the rain season.

Seven main basins drain Eastern Guerrero (figure 2.22) of which the basin of the Quetzala River is the most important. It embraces an area of 7,132 km\(^2\), of which 6,519 km\(^2\) fell within the area described, draining 3,568,426,414 cubic meters of water during the year (42% of the total runoff of the area). That is an average of 115 cubic meters per second. Basically the Quetzala river takes care of most of the overland flow of the eastern windward slope of the Montaña and Costa Chica, the area with the highest index of precipitation. The Tlapaneco River drains the high Montaña and its dry northern sector. The Tlapaneco basin embraces an area of 5,052 km\(^2\), with a yearly overland flow of 1,558,404,925 cubic meters (18.5% of total runoff), which means an average of 50 cubic meters per second.

The Rio Grande de los Yopes is another very important basin for eastern Guerrero, with a partial area of 4,263 km\(^2\) from its headwaters in the municipalities of Malinaltepec, Tlacuapa, Acatepec and Quechultenango to its union with the Papagayo river (under the name of Rio Omitlan) near the town of Tierra Colorada. It is likely that the runoff of the Rio Grande de los Yopes is larger than that of the Tlapaneco, but for the selected area, it only drains 8% of the total overland flow, with an average

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\(^8\) The amounts were calculated with the rainfall information contained in the Carta de Efectos Climáticos Regionales Mayo-Octubre 1:250,000 and the Carta de Efectos Climáticos Regionales Noviembre-Abril 1:250,000, INEGI. Maps E-14-8 (Chilpancingo) and E-14-11 (Acapulco). These values are just proxies estimated through the mean value of each rainfall tier represented on the maps. Digitization, interpolation and pixelation of the data may introduce some error.
volume of 22 cubic meters per second. The Mixteco River, which gets deeper into Oaxaca and Puebla only drains 2,193 km² of the dry northeastern sector of the area under description. Table 2.3 illustrates the yearly volume of runoff for each basin and its share of the estimated streamflow. All these basins flow to the Pacific Ocean, although the Mixteco, Tlapaneco, Mitlacingo and Teolongo rivers are tributaries of the larger Balsas-Mezcala system which means that all the rainfall on the leeward slope of the Montaña flows through the Balsas to the Costa Grande region. The Rio Grande the los Yopes, Coapala, Marquelia, Quetzala, Yutacuite and other smaller streams have their own mouths along the Costa Chica.

2.7 Soils.

The soil layer produces nutrients and retains water for use by plants. Climate is responsible for the breakup and chemical change of rock to produce the parent material of the soil. But climate acting on rock cannot make a soil layer capable of sustaining a rich plant cover. Plants themselves together with many forms of animal life, play a major role in determining the qualities of the soil layer. Those qualities have evolved through centuries of interaction of organic processes with physical and chemical soil processes. The soil is a dynamic layer in the sense that many complex physical and chemical activities go on simultaneously within it. Because climate and plant cover vary greatly, the combined effects of soil-forming activities are expressed differently from place to place. The capability of a given soil type to support food crops largely determines which zones of a larger area support the bulk of local population.

Soils usually show horizons, which are distinctive horizontal layers set apart from other soil zones or layers by differences in physical and chemical composition, organic content, structure, or a combination of those properties. Soil horizons are developed by the interaction of climate, living organisms, and the configuration of land surface (relief). Most horizons are visibly set apart on the basis of color or texture. Mineral soil horizons are designated by a set of capital letters and numerals.
### Basin

Note: All figures were calculated based on the drainage areas within the selected 19,500 sq km area of study, and not based on the total drainage areas.

<table>
<thead>
<tr>
<th>Basin</th>
<th>Total drainage basin area, Sq Km</th>
<th>Drainage area within studied regions, Sq Km</th>
<th>Yearly rainfall in the basin m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quetzala</td>
<td>7132</td>
<td>6519</td>
<td>10813413376</td>
</tr>
<tr>
<td>Tlapaneco</td>
<td>5052</td>
<td>4911</td>
<td>4722439168</td>
</tr>
<tr>
<td>Rio Grande de los Yopes</td>
<td>4263</td>
<td>1267</td>
<td>2058170624</td>
</tr>
<tr>
<td>Marquelia</td>
<td>1296</td>
<td>1296</td>
<td>1911600256</td>
</tr>
<tr>
<td>Mixteco</td>
<td>***</td>
<td>2193</td>
<td>1874123264</td>
</tr>
<tr>
<td>Grande-Paredones-Yutacuite</td>
<td>1238</td>
<td>1238</td>
<td>1382588416</td>
</tr>
<tr>
<td>Mitlacingo</td>
<td>1372</td>
<td>1082</td>
<td>1130376768</td>
</tr>
<tr>
<td>Coapala-Las Lajas</td>
<td>741</td>
<td>741</td>
<td>1102064256</td>
</tr>
<tr>
<td>Otros</td>
<td>***</td>
<td>133</td>
<td>235943378</td>
</tr>
<tr>
<td>Barranca Teolongo</td>
<td>151</td>
<td>151</td>
<td>126161104</td>
</tr>
<tr>
<td>Mezcalca</td>
<td>***</td>
<td>118</td>
<td>92841968</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Basin</th>
<th>Yearly volume of run off, m³</th>
<th>% of total run off</th>
<th>Average run off per second, m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quetzala</td>
<td>3568426414</td>
<td>42.47</td>
<td>115</td>
</tr>
<tr>
<td>Tlapaneco</td>
<td>1558404925</td>
<td>18.55</td>
<td>50</td>
</tr>
<tr>
<td>Rio Grande de los Yopes</td>
<td>679196305.9</td>
<td>8.08</td>
<td>22</td>
</tr>
<tr>
<td>Marquelia</td>
<td>630828084.5</td>
<td>7.51</td>
<td>20</td>
</tr>
<tr>
<td>Mixteco</td>
<td>618460677.1</td>
<td>7.36</td>
<td>20</td>
</tr>
<tr>
<td>Grande-Paredones-Yutacuite</td>
<td>456254177.3</td>
<td>5.43</td>
<td>15</td>
</tr>
<tr>
<td>Mitlacingo</td>
<td>375994333.4</td>
<td>4.48</td>
<td>12</td>
</tr>
<tr>
<td>Coapala-Las Lajas</td>
<td>363861204.5</td>
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<td>12</td>
</tr>
<tr>
<td>Other</td>
<td>77861514.00</td>
<td>0.93</td>
<td>3</td>
</tr>
<tr>
<td>Barranca Teolongo</td>
<td>41635164.32</td>
<td>0.50</td>
<td>1</td>
</tr>
<tr>
<td>Mezcalca</td>
<td>30637849.44</td>
<td>0.36</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 2.3. Tables and chart of the yearly volume of runoff per basin for the study area.
subscripts, starting with A at the top, follow by B and C. An organic horizon, designated by the letter O, lies on the A horizon. The soil solum consists of the A and B horizons of the soil profile; this is the zone in which living plant roots exert control on the soil horizon. The C horizon, by contrast, is the parent material. The bedrock underlying the C or B horizons is designated the R horizon.

Seven types of soil are present in Eastern Guerrero: Regosol, Cambisol, Litosol, Luvisol, Rendzina, Fluvisol and Vertisol. From these, the former three cover 92% of the area described (figure 2.23).

2.7.1 Regosol.

This soil is formed from non-consolidated volcanic ashes and gravels, with depths of 100 cm or more. “A” is its diagnostic horizon, which is ochric or mollic. Its texture is coarse form silt-sand to coarse sand, with a \( pH \) from neutral to weakly alkaline. It is found in steep terrains with slopes of more than 8 degrees (16%). This soil sustains pine and oak-pine forest as well as shrubs. If alkaline, it supports agriculture of moderate intensity. It covers 55.6% of the area of study and it is located in the temperate zones on both the windward and leeward slopes of the Montaña as well as on the leeward Tierra Caliente. Most of the municipalities around Tlapa have this type of soil.

2.7.2 Cambisol.

Cambisol is a soil whose formation was interrupted by erosion or volcanic events, like being covered by volcanic ashes or “tepetate”. It presents thin ochric,

9 On the basis of the Carta Edafológica, México, 1:1,000,000, INEGI. I am following the soil classification used by the INEGI and the FAO-UNESCO (1990).
10 Ochric epipedon (Gr. Ochros, “pale”). A surface horizon that is light in color and contains less than 1 percent organic matter.
11 Mollic epipedon (L. mollis, “soft”) A relative thick, dark colored surface horizon. The dark color is due to presence of organic matter (humus) derived from roots or carried underground by animals.
Soil maps and tables are based on the Cartas Edafológicas Chilapancingo E14-8 and Acapulco E14-11, 1:250,000. INEGI.

Figure 2.23. Spatial distribution of soil types in Eastern Guerrero.
umbric\textsuperscript{12} and mollic “A” horizons over a cambic\textsuperscript{13} “B” horizon, which is the diagnostic feature of this soil. Its pH ranges from slightly acid to neutral. Its textures goes from very fine sand-silt to silt-clay. This is a very fragile soil and deforestation or abusive agricultural use can lead to fast erosion and the formation of deep and extensive gullies. Its high vulnerability to erosion restricts its potential uses. Cambisol covers 19.6\% of the area of study and it predominates along the Costa Chica.

\textbf{2.7.3 Litosol.}

This is a weakly developed soil often found in mountainous areas where erosion limits soil development. It presents depths of around 10 cm. and occurs in the high Montaña, in the municipalities of Malinaltepec, Metlatonoc, Alcozauca, Guerrero and Coycoyan de Flores, Oaxaca. It covers 17\% of the area.

The remaining four types of soil cover less than 8\% of the area and are sparsely localized. It is important to keep in mind that these are broad categories and that great variability may exist from place to place due to micro-topography and very localized soil formation processes.

\textbf{2.8 Land use and natural Vegetation.}

The natural vegetation series that have been studied with some detail for southern Mesoamerica are: 1) the \textit{tropical rain forest} which have high temperatures combined with abundant precipitation throughout the year; 2) the \textit{montane} formation series which extends up the slopes of the mountains and has adapted to decreasing temperatures and a moisture supply that remains high, and 3) the \textit{seasonal} formation which has low precipitation and is composed of evergreen to deciduous forests and thorny woodland (Wagner, 1964: 221-222).

\textsuperscript{12} Umbric epipedon (L. umbra, “shade,” hence “dark”). A dark surface horizon resembling the mollic epipedon, but with base saturation (PBS) less than 50 percent.

\textsuperscript{13} Cambic horizon (L. cambiare, ‘to exchange’). An altered horizon with texture as fine as or finer than very fine sand that has lost sesquioxides or bases, including carbonates, through leaching. It lacks the dark color and organic-matter content of a histic, a mollie, or an umbric epipedon.
Figure 2.24, illustrates the 18 aggregation categories found in eastern Guerrero according to INEGI’s classification standards (Carta de Uso del Suelo y Vegetación, México 1980). Basically oak, oak-pine, pine, pine-oak and fir communities cover the summits of the Montaña. Along the Costa Chica the main vegetation community used to be the Medium Semi-Deciduous Forest, while in the area around Tlapa the dominant vegetation is Low Deciduous Forest. Natural vegetation in the area has been heavily affected by human activities consisting of agriculture, cattle grazing, and wood extraction. That is why figure 2.24 appears patchy and is difficult to read. In order to have a better idea of the “natural vegetation” distribution on the area, I reduced the number of classes provided by INEGI’s to conform to the vegetation classes used by Wagner in the Handbook of Middle American Indians (1964). This conversion is presented in figure 2.25.

It is possible to see that just three vegetation classes cover 97.2 percent of the study area. Montane vegetation, formed by oak (*Quercus spp.*), pine (*Pinus spp.*) and fir (*Abies*) communities covers 54.6% of the area, extending all over the high Montaña in the municipalities of Metlatonoc, Malinaltepec, Tlacopa, Acatepec, Atlixtac and some portions of Olinala (figure 2.26). There are two types of seasonal vegetation series in eastern Guerrero: the Low Deciduous Seasonal Forest and the Medium Semi-Deciduous Seasonal Forest. The former is a forest formed by trees not taller than 15 meters, most of which lose their leaves during the dry season. Low Deciduous Seasonal Forest predominates on the leeward face of the Montaña where rainfall is scarce (figures 2.27, 2.28). This kind of vegetation has been heavily affected by human activities and it can be badly eroded.

The Medium Semi-Deciduous forest is dominant along the coast from Marquetía to Pinotepa Nacional, where rainfall is slightly more abundant. Trees range from 15 to 30 meters in height and vegetation is adapted to hot, semi-humid
Short-Fallow Cultivation
Short-Fallow Cultivation and Low Deciduous Forest
Short-Fallow Cultivation and Medium Deciduous Forest
Forest-Fallow Cultivation
Oak Forest
Oak-Pine Forest
Fir Forest
Pine Forest
Pine-Oak Forest
Mangrove
Palm
Pasture Land
Savanna
Low Deciduous Forest
Medium Sub-Deciduous Forest
Dune Vegetation
Estuary Vegetation

Note: Vegetation and land-use maps and tables are based on the Cartas Edafológicas Chilapanco E14-8 and Acapulco E14-11, 1:250,000. INEGI.

Figure 2.24. Distribution of vegetation and land use on eastern Guerrero.
Vegetation

- Dune vegetation
- Estuary
- Low Deciduous Seasonal Forest
- Mangrove
- Medium Deciduous Seasonal Forest
- Montane Forest
- Sabana

Percentage of area covered by each type of natural vegetation

<table>
<thead>
<tr>
<th>Natural Vegetation</th>
<th>Elements</th>
<th>Area Sq Km</th>
<th>Percentage of Area</th>
<th>Cumulative Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Montane Forest</td>
<td>Oak, Pine, Fir</td>
<td>10670</td>
<td>54.6</td>
<td>54.6</td>
</tr>
<tr>
<td>Medium Deciduous Seasonal Forest</td>
<td>Bursera, Cuachalata, Ceiba</td>
<td>4560</td>
<td>23.4</td>
<td>78.0</td>
</tr>
<tr>
<td>Low Deciduous Seasonal Forest</td>
<td>Tall Columnar Cactus, Deciduous trees,</td>
<td>3750</td>
<td>19.2</td>
<td>97.2</td>
</tr>
<tr>
<td>Sabana</td>
<td>Shrub</td>
<td>442.5</td>
<td>2.3</td>
<td>99.5</td>
</tr>
<tr>
<td>Dune vegetation</td>
<td>Grasses</td>
<td>60.6</td>
<td>0.3</td>
<td>99.8</td>
</tr>
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<td>27.1</td>
<td>0.1</td>
<td>99.9</td>
</tr>
<tr>
<td>Estuary</td>
<td>Halofitas</td>
<td>17.25</td>
<td>0.1</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Figure 2.25. Natural Vegetation in eastern Guerrero.
Figure 2.26. Pine and oak forest in Metlatonoc (photo: Gerardo Gutierrez).

Figure 2.27. Thorny low deciduous seasonal forest around Tlapa (photo: Gerardo Gutierrez).
Figure 2.28. Low deciduous forest along the dirt road Tlapa-Zoyatlan (photo: Gerardo Gutierrez).

Figure 2.29. Secondary vegetation along the Costa Chica, municipality of Azoyú (photo: Gerardo Gutierrez).
conditions. Between 50 to 75 percent of the tall trees lose their leaves during the long dry season. The dominant species are *Brosimun alicastrum* (Ramón), *Lysiloma spp.* (Tepehuaje), *Ceiba spp.* (Pochote) and *Ficus spp.* (Amate). Most of this forest has been deforested since Colonial times, as a result of grazing activities creating large savannas and *Acahuales*, areas covered by secondary vegetation (figure 2.29).

These three vegetation classes cover 97.2 % of the study region area, the remaining 2.8% is covered by savanna, dune and mangrove vegetation localized along the Costa Chica.

### 2.9 Demography.

Seventy-five municipalities are located in the study area: 45 of them in the state of Oaxaca, 3 in Puebla and 27 in Guerrero. The municipalities of Guerrero have larger territories than those of Oaxaca and Puebla, thus they occupy 68% of the descriptive area. According to the INEGI (population census of 1990), there were 680,622 inhabitants distributed among 1,687 communities within the study area (figure 2.30). There are only 144 towns in this area with population greater or equal to 1000 inhabitants. These towns contain 50.5% of the total population, which means that the remaining 49.5% lives in villages under 1,000 inhabitants (figure 2.31). The index of urbanization (the proportion of the population living in towns larger or equal to 2,500 inhabitants) was 0.26, which reflects a rural way of life throughout the area. The four largest towns in 1990 were Tlapa (26,409 inhabitants), Pinotepa Nacional (23,475), Ometepec (14,775) and Cuajinicuilapa (8,547), which together represent 10% of the total population. In the Montaña region, Tlapa stands out as a primary center, while the distribution of population between coastal towns is more balanced.

If we super-impose a grid over the area with cell sizes of 250*250 meters and calculate density for each cell by summing the population size for each town found in a search radius of 10 km, and dividing by the area of the circle in square kilometers, we obtain the picture of population density represented in figure 2.32. This figure portrays where population tends to agglomerate. It is striking to observe the oasis-like
Figure 2.30. Distribution of towns and villages in the study region (based on Censo de Población y Vivienda, INEGI, 1990).

Figure 2.31. Distribution of towns and villages with a population size larger or equal to 1000 inhabitants (based on Censo de Población y Vivienda, INEGI, 1990).
Figure 2.32. Spatial distribution of population densities (based on Censo de Poblacion y Vivienda, INEGI, 1990).
distribution of the zones that support large population densities and makes us think about the economic and environmental processes that operate at the regional level to support dense populations. This pattern might have been very similar in the Prehispanic times.

INEGI reported a total of 123,208 households in the study region in 1990. This results in an average size family of 5.5 members per household. Fifty-three percent of the population was 15 years old or more and were economically active. Forty-two percent of this population (older than 15 years) could not read or write. It was reported that in 1990, 40% of the population older than 5 years spoke an Amerindian language, and from this Amerindian-speaking population, 33% could communicate only in an Amerindian language. This means that 13.5% of the total population could not speak Spanish.

2.10 Agriculture.

Marcos Matias Alonso (1997) conducted a detailed study of indigenous agriculture in the Montaña region. Basically he found that the Indian farmers of the Montaña possess a great empirical knowledge of how to maximize crop production given hard agricultural conditions, and irregular rainfall. He identified four main systems of agricultural production:

- **a) tonalmitlaltin:** Short fallow and annual cropping (dry agriculture)
- **b) atentlaltin:** Multi-cropping by river irrigation
- **c) tepetlaltin:** Bush-fallow cultivation
- **d) cuechahuactlaltin:** Annual cropping by high water table.

Each system is adapted to specific local circumstances of rainfall availability, slope conditions and climatic variables. Different kinds of maize are also used for specific local conditions. From the 1991 agricultural census of INEGI, it is possible to estimate the total production of maize for the 27 municipalities in Guerrero at
79,720.99 tons, 87.66% of which is produced during the rainy season in the spring-summer cycle. The major producers of maize during the year are located on the Costa Chica. Ometepec yields 11.1% of all maize production of eastern Guerrero followed by Azoyú (7.22%), Tlacochehualuac (8.22%), and San Luis Acatlan (6.41%). The lowest maize producers are Tlalixtacualuca (0.86%), Xochihuehuetlan (0.91%) and Alpoeca (0.93%). All of these low producers are located on the dry sector of the Montaña (figure 2.33).

Most of the agricultural production of the Montaña region is for self-consumption. Perhaps one of the most striking findings in Matias’ research is that, except for the irrigation agriculture, the average maize production of 1 hectare of dry agriculture throughout much of the Montaña (633 kg/ha.) is insufficient to supply the annual 1,920 kilograms of maize required by a household of 6 members with domestic animals (1997:83). This of course means that the households are forced to cultivate large areas just to meet subsistence requirements. But suitable agricultural land is scarce, which limits the possibilities that all the households may get enough.

From the agricultural census, it is estimated that on average only 6.99% of the total territory of eastern Guerrero gets cultivated during the spring-summer cycle and less than 1% during the dry season. On average each household cultivates 1.7 hectares (with a standard deviation of 0.33 hectares). However when the distribution of available agricultural land per household is analyzed, it is possible to see that the farmers around the municipality of Tlapa are the least privileged, with less than 1.32 hectares available per household (figure 2.34). This reflects directly on the average maize yield per household. This contrasts with the municipalities of the Costa Chica where each household harvests from 1.5 to 3 metric tons of maize. In the municipalities of Alcozauca, Tlapa, Xalpatlahuac, Copanatoyac, Zapotitlan Tablas, Tlacoapa and Acatepec the average harvest ranges from 0.5 to less than 1 ton per household. This creates a pattern of privileged areas that can yield surpluses of maize versus areas where maize needs to be imported to satisfy the total year’s demand. Figures 2.33 and 2.34 may give the wrong impression that the lands around the valley
Figure 2.33. Percentual distribution of total maize production in eastern Guerrero.
Figure 2.34. Average available agricultural land per household during the spring-summer cycle (hectares).

Figure 2.35. Areas of major maize production in eastern Guerrero. Total production/Total area of the municipality.
of Tlapa are the least productive of all eastern Guerrero. This is because of the way INEGI aggregates the information by municipality. Nevertheless, the actual distribution of the most productive lands of eastern Guerrero is revealed by dividing the total production of maize by the total area of each municipality (figure 2.35). **It striking to see the creation of two main productive regions, one located in the small valley of the Tlapaneco basin and the other located in the Quetzala basin and the Amuzgo municipalities. It is probable that this was similar in prehispanic times, enhancing the natural advantages of the valley of Tlapa over much of the Montaña. This advantage possibly was exploited by local leaders to increase their power and prestige.**

2.11 Irrigation.

Thanks to irrigation and very exceptional microclimatic and micro-topographic conditions, some maize can be cropped during the fall-winter cycle (October-February). While most of the dry farm land goes fallow, irrigation plots provide the only food supply in the worst months of the long dry season. In pre-industrial times this could have made the difference between survival and starvation. Figure 2.36 presents the municipalities that yield 1 or more tons of maize per cultivated hectare during the dry season, as a result of some kind of irrigation agriculture. A comparison of figures 2.35 and 2.36 indicates which lands within the basin of Tlapaneco and along the Quetzala River are fertile all the year round.

During the field research in Guerrero I was able to observe some canal irrigation systems along the Tlapanec River and its tributaries. These are not complex works in terms of scale. They consist of ditches 50 cm-1 meter wide and 30-50 cm deep, that run along river margins, taking advantage of the natural slope of the land. These systems irrigate fields 1-4 meters above the natural river flow. To accomplish this a water capture system (boca de canal) is constructed along the upper-river a few meters above the agricultural land. The proper water flow sometimes requires the
Figure 2.36. Maize production by irrigation during the dry season
digging of ditches several kilometers along the mountain slope. As figure 2.37 shows, the length of the canal (a) depends on four factors: 1) the differential altitude between the river itself and the agricultural fields (b), 2) the angle of the river flow (angle A), 3) the topography of the area in which the canal will be constructed, and 4) the surface of the fields to be irrigated. The construction of canals implies not only the excavation of ditches, but also the construction of retention walls above the natural surface in order to prevent substantial water loss. The construction of simple aqueducts or bridges above gorges and gullies is also common.

These systems have limits since their size depends on the extent of the surface to be irrigated. The larger the area, the more water has to be channeled from the river. This implies wider and deeper ditches which increase the difficulties of construction and canal maintenance. In the case of figure 2.37 the arbitrary twists and turns of the canal are the product of both the micro-topography of the area and the ability of the constructors to surmount the obstacles of the terrain. The canal in figure 2.37 is part of the Atlamajalcingo del Rio’s irrigation system and represents an average canal in the region. It measures 1,053 meters long, 70 cm wide, and 40 cm deep, and required the excavation of 295 cubic meters of soil. The canal irrigates a surface of 4 hectares, which is shared by 35 families with land holdings varying between 900 and 1200 square meters. The distribution of water among the different properties represents another important problem. The fields located in the upper-river zone are closer to the water capture system and as a result always have a better chance of receiving water. In contrast, the fields at the end of the system are disadvantaged in terms of water distribution. Figure 2.37 demonstrates how the plots in field 1 have better access to water than the ones in field 2. The problems that emerged can be technical difficulties such as obstructions, filtrations, and collapses in the system, or they can be related to social relations and abuses by the upstream water users.

Nonetheless, what is really impressive about the irrigation systems in the valleys of the Montaña of Guerrero is not the canales, but the agricultural fields
Figure 2.37. Canal irrigation system along the Tlapaneco river (Atlamajalcingo del Rio).
themselves. The fields have been formed by the controlled accumulation of sediments through the construction of retention walls called “Trompezones”.

2.12 The “Trompezón” System.

I will briefly explain the basic principles of the construction and operation of this ingenious agricultural system called Trompezón, in Spanish, and *tlachiquihuite* in Nahuatl. The latter literally means “the act of straining something by passing it through a basket.” The Tlapanec River flows throughout deep and narrow valleys. During most of the time the river’s current is not strong enough to remove large quantities of sediment, most of it has filled up the valley. This accumulation makes the level of the river bottom rise, producing constant changes in the direction of the flow. The uncertainty of the watercourse represents a serious problem for the farmers who want to use the fertile alluvial soil accumulated annually along the riverbanks. Any kind of crop or layer of organic soil is at risk of being dragged by destructive floods during rainy season. The only safe way to make use of the alluvial banks is through the construction of retention walls capable of resisting the force of the river and keeping the flood away from the soil banks. By trial and error the farmers of the Montaña of Guerrero found that the best form of protection was the construction of long walls built using a combination of wood sticks, dry shrubs, rocks, and *ahuehuetes* or aquatic willows (figure 2.38). These “living walls” have proved to be strong enough to resist big floods even better than modern cement walls (figure 2.39).

The main objectives of the Trompezón system are: 1) to gain flat space from the river, 2) to capture and accumulate sediment carried by the river flow, and 3) to protect the system from floods. Once the retention walls have been constructed, irrigation canals are dug in order to channel both the water and soluble organic debris into the new fields. It is amazing to observe how in a couple of years, a rocky landscape is transformed into a highly productive area (figures 2.40, 2.41). Unless major floods or destructive pests disturb the annual agricultural cycle, the Trompezón is a reliable system, capable of producing 4 metric tons of corn per hectare per year.
Figure. 2.38. Retention walls protecting the irrigation fields along the Tlapaneco river.

Figure. 2.39. Retention walls protecting the agricultural fields along the Tlapaneco river (Ixcateopan).
Figure 2.40. Trompezon fields in an early stage of soil accumulation (photo: Gerardo Gutierrez).

Figure 2.41. Trompezon fields in a mature stage of soil accumulation (photo: Gerardo Gutierrez).
Nonetheless, even the strongest Trompezón can be damaged or totally destroyed by catastrophic floods which make it a very dynamic system that requires constant maintenance. If the system successfully pulls through destructive events, it can mature and accumulate 2-3 meters of soil behind its living walls, as I have been able to corroborate through drilling tests.

The way in which the Trompezón is constructed and extended makes it susceptible to leaving conspicuous archaeological remains that indicate when and how the system evolved.

2.13 Chapter overview.

In this chapter I have provided a general overview of the study area. Eastern Guerrero can be conceptualized as two symbiotic regions: the Montaña and the Costa Chica. Climatic gradients due to topographic variability create three main ecological zones or tiers: the Tierra Caliente, Tierra Templada and Tierra Fría. Variability in rainfall due to leeward and windward adiabatic processes complicates the zonal model and allows a more refined differentiation between a High Montaña and a Dry Montaña. The vegetation cover of the leeward Tierra Caliente was mainly low deciduous forest with dominance of thorny vegetation adapted to arid conditions. On leeward slopes throughout the Tierra Templada vegetation is mainly of oaks while on the summits of the Tierra Fría pine-oak forest predominates. Along the Costa Chica (the windward Tierra Caliente), the main vegetation used to be medium semi-deciduous forest and savanna. The vegetation cover has been deeply affected by human activities since time immemorial, specially agriculture and later by European cattle raising. Two regions of high agricultural fertility have been identified on eastern Guerrero: one along the riversides of the upper and middle Tlapaneco basin and other on the Amuzgo-Mixteca area of the Costa Chica, between Ometepec and Tlacochistlahuaca. Irrigation plays a key role in the agricultural systems of the Montaña and Costa Chica and the native inhabitants have developed complex and ingenious irrigation systems to cope with the problem of long dry seasons.
One important feature of eastern Guerrero is a preponderance of Precambrian metamorphic rocks which are rich in gems and valuable minerals used by Prehispanic societies. Gold was exploited and caught the attention of the Spaniards during the 16th century. Four major linguistic groups were present in the area: Mixtec, Tlapanec and Mexicans and Amuzgos. These linguistic groups were organized into dozens of independent political units that competed for the control of the area. One goal of this research is to understand how the topographic, geological and environmental factors influenced political competition within eastern Guerrero.
Chapter 3. The Cultural and Historical development of Eastern Guerrero.

This chapter provides a summary of culture historical development in eastern Guerrero, especially the Montaña region, where I have undertaken most of my archaeological and ethnohistorical studies. I discuss here the main ethnohistorical and archaeological researches that have been undertaken in the area. Special attention is given to the spatial distribution of the four main ethnic groups present in the area: Mixtecos, Tlapanecos, Nahuas and Amuzgos. The classification problem of distinguishing between Yopes and Tlapanecos is addressed and the nature of the Yopetzingo province is analyzed.

It has been suggested that the cultures that inhabited the modern state of Guerrero were marginal to the mainstream of Mesoamerican evolution (Schmidt and Litvak 1986). This view is erroneous and reflects the lack of systematic archaeological research in the area. Cultures within the state of Guerrero experienced most of the general transformations observed in better-known areas of Mesoamerica. These cultural changes include the formation of stratified groups and their evolution into state societies. Guerrero was linked to the pan-Mesoamerican trade network since the Formative period, sharing most of the typical Mesoamerican features. These cultural and historical processes have left their traces in the human landscape of Guerrero and are just waiting to be recorded, analyzed and interpreted.

3.1 Ethnohistoric Research.

Since the 1960 it has been recognized that the mountainous villages surrounding the city of Tlapa possessed a rich ethnohistorical tradition. So far twenty five ancient pictorial documents have been found in the area (Villela 1996; Jiménez and Villela 1998). Preliminary studies have been written for most of these sources,
though, none have attempted either a major historical summary or a comparison of information with archaeological data.

Lord Kingsborough (1831-48) in his *Antiquities of Mexico* reproduced the first codex from eastern Guerrero. This was the Humboldt Fragment 1, a screenfold of 15 leaves painted on one side and related to the tributary obligations of the province of Tlapa to Tenochtitlan. The manuscript is a continuation of the reverse side of Codex Azoyú 2, but the pages that would connect the two documents are lost. The commentary by Seler on a photographic reproduction of 1892 does not treat the related Codex Azoyú 2 which was not discovered until 1940 (Glass and Robertson, 1975:93). Indeed it was not until the Codices of Tlapa-Azoyú were found that it was possible to assign a geographical location for the Humboldt Fragment 1.

In 1940, the engineer Francisco Rodríguez, a surveyor from the Mexican Department of Agriculture, acquired a couple of pages from an ancient pictorial document kept by the local authorities in the community of Azoyú in the Pacific coast of Guerrero (Vega Sosa 1991:16). He contacted the researchers from the Mexican National Museum of Anthropology to sell the fragment in his possession and informed them that there were more similar documents in the village. Alfonso Caso got interested and made arrangements to send a small expedition to purchase them. Although the first expedition did not arrive at Azoyú, a second one did and three ancient manuscripts found their way to Mexico City in 1942 where they were deposited in the Library of the Museum. The historian Salvador Toscano and Alfonso Caso named them the Tlapanec Codices of Azoyú (Codex Azoyú 1, Codex Azoyú 2 and Lienzo de Tlapa), and made preliminary studies of them (Toscano 1943). John B. Glass and Donald Robertson described these documents (1975:92-93) and Constanza Vega Sosa published Codex Azoyú 1 along with a comprehensive study of the 38 leaves of its obverse section (Vega 1989, 1991).

In 1948 Robert Barlow studied and published a Lienzo which he called Palimpsest of Veinte Mazorcas. It is a cartographic-historical document that depicts 15 pictographic place names of communities in the Tlapa region along with the
names of 21 late Prehispanic rulers. Later additions in a different style include drawings of Spaniards, Colonial caciques, churches and glosses in Mixtec and Nahuatl which make the document difficult to read. Barlow identified some of the place names and proposed that they made reference to the province of Tlapa in the Codex Mendoza. He thought that a central figure in the codex, represented with a hill, water and a corncob with 20 marks, was the place name of an altepetl called Veinte Mazorcas (Barlow, 1961). Another document from the area was the Codex Cualac, a geographical-historical document related to the Señorio of Cototolapan, currently Cualac, Guerrero (Müller, 1958).

The next breakthrough in the study of pictorial documents from eastern Guerrero was the analysis and publication of the Lienzos de Chiepetlan by Joaquín Galarza (1972, 1986). These are six large Lienzos depicting cartographic and historical information about Nahuatl-speaking immigrations from Central Mexico, as well as the foundation of the village of San Miguel Chiepetlan and its struggles with neighboring Tlapanec villages. In 1974, the Lienzo de Totomixtlahuaca (Codex Condumex) was reproduced together with a commentary by Glass. In 1982, Danièle Dehouve presented her analysis of the Lienzos de Malinaltepec and in the same year Marion Oettinger and Fernando Horcasitas published the Lienzo of Petlacala (Dehouve, 1982; Oettinger and Horcasitas, 1982). Recently, Raúl Vélez Calvo, Rafael Rubí Alarcón and Edgar Pavia Guzmán, local historians, presented very good analyses of native ethnohistorical sources in volumes 1 and 2 of Historia General de Guerrero (1998). The same year Blanca Jiménez and Samuel Villela (1998) printed a catalogue with partial or complete reproductions of most of the presently known pictorial documents from Guerrero.

In the field of ethnography and social anthropology, eastern Guerrero was first visited by Schultze-Jena (1938). His “Bei Den Azteken, Mixteken und Tlapaken der Sierra Madre de Sur von Mexiko” is an excellent ethnographic study of the region. Later, the American missionary H.V. Lemley, who lived for 30 years among the Tlapanecs wrote a brief article about Tlapanec myths (1949). The Instituto Nacional
Indigenista undertook two major field researches in eastern Guerrero: one in 1954 by Alfonso Fábila and César Tejeda and another in 1962 by Maurilio Muñoz and Salomón Nahmad. Maurilio Muñoz published the results of both studies in his classic *Mixteca-Nahua-Tlapaneca* (1963) in which the authors explain the ethnic, economic, and demographic features of the Montaña region of Guerrero.

During the 1970’s the French ethnographer Danièle Dehouve and the American anthropologist Marion Oettinger undertook field research in the area, the former among the Nahua of Xalpatlahuac and the latter with the Tlapanecos of Tlacoapa. A profusion of articles and books followed this research and provide major sources of ethnohistorical and ethnographic information for eastern Guerrero (Dehouve 1976a, 1976b, 1982, 1990, 1994; Oettinger 1976, 1977, 1980, 1983). Dehouve has continued her research in the Montaña of Guerrero and in 1995 published an excellent overview of the territorial and spatial transformation of the Pueblos of Tlapa under Spanish administration. Marcos Matías Alonso (1997) published the latest ethnographic material for the Montaña, which includes an impressive array of detailed and valuable information on the agriculture systems of eastern Guerrero. For the Costa Chica, Aguirre Beltran’s study on the Black population of Cuijla (1958) remains an unsurpassed ethnography. In a similar fashion, Rudolf Paul Widmer (1990) wrote the most comprehensive historical study for the “Costas de la Mar del Sur” dealing with the cultural transformation of the Pueblos along the coast, from Acapulco to Huatulco, during the first two centuries of the Spanish colonization.

### 3.2 Archaeological Research.

Despite the number of pictorial documents and ethnographic material, the entire province remained unexplored archaeologically. The little that was known of its archaeological cultures came from a few reports made by monument inspectors in the wake of large-scale looting. Nevertheless, the materials rescued by these inspectors represent the only clues about the cultures that inhabited the region. In
1920 two Teotihuacan-style masks were found in a burial near the town of Malinaltepec (Aguirre, 1922). One of the masks was richly decorated with jadeite, shell, quartz crystals and turquoise (Figure 3.1). Such elite objects may indicate some kind of interaction with the Classic period polity of Teotihuacan and the basin of Mexico.

In 1932 a tomb was looted in a place called Texmelincan. Some of the objects (mainly jadeite figurines, gold discs, *chalchiuite* beads, alabaster vessels, obsidian blades, copper rings, shell collars, carved bones and amber) found their way to the National Museum of Anthropology, where archaeologists related them stylistically with objects found in tomb 7 of Monte Albán (Noguera, 1933). Five years later, in 1937, an expedition was sent to the Montaña to locate the place where these objects came from. Texmelincan turned out to be a large archaeological site with 20 mounds arranged in three sectors, each one with a ballcourt. Four stelae with Classic-Epiclassic calendric dates were also recorded (Figure 3.2). Dozens of stone grinders were also identified along the bank of the river shores which are believed to have been employed in the extraction of gold nuggets from the river sand banks (Payón, 1941). Unfortunately the site was severely looted and badly preserved, and a lack of supplies and adequate tools forced the expedition to leave prematurely. Since then no archaeologist has returned to Texmelincan. I was able to relocate the site during the summer 2000, recording its geographical position and mapping its main architectural features. I confirmed the existence of grinding activities along the river’s banks related to the extraction of some mineral, perhaps gold nuggets from a quartz matrix.

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1 Unfortunately, the authenticity of such masks was put in their question since their discovery (Anonymous, 1922). Although the Mexican government ordered evaluation and several recognized scholars supported their authenticity, the problem was not satisfactorily solved (see “Máscara con mosaico de turquesa. Dictámenes Periciales”, Boletín del Museo Nacional de Arqueología, Historia y Etnografía, T. I, 4a época, número 3, septiembre 1922). Personally, I have been twice to Malinaltepec, Guerrero, trying unsuccessfully to find the mounds described by Aguirre (1922). I started to believe the findings were fake, until I located the remains of large Teotihuacan censers in small sites along the gullies of the Tlapanec river. This of course does not solve the problem of the masks’ authenticity, but suggests of a strong Teotihuacan influence in eastern Guerrero.
Figure 3.1. Teotihuacan style mask, supposedly found in Malinaltepec, Guerrero (Aguirre, 1922).

Figure 3.2. Stelae 1 from Texmelucan, Guerrero (photo: Gerardo Gutiérrez).
Guadalupe Martínez Donjuán carried out a salvage project in the Post-Classic site of Huamuxtitlan (1979), but the results were never published. One can consult her official report in the Archivo Técnico del INAH. The same author reports the finding of several small Olmec-style figurines around the town of Olinala and she has explored the Pre-Classic site of Teopantecuicanitlan, near the union of the Tlapaneco and Balsas rivers, since the 1980's (Martínez Donjuán 1982, 1994). Elizabeth Jiménez, from the Centro Regional INAH de Guerrero, has undertaken several exploratory trips in the region and helped to create local museums in Tlapa and Huitzapula. She has published an excellent report of her archeological research in eastern Guerrero (2000), and is writing a more extensive study as part of her master thesis. I have been visiting eastern Guerrero since 1997. During 1999 and 2000 I was able to undertake six months of systematic archaeological reconnaissance in eastern Guerrero, and one more month in 2001. Most of the information that I present here and in the following chapters is based on these field researches. At the same time I will compare and contrast my own data with that presented by previous researchers.

3.3 Ethnographic groups.

Eastern Guerrero was inhabited by at least four major linguistic groups: Nahuas, Tlapanecs, Mixtecs and Amuzgos. Although linguistically different, most of these groups shared common traits as a result of a prolonged cultural interaction and the need to adapt to the same geographical and environmental conditions. One can see the approximate geographical distribution of these groups in Figure 2.2.

3.3.1 Nahuas.

The evidence suggests that the Nahuatl speakers in eastern Guerrero arrived to the area in two main waves of immigration (Dehouve 1990, 1994). Based on their own migratory traditions related to a common exodus from mythical Aztlan, it is presumed that the Coixcas or Cohuixca were the first Nahuas to arrive in eastern Guerrero around the 12th century A.D., displacing and mixing with previous speakers.
of Chontal. The Coixca groups occupied an area that runs from Tepecoacuilco to Chilapa and from Chilapa to Olinala. Following some of the Coixca trails, a second wave of Nahuas started to occupy eastern Guerrero during the 15\textsuperscript{th} century. These new people were Nahuas from Xochimilco and Toluca associated with areas under, or in process of being brought under, the control of Mexico-Tenochtitlan (Dehouve 1995). From their own \textit{relatos de fundación} and \textit{títulos primordiales}\textsuperscript{2} we know much more about the mechanisms of these particular migratory events than the previous Coixca movements.

According to these traditions the migrants decided to leave the basin of Mexico due to famines and the constant wars between the Mexicas and the polities of the Puebla-Tlaxcala valley (Dehouve, 1976b). It is inferred that each migratory group was composed of 20 to 50 related families organized as a \textit{calpulli}, traveling under the direction of one or several leaders. All these groups first passed intermittently through the valley of Morelos. The towns of Oaxtepec and Tlayacapan are among the places mentioned in the migratory narrations. From there they followed the open lands of Cuautla toward Axochiapan, either via Jonacatepec or Tepalcingo de Hidalgo. They entered the Atoyac basin near Chiautla de la Sal, crossing the Atoyac river at Coacalco and then crossing the Tlapaneco river at Ixcamilpa. From there they moved to Chiepetlan and presented themselves to the great Tlapanec and Mixtec lords requesting land grants. The total migratory process is supposed to have taken several years. This is because the migrants stopped one or two years at the places that they passed through. Each time they presented themselves to the local lords and begged for a temporary land grant in exchange for services and subordination. Once the productivity of the land started to diminish they departed to the next station along the migratory route, repeatedly begging for land from each local lord. Interestingly when the Aztecs began their imperialist expansion, they easily annexed these Nahuatl

\textsuperscript{2} Documents with official character, where the \textit{pueblos} stated their origin, how they acquired rights over the land, the date in which the \textit{pueblo} was founded and its territorial boundaries with neighboring \textit{pueblos}. 
calpuleque (kin related units). In a symbiotic partnership such groups supported, as strategic enclaves, the Aztec military expeditions and at the same time the Aztecs helped them to overpower their local non-Nahuatl lords and seize the land.

3.3.2 Tlapaneca-Yopes.

The linguistic Paul Radin (1933) grouped the Tlapanec and the Yope from Guerrero together with the Subtiaba (Maribio) from Nicaragua into one single linguistic class. According to him these languages present little variation despite their geographical separation. These early linguistic studies supported the thesis that the Supanec was a part of the Hokan-Sioux family and thus related to Seri, Yuma, Hokan and Sioux (Lehmann 1915; Sapir 1925; Mason 1977; Johnson 1977). More recent studies with the Tlapanec of Malinaltepec challenge this classification, proposing that the Tlapanec is an Otomanguean language (Suárez, 1983, 1988). This highlights the need for more linguistic studies in the area to settle the problem. This is an important matter, because depending on the linguistic affiliation of the Tlapanecs, one may infer different migratory patterns and specific cultural interactions between Tlapanecs and Mixtecs groups.

One may say that the Tlapanecs are divided into two groups based on geographic and historical characteristics. The first of these are the Yopes that used to inhabit a large area running from the western streams of the Río Grande de los Yopes (Río Papagayo) to the Nexpa River and from the mountains around Quechultenango to the Pacific Ocean (figure 3.3). The Yopes are known in Mesoamerican studies because of their fierce resistance to conquest either by the Aztecs or the Spaniards. Their land was called Yopetzinco and remained an independent territory, never annexed to the Aztec’s imperial hinterland (Ortega 1940; Davies 1968).

The second group is the better-known Tlapanecos, associated with the ancient Kingdom of Tlapa-Tlachinollan. This kingdom became an Aztec tributary province in A.D. 1486 (Barlow 1992:154-155). According to Codex Azoyú 1, the Kingdom of Tlapa-Tlachinollan extended from Tenango Tepexi in the north to Totomixtlahuaca in
Figure 3.3. Approximate area where Yope Indians were reported in Spanish documents during the 16th century.

Figure 3.4. Geographic escalation of the conflict during the different stages of the Yope uprising, AD 1531. First stage: uprising of Guatepeque before March 3rd. Second stage: Jorgico’s encounter with the fugitive Indians in Acapulco, before March 3rd. Third stage: massacre of Cuscotitlan, March 12th, and uprising of Citala, Xaltiango and Acamalutla, between March 12th to March 18th.
the south and from Atlixtac in the west to Alcozahuaca in the east (Vega 1991). It is
necessary to keep in mind that throughout this vast territory Tlapanec villages were
intermixed with Mixtec villages, sharing the same territory and even the same ruling
lineages. One must notice that there are more Tlapanec villages beyond the supposed
political limits of Tlapa-Tlachinollan Kingdom, basically around Azoyú in the Costa
Chica.

3.4 The academic recreation of the Yopecingo province.

Based on different interpretations of the available documentation some
researchers have wanted to split the Yopes and the Tlapanecs into two completely
different ethnic and linguistic groups (Ortega, 1940; Meza, 1986). I consider the
argument for this differentiation weak. Dehouve (1994:49) found in colonial
documents from the Costa Chica that the terms “Yopi” and “Tlapaneco” are used
indiscriminately from one another, supporting the idea that these people were
ethnically related. A similar impression is found in Sahagún’s description of the
Yopime or Tlapanecas:

Estos yopimes y tlapanecas son de los de la comarca de Yopitzinco; llámánes yopes porque su tierra se llama Yopitzinco, y llámános también tlapanecas, que quiere decir hombres almagrados, porque se embijan con color; y su ídolo se llama Tótec Tlatlauhqui Tezcatlipoca, que quiere decir ídolo colorado porque su ropa era colorada, y lo mismo vestían sus sacerdotes, y todos los de aquella comarca se embijaban de color. Estos tales son ricos; hablan lengua diferente de la de México, y son los que llaman propiamente tenime, pinome, chinquime, chochonti, y a uno sólo llaman pínotl, chinquitl, chochon.³

Indeed, it is very possible that specific names such as Tenime, Pinome,
Chinquime and Chochonti, although pejorative Nahuatl terms, may be refer to tribal
or clan names. No Yope speaking village has survived to the present day, but it may

³Sahagún, Historia General de las Cosas de la Nueva España, libro X, capítulo XXIX, 1975:608.
be that early colonial ethnic categories are misleading us here. I undertook a short trip in 1998 between Totomixtlahuaca and Ayutla de los Libres and I had the chance to interview several families in the dispersed Rancherías along the Omitlan river, a major stream of the Río Grande de los Yopes. These people identified themselves as Me’phaa (Tlapanecos) and recognized that they could understand the language of Tlacoapa as well as that of Malinaltepec. Perhaps these people represent migrations of Tlapanecos into a territory previously under the control of the Yopes, but it made me think of the possibility that the Yopes were always Tlapanec speakers. It is possible that they ceased being referred to as Yope during the Colonial period, if indeed they ever used such name to identify themselves. I think that the only real difference between Yopes and Tlapanecs was whether they were subjects to the lords of Tlapa or whether they existed as a loose confederation of tribes without a centrally recognized leader.

Much of what we really know about the enigmatic Yope territory comes from two letters written by Diego Pardo in A.D. 1531 (Paso y Troncoso 1939, vol.2, pp. 29-33). In that year the so-called province of the Opelcingos rebelled, killing several gold prospectors along the Omitlan and Papagayo rivers (Río Grande de los Yopes). In the letter written on March 18th to Rodrigo de Albornoz, the Accountant of Mexico, Diego Pardo claims that the entire province was in rebellion. He discusses the slaughter of the Encomendero Diego de Gallegos and other Spaniards and slaves. Diego Pardo states that on March 12th the Yope Indians attacked and burned down the Nahuatl village of Cuzcotitlan, beheading and sacrificing more than 250 Mexican Indians. They also killed another Spaniard in Acapulco. Diego Pardo inquired why the Yopes had rebelled. The Yopes’ answer was full of pride: “…they had never wanted to obey Motecuzoma, the greatest lord of the Indians, how come the
Christians pretended now to rule them? That the Yopes had always had wars in which they wanted to die and proof their courage⁴…”

When Diego Pardo speculated about the reasons for the Yope uprising, he blamed the scarcity of Spanish population in the Villa de San Luis: “…toda esta costa quedará asolada después de no dejar español a vida que tal camino llevan: todo esto sucede de no haberse poblado esta villa y nosotros estamos aquí esperando cada día la muerte y juro a Dios que no escribo letra en esta carta a vuestra merced sino la verdad” (Paso y Troncoso 1939, vol.2, pp. 32-33).

This desperate cry for help makes the account a little suspicious. Diego Pardo was encomendero (possessor of a grant of Indians) of Cacaguatepec, a pueblo directly located in this area. Thus it was in his best interest to magnify the revolt as a generalized rebellion with the possibility of threatening the stability of the New Spain: “Soplico a vuestra Merced… lo haga saber luego a esos señores oidores para que se ponga en ello remedio antes que hagan más mal porque dicen que traen un diablo consigo que les dice que ahora es tiempo que no paren hasta México…” (Paso y Troncoso 1939, vol.2, p. 32). The same can be said about Alonso de Sota’s account to Diego Jaramillo about the uprising (Paso y Troncoso, 1939, vol. 15, pp. 180-181).

When one reads Diego Pardo’s letter dated March 3rd, 1531, it is possible to establish the real dimensions of the rebellion (Paso y Troncoso 1939, vol.2, p. 30-31). In this letter addressed to Pedro Lozano, encomendero of Cuzcotitlan, Diego Pardo stated that the Indians from Guatepeque had risen up due to the constant harassment of the Indians from Puzutla. Diego Pardo said that the Indians from Guatepeque killed the slaves that he owned in that Pueblo and then abandoned the settlement taking with them their wives and children. After this Diego Pardo sent a Spaniard named Jorgico to chase them. It seems that Jorgico found the Indians hidden near Acapulco where

⁴ “…que no sabía yo que ellos nunca habían querido obedecer ni servir a Motezuma que era el mayor señor de los indios, que cómo quería que obedeciesen ahora a los cristianos; que ellos siempre tovieron
they tried to kill him. After this encounter the Indians abandoned their encampment in Acapulco.

One appreciates that during the events recorded in the letter of March 3rd, the rebellion seemed to be contained to the area between Cacaguatepec and Acapulco (figure 3.4, first and second stages of conflict), thereby blocking one of the main roads between Mexico City and the Pacific Coast. On March 12th the hostilities escalated after the Yopes attacked more Spanish prospectors along the Papagayo River as well as the Mexican town of Cuscotitlan. It is reported that the Indians from Citala, Xiquipilco, and Acamalutla joined the rebels, expanding the area of conflict to the west and north of Acapulco.

From these accounts, I infer that the uprising was contained in an area no larger than 3,000 square kilometers, located between San Marcos, Coyuca the Benitez and Xaltianguis and under the Jurisdiction of the Spanish Villa of San Luis (figure 3.4, third stage of conflict). Yope raids did not spread to the areas under the jurisdictions of Chilapa and Tlapa. This uprising never threatened the rather weak political stability of the early New Spain, but only damaged the Encomiendas in the area and gold mining along the Río Grande de los Yopes, which contributed to the final abandonment of the white population from the Villa de San Luis. That is why Diego Pardo and Alonso de Sota’s desperate cry for help was rapidly listened by the Audiencia of Mexico, which ordered all the encomenderos from 30 leagues around the area to gather forces to punish the Yopes. The Audiencia and Hernando Cortés ordered Vasco Porcallo, Encomendero of Tlacozautilan, to quel the revolt which he did.

It is reported that most of the male Yopes were killed during the Spanish retaliation (Zavala, 1981:168; Rubí, 1998:168), although, I consider this doubtful. There is evidence from in A.D. 1560 that most of the Pueblos participating in the rebellion continued to exist and paid tribute regularly (Paso y Troncoso, 1940, vol. 9, guerras y que en ellas quieren morir y probar quien son…” Colección de Documentos para la Historia de Oaxaca, Primer Congreso Mexicano de Historia, MNAHE, 1933.)
pp. 2), although I do not doubt that the war reduced tribal political structures in the area, eliminating the possibility of any future revolt.

Miguel F. Ortega in his classic “Extensión y Límite de la Provincia de los Yopes a mediados del Siglo XVI”, was the first scholar to call attention to this region, establishing the borders of the so-called Provincia de los Opelcinos (figure 3.5). Perhaps guided by Durán and Torquemada’s references to the invitation made to the Yopes to assist the crowning of Ahuitzotl (Davies 1968:170), Ortega argued that Yopitzinco was a unified political entity under the rulership of one lord which it was not. In any case this view forced him to draw strict borders of the province. Davies (1968) recognized that Yopitzinco was not a single political unit and suggested for the first time that it was rather a territory inhabited by independent tribal groups. While Davies respected Ortega’s core boundaries I believe these limits were quite fluid, even discontinuous with Yopes intermixed with Indians related to other ethnic affiliations. Such was the case of the inhabitants of Naguala, who were identified as Tustecos (Ortega, 1940:50).

The Codex Tudela depicts three images mentioning Yope customs around Acapulco (Tudela, 1980). The folio 3v presents a realistic drawing of a Yope Indian (figure 3.6), its glosses mention that the girls did not wear any clothes until after were married. The men dressed with deer’s skins. The Yopes were reputed as great hunters; at the age of 7 years old parents gave the boys a bow and an arrow and ordered them to go hunting and bring food to the house. Folio 74v represents a Yope wedding ceremony. First the parents of the groom asked for the girl’s hand in marriage. The bride’s parents presented some agricultural tools to the groom and inquired whether he agreed to live and work for them as bride service (figure 3.7). If the answer was positive, the marriage took place. Once married, if the man wanted to break the marriage, he stopped working for his parents-in-law and he and the girl were free to separate. Oettinger reported in the 1970’s a similar custom of matrilocal
Figure 3.5. Province of the Yope Indians in 1531, according to Miguel F. Ortega (1940:53).

Figure 3.6. A Yope Indian from Acapulco as represented in the Codex Tudela, folio 3v.
Figure 3.7. A Yope marriage as represented in the Codex Tudela, folio 74v.

Figure 3.8. Yope punishment for adultery, Codex Tudela, folio 75v.
bribe service is found in the Tlapanec community of Tlacoapa (Oettinger 1980:211). Two singular customs of the Yopes were male circumcision and the punishment of adultery, in which the offended husband was allowed to mutilate the noses of both the adulterer and the adulteress (folio 75v, figure 3.8).

3.5. Recreating the Province of Tlapa-Tlachinollan and its multiethnic character.

While the Yope name was lost during the 16th century, the Tlapanec appellative survived and has been used to identify the entire ethnic group. The Tlapanecos identified themselves not as Tlapanecs, but as Me’phaa, the one who inhabits the red place or Tlapa (Carrasco Zúñiga, 1997:5). According to Basauri (1940:437) the Tlapanecs believed they migrated from the north, and settled in Tlapa (from Tlapalli, a colored one). One needs to remember that mesoamerican groups claimed their rights over land based on mythical or real migratory movements led by some deity or powerful chief. If the Tlapanec language was really related to the Hokan-Siou languages, then that tradition might commemorate the movement of the group into the area. Besides as I have already mentioned there is a good possibility that Tlapanec is actually an Otomanguean language.

It is interesting that the Tlapanecs consider themselves attached to Tlapa, when this settlement seems to have been just a secondary village, subordinated in Prehispanic times to the great polity of Tlachinollan. The settlement of Tlapa became noticeable only late in the 15th century when it was chosen to shelter an Aztec tribute collector (Calpixque) after Tlachinollan became a client state of Tenochtitlan. The altepetl of Tlachinollan (Place of the burned fields) was the major political unit during most of the Prehispanic period. This altepetl was a multi-ethnic polity subjecting both Tlapanec and Mixtec villages located along a complex system of narrow and deep valleys created by the Tlapanec River. Before Tlachinollan became the dominant regional polity during the 15th century, the Mixtec-Tlapanec region was broken up into dozens of small political units and an undetermined number of
independent village clusters. This ethnic panorama became even more complex after the influx of Nahuatl speakers into the area.

It is possible to trace the political history of Tlachinollan back to A.D. 1300, when it was supposedly founded by the lords Death-Sun and Ten Deer. Following an aggressive expansionist policy, Tlachinollan spread its power over a vast area in the mountains of Sierra Madre del Sur, dominating about eight important polities and dozens of villages. Tlachinollan’s expansion was suddenly stopped when the Aztec empire reach the region. The first Aztec pressures were felt as early as the A.D. 1460’s, when the Aztec lord Hueuhue Moctezuma subjugated the northern province of Quiauhteopan-Olinala. Tlachinollan was able to form a pact with the Aztecs and avoided complete annexation until A.D. 1486, when Ahuitzotl’s forces conquered and burned Tlachinollan’s regal ritual core (Sahagún, 1975:449, book 8, chapter 1).

After its conquest Tlachinollan and its subordinated units were organized into the tributary province of Tlapa. The modular components of this province and their tributary obligations are described in the Codex Mendoza (folio 39r). It was composed of fourteen *altepetl*: Tlapan, Xocotla, Ichcateopan, Amaxac, Ahuacatla, Acocozpan, Yoalan, Ocoapan, Huitzamola, Acuitlapan, Malinaltepec, Totomixtlahuaca, Tetenanco y Chipetlan (figure 3.9). All together Tlachinollan paid an annual tribute to Tenochtitlan of 800 loads of women’s skirts and tunics, 2400 loads of different cloaks, 1600 decorated gourd bowls, two warrior costumes with their shields trimmed with rich feathers, 20 gourd bowls containing approximately one pound of gold dust, and 10 gold tablets 10 centimeters wide, 1.2 meters long, and of the thickness of parchment (Berdan and Anawalt, 1992:82; Códice Mendocino, 1979: 128-129).

Under Aztec rule, the northern sector of the Kingdom of Tlapa-Tlachinollan suffered a strong Mexicanization and both Tlapanec and Mixtec inhabitants were displaced from the most fertile irrigation lands along the Tlapa and Huamuxtitlan valleys. The ancient lords of Tlachinollan, arranged marriage alliances with Nahuatl lineages and rapidly adopted Aztec manners, titles and power paraphernalia. As a
Figure 3.9. Tributary province of Tlapa, Codex Mendoza, folio 39r. And its approximate geographical extension.
result of acculturation processes, land seizures and actual ethnic displacements, most contemporary Tlapanec villages are found to the southeastern sector of the Montaña, around Zapotitlan Tablas, Tenamazapa, Tlacoapa and Malinaltepec. Conversely most of the predominantly Mixtec villages are spread from the Igualita valley to Tototepec, Zitlatepec, Cochoapa Grande, Metlatonoc and Alcozaica.

Figure 3.10 uses the actual geographic position of the altepetl mentioned in the Codex Mendoza along with their predominant linguistic affiliation to show the complex ethnic panorama of the region. One can see that the major ethnic complexity was located to the south of Tlapa, in the present day Municipalities of Copanatoyac, Xalpatlahuac and Tlapa. In that area Nahuatl, Tlapanec and Mixtec villages have intermingled since at least the 15th century. It is interesting to note that TotomixtlaHUACA represented an enclave in a predominantly Tlapanec territory where speakers of the three ethnic groups were present. Perhaps this was because of its key position along the ancient trade route between the highlands and the Pacific coast.

It is common today to find bilingual people throughout the region. I have found people are more often able to communicate in Mixtec-Tlapanec and Nahuatl-Tlapanec than in Nahuatl-Mixtec, but this is only an impressionistic judgment with no statistical confirmation. Besides trilingual people are not rare at all. Multilingualism is the result of both ethnic intermarriages and migratory patterns between villages with different languages. For example, one person was born in a Tlapanec village, but his father died when he was a child and his mother took him to a neighboring Mixtec village where he learned how to speak Mixtec; later as a teenager he was adopted by a family of Mexican shepherds and married a Nahuatl speaker woman, learning that language too. Since 1940, Spanish is increasingly becoming the region’s lingua franca and many people are not able to communicate in a native language any more.

Tlapa was conquered by the Spanish forces between A.D. 1521 and 1522. Due to the presence of gold in the region, Hernando Cortés tried unsuccessfully to keep it for himself. One half of it was given in *encomienda* to Alonso de Estrada and a quarter to Bernadino Vázquez de Tapia; the remaining quarter was kept by the crown.
Figure 3.10. Ethnic landscape of Tlapa during the 16th century.

Figure 3.11. Chert projectile point and chert flakes found in the Huamuxtitlan Valley.
(Gerhard, 1986:331; Rubí, 1986). After the European conquest, the Indian elite tried rapidly to adopt the Spanish cloths and manners. During most of the 16th and 17th centuries Tlapa-Tlachinollan survived as a strong Cacicazgo. It finally collapsed and split into several parts which became the modern municipalities of the Montaña. The Augustinian friars started to evangelize the region in A.D. 1535. They founded several convents, the most important of which were those at Chilapa, Tlapa and Totomixtlahuaca. After A.D. 1777 all the parishes were under the jurisdiction of the Bishopric of Tlaxcala.

I need to mention that Mixtec and Amuzgo are both Otomanguean languages. While the Mixtecs of Guerrero were always a fundamental component of Tlapa-Tlachinollan, the Amuzgo speakers were rather peripheral to Tlapa-Tlachinollan’s political hinterland. Nevertheless, Amuzgo polities located along the fertile banks of the Quetzala basin between Ometepec and Xochistlahuaca interacted strongly with Tlapa as trade partners, maintaining tight cultural ties with the Montaña as I will examine below.

3.6 An overview on the archaeology of the Montaña of Guerrero.

No one has undertaken a systematic program of archaeological excavation in the territory that used to be part of the Kingdom of Tlapa. Moreover, until this study not even a map showing the spatial distribution of its archaeological sites had been published. Based on this lack of information and previous studies, most of what is summarized here is based on my own field observations, the recently published work of Elizabeth Jiménez (2000), and a miscellania of field reports available in the Archivo Técnico of the INAH. Because most data come from surface collections, chronological control is doubtful and is based on comparisons with recognized pan-Mesoamerican styles of ceramic, sculpture and architecture. The maps shown here represent a preliminary approximation of the actual distribution of sites according to phase. The reader should see the appendix for a larger description of all the sites mentioned in this chapter.
3.7.1 The Preceramic period.

It is not possible to establish when this region was first inhabited. But one can safely guess that bands of hunter and gatherers were around the area before the introduction of either ceramic manufacture or agricultural production, perhaps some 4000 years BP. Rock art provides the only clues for this period, as well as the presence of large chert triangular projectile points found in small aceramic campsites along the Cañada de Huamuxtitlan, (figure 3.11). Maybe the most impressive example of Preceramic rock art is located at Totomixtla-huaca-Piedra Pinta, an archaeological site 6 km to the east of present day Totomixtla-huaca, along the Tameaco River. A rock outcrop on the southern margin of the river contains a large rock 19 m in circumference and almost two meters high which contains more than 100 carved geometric designs (figure 3.12). None of these designs share stylistic parallel with later Mesoamerican iconography. Other sites in the region with rock art which might date to Preceramic times are Ocoapan-Cueva del Diablo, Totomixtla-huaca-La Huerta, Zacualpan, Zapotitlan Tablas-Piedra Pinta (figure 3.13).

3.7.2 Preclassic Period, B.C. 1500- A.D. 300.

Unfortunately the local chronological markers for this time period are not known and the Olmec pan-Mesoamerican style was used to date the archaeological evidence during this period. Several portable objects featuring Olmec style have been found in eastern Guerrero, as well as rock painting and even large monumental architecture. Baby face figurines have been found in Chilapancingo and Tlapa (Jiménez et al., 1998). Other typical Preclassic ceramics such as the black incised Cajetes Arriñonados are reported in Tlapa-San Antonio and Atlamajac (Jiménez, 2000:17). I found fragments of this incised black ceramic 1.60 meters below the surface in a pit made during the construction of a house in the site Colonia Contkalco 2 (figure 3.14). I also saw Preclassic clay figurines in the local museum of Azoyú and in the town of Conhuaxo I was given a clay mask with the San Andrés design incised in its cheek (figure 3.15). A beautiful Olmec stone mask was located in San Luis.
Figure 3.12. Site of Totomixtlahuaca-Piedra Pinta and some of the designs carved on the rock (photo and drawing: Gerardo Gutierrez).
Figure 3.13. Spatial distribution of possible Preceramic sites in eastern Guerrero.

Figure 3.14. Preclassic black incised ceramic, Colonia Contlalco 2 (photo: Gerardo Gutiérrez).
Figure 3.15. Preclassic clay mask from Conhuaxo-Los Amargos (photo: Gerardo Gutierrez).

Figure 3.16. Preclassic stone mask from San Luis Acatlan (Jiménez, et al., 1998).
Acatlán (figure 3.16) and a jade plaque in Olinala. Preclassic rock paintings are present in Juxtlahuaca and Oxtotitlan caves (Grove 1968, 1970) as well as in Cacahuaziziqui cave⁵ (Villela 1989). Thus far the site of Teopantecuanitlan represents the most important preclassic settlement in Guerrero, sharing a lot of material features with preclassic sites in Central Mexico and the Valley of Morelos (Martínez Donjuán 1982, 1994). This site confirms that the societies in eastern Guerrero reached a chiefdom level of social complexity and were connected to major Mesoamerican trade networks by at least B.C. 1000.

When the spatial distribution of these Pre-Classic sites is analyzed (figure 3.17), we see that the general framework of the settlement in eastern Guerrero was already well established. Wealthy and powerful political units developed in the main valleys of the region: Chilapancingo-Muchitlán-Quechultenango and Tlapa-Huamuxtitlán. Similar polities emerged along the piedmont of the southern slope of the Sierra Madre del Sur and the Costa Chica (San Luis Acatlán-Azoyú-Ometepec). One may infer that these early political units found their economic niche as intermediaries in the trade exchanges between the Pacific Coast and Central Mexico. It is possible that the extraction of valuable minerals played a major role in maintaining linkages between eastern Guerrero and other regions of Mesoamerica throughout Pre-Columbian history.

3.7.3 The Classic and Epiclassic Periods, A.D. 300-A.D. 1100.

It is necessary to make use again of a pan-Mesoamerican style to create a chronological map for the archaeological remains of eastern Guerrero during this period. Teotihuacan style objects are abundant across the area. Most of them are portable objects like the mask of Malinaltepec (figure 3.1), but there are a few sites with typical Teotihuacan talud-tablero architecture (Jiménez 2000). For this chronological period, there is also iconography on monumental sculpture featuring a

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⁵ Ocoapan-Cueva del Diablo in my register.
Figure 3.17. Spatial distribution of Preclassic archaeological sites.

Figure 3.18. Teotihuacan Style censer, found in Mezcala, Tlapa, Guerrero (Gerardo Gutierrez).
combination of stylistic attributes related to Zapotec and Mixtec cultures. Gray wares have been identified that can be linked with Monte Albán III in Alcozauca, Contlalco, Huipila, Huamuxtitlan-Tecoapa, Huamuxtitlan-Los Cuartos, Cerro Quemado, Coyahualco-Cuatetelzin and Cerro Machete.

Thin Orange ceramics have been reported all over the area, but most of these materials seem to be local imitations. Fragments of large Teotihuacan style censers have been found at the La Soledad and Contlalco sites (Jiménez 2000). In the small village of Mezcala in the municipality of Tlapa, I was given a complete one, which was recovered from a burial during the construction of the town’s kindergarten (figure 3.18). Figure 3.19 shows the distribution of these classic censers along the valley of Tlapa. Interestingly when the chemical composition of the censer from Mezcala was analyzed by the PIXE technique and compared against Teotihuacan and Guerrero’s ceramics, it turned out to be a local manufacture (Gutiérrez, Lazos and Rubalcava, in preparation). Strong evidence of a Teotihuacan presence it was found at of Contlalco, where a building with a typical talud-tablero profile was discovered during an excavation at the local High School (Barrera and Parra 1992).

Archaeological sites with Classic period stone sculpture were identified at Yu kivi (figure 3.20), Azoyú (figure 3.21), Piedra Parada-Ometepec (figure 3.22), Texmelincan (figures 3.2 and 3.23), Huitzapula (figure 3.24), Temalacacingo (figure 3.25) Cualac-Coracero (figure 3.26), Huamuxtitlan (figure 3.27) and Chilpancingo (figure 3.28). The iconography on these sculptures appears to date between A.D. 600 800. Furthermore, there are several stone sculptures that appear to be transitional phases spanning the Classic to Epiclassic periods (A.D. 700-1000) and related to the Oaxaca Ñuiñe style and the iconography of Xochicalco and Tula6. Such is the case of

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6 Piña Chán (1960: 65-76) registered several sites near Ometepec and Comaltepec, in the Costa Chica. There he found stelae and ceramics that he associated with Teotihuacan and Monte Albán II and IIIa. Nevertheless some of monuments seem to be rather Epiclassic or at least were made after the political fragmentation of Teotihuacan.
Figure 3.19. Spatial distribution of Teotihuacan style censers in the valley of Tlapa (Gerardo Gutiérrez).

Figure 3.20. Classic sculptures of Cochoapa-Yu Kivi (photos and drawing: Gerardo Gutierrez).
Figure 3.21. Serpent head from Azoyu Tenconahualle (photo: Gerardo Gutiérrez).

Figure 3.22. Carved slab from Piedra Labrada, Ometepec, Guerrero (Jiménez, et al. 1998:73).
Figure 3.23. Serpent head from Texmelucan, Guerrero (photo: Gerardo Gutiérrez).

Figure 3.24. Serpent head from Huitzapula, Guerrero (photo: Gerardo Gutiérrez).
Figure 3.25. Ball court ring from Temalacacingo, Guerrero (Jiménez et al. 1998). Note that the depicted individual is tied as if he were a prisoner.

Figure 3.26. Stelae A from Coracero, Cualac (Muller, 1966).
Figure 3.27. Fragment of a year sign from Huamuxtitlan, Guerrero (Gerardo Gutiérrez).

Figure 3.28. Tlaloc sculpture from nearby Chilpancingo (Gerardo Gutiérrez).
From the spatial distribution of Classic period sites (figure 3.31), one may infer that most of the Preclassic sites continued to be occupied during the Classic period. This is understandable because of the aridity of the northern sector of the region (see chapter 2). Thus, the presence of springs and permanent sources of running water might have helped stabilize the settlement system. One observes a quantitative increase in the number of sites which might be correlated to an increase in population size. Judging from their size I believe that the regal-ritual centers of Texmelincan, Contlalco (Tlachinollan), Cerro Quemado, Alcozauc, Coyahualco-Cuateteltzin and Huamuxtitlan-Tecuapan played a dominant political role in the region.

Based on the thermo-luminescent dating of the Teotihuacan censer from Mezcala (Gutiérrez, Lazos and Rubalcava, in preparation), it is possible to suggest a strong interaction with Teotihuacan between A.D. 450-650. No one really knows what this interaction consisted of. Some researchers suggest that a large number of colonists from Teotihuacan immigrated to Guerrero at this time (Jiménez et al. 1998, Jiménez 2000, Barrera and Parra 1992). This is not unfeasible, if one recalls the Postclassic period immigrations of Nahuas from Central Mexico into Guerrero. It is even possible to think that Teotihuacan behaved similarly to Tenochtitlan in the way it expanded its political domain. In such a case we might conceive the region around Tlapa as tributary province of Teotihuacan.

Whatever the case, it is likely that local polities copied and replicated some of the political structures of Teotihuacan. It is likely that the first state-like political units emerged at this period. After the decline of Teotihuacan, the area fragments politically and is reorganized under local authority. A stronger interaction with Oaxaca is observed. This might be related to an expansion of Mixtec groups into Guerrero colliding with Tlapanec speakers. Such unrest could have created political competition and is precisely at this time that one observes a proliferation of war-like iconography (figures 3.22, 3.25, 3.30). It is very probable that political fragmentation
Figure 3.29. Carved slab from Huamuxtitlan seemingly a Ñuiñe style place name. It seems to depict Quetzal feathers and blood droplets the Ezguaguacatl glyph “Raining Blood” (photo: Gerardo Gutiérrez).

Figure 3.30. Slab from Texmelincan seemingly Epiclassic and related to the style of Central Mexico (Jiménez et al. 1998).
Interaction with Oaxaca cultures

Interaction with Central Mexico and Morelos cultures

Figure 3.31. Spatial distribution of Classic Period archeological sites in eastern Guerrero.

3.32a
3.32b

Figures 3.32a and 3.32b. Post Classic potsherds: Figure 4.32a, Type I- Tlapaneco Burdo Grano Blanco; and Figure 3.32b Type XIV-Mica Olinala.
lasted until 12th century when polities like Tlachinollan began to accumulate enough power to dominate their weaker neighbors.

3.7.4 Postclassic Period. A.D. 1100-1522.

This period is represented by the re-emergence of powerful polities that managed to concentrate power and reorganize the region politically. No doubt the polities located in the northern valleys of the Tlapaneco river played a major role in this process. To create a chronological map for this period, one can use the presence of metallurgy and two ceramic trade wares: Yeestla-Naranjo and Aztec. It is also safe to use several local Postclassic ceramic types including: 1) Type 1 Burdo Grano Blanco (T1BGB), Type 2 Burdo Laminar (T2BL) and Type 3 Burdo Laminar Mica (T3BLM), which are different variants of a very thick grayish brown potsherd with large fragments of schist and calcite used as temper; and 2) Type14 Mica Olinala (T14MO), a porous red ceramic with abundant golden laminar temper, which shines beautifully under the sunlight (figures 3.32a and 3.32b).

Of course ethnohistorical references also provide good clues to date archaeological sites in the region. More than 40 different place names for the area are recorded in different documents which correspond to actual Postclassic settlements in the region (see chapter 5). I found imported Aztec III and IV ceramics (figure 3.33), as well as local imitations at the archaeological sites of Ahucatitlan (Mexquititlan-Organera), Tecoyo-La vuelta de las Pilas, Cerro Machete, Yoso None (Tototepec-Pueblo Viejo), Alpuyeca-Las Minas, Huamuxtitlan-Tecoapa, Huamuxtitlan-Los Cuartos, Conhuaxo-Los Amargos, Buenavista-Loma 8, Buenavista-Loma 11, Alcozauca, Atlamajac, Axoxuca, Xocotla, Aserradero, Loma del Potrero 1, Loma del Potrero 2, Loma del Potrero 3, and Cerro Quemado (Coquera). Nevertheless, in most collections Aztec ceramics are scarce. From the 127 Postclassic sites only 19 sites (15%) contain Aztec potsherds. The frequency of Aztec potsherds per site was also low, from 3 to 4 per site. Of the 5,457 potsherds recovered in surface collections
Figure 3.33. Post Classic potsherds, sample of Aztec wares from eastern Guerrero.

Figure 3.34. Post Classic Potsherds, Yeztla-Naranjo from a looted tomb in Loma UPN, Tlapa, Guerrero.
throughout the region only 71 (1.3%) are Aztec ceramics, 60% of which are probably local imitations.

Another Postclassic ceramic type is Yeztla Naranjo (Figure 3.34). This type is even scarcer than the Aztec wares; only four potsherds have been found in two sites: Loma UPN and Conhuaxo 7. However 116 sites have local Postclassic wares (T1BGB, T2BL, T3BLM and T14 MO) representing a huge settlement increase after the Classic period.

I have already mentioned the importance of mineral extraction in the economic specialization of the region. In a way this is confirmed by the tributary pages of the Codex Azoyú 2 and the Codex Mendoza. I have shown in chapter 3 that the area contains the largest metamorphic rock deposit of southern Mesoamerica and some of its most important sites were apparently exploiting these deposits. This is the case of Texmelincan where quartz matrix was ground to get some kind of mineral (most probably gold). Green gemstones are also mentioned as a tribute item for the province of Quiauhteopan-Olinalan and large prismatic quartz and other gems were exploited in the Costa Chica near the site of Azoyú-Tenconahualle. It is interesting to quote here a reference from Sahagún, who was informed by the Aztecs of these economic activities: “Estos tales son ricos (the Tlapanecs)... y vivían en tierras estériles y pobres, con grandes necesidades, y en tierras frágatas y ásperas; pero conocen las piedras ricas y sus virtudes…” (Sahagún 1975:608).

The end of this period is represented by the domination and incorporation of the local Tlapanec and Mixtec lords into the Aztec State. Plenty of pictorial documents record place names of major settlements from the Balsas River to the Costa Chica (see chapter 5). These references were a great help in locating archaeological sites. Colonial period settlements are represented by Colonial churches with mixed colonial ceramics (mayolica) and obsidian blades. Besides the increase of Postclassic sites, the settlement pattern remains pretty stable with the sites of valleys of Huamuxtitlan and Tlapa dominating the political landscape of the area (figure 3.35). Nevertheless, there is a noticeable increase in the power of the northern
Figure 3.35. Post-Classic settlement pattern in Eastern Guerrero.
Nahuatl settlements around Olinala and Chiepetlan which were used as Aztec enclaves during the Mexica expansion.

3.8 Chapter overview.

Eastern Guerrero has been inhabited since the Preclassic period and it has participated in the Mesoamerican exchange system since this time. Its settlement pattern has been heavily influenced by the arid conditions of the leeward Montaña, concentrating the majority of sites along the permanent streams of the Tlapaneco river. The area was greatly influenced by Teotihuacan, but the nature of this influence is not well understood. After Teotihuacan’s fall the presence of Oaxacan styles increases in the area and political fragmentation is inferred from an increase in warfare iconography at this time.

Powerful polities emerged during the Postclassic period and competed for the control of the area, especially the trade routes connected the Costa Chica to the leeward Tierra Caliente. Tlapa-Tlachinollan became the dominant power during this period of political competition. Nahuatl groups were present in eastern Guerrero since 11th or 12th century and the Aztecs conquered Tlachinollan in A.D. 1486. In spite of this influence, only scanty amounts of Aztec ceramics have been found.
Chapter 4. Territorial expansion as a social and geographic process.

“The territory of a state is no definite area fixed for all time -for a state is a living organism, and therefore cannot be contained within rigid limits- being dependent for its form and greatness on its inhabitants, in whose movements, outwardly exhibited especially in territorial growth or contraction, it participates (Ratzel, 1999:526).”

Territorial expansion is the spatial manifestation of complex social and political processes. Thus, in this chapter I explore first some of the variables that have to be considered in the study of expansionism. Once this is done I propose a way to approach the study of territorial expansion through geographic analysis using deviation of a polity’s territorial shape from an ideal Von Thünen like landscape.

I start this chapter with Carneiro’s explanation of state formation in which territorial expansion is a byproduct of population pressure on a circumscribed landscape. I continue with a factional perspective in which territorial expansion is a consequence of leaders’ ambitions and interests. At the end of the chapter I present a geographic model to describe and classify different patterns of spatial expansion on the basis of the deviation of the actual morphology of the borders against the theoretical concentric circles of Von Thünen.

4.1 Carneiro’s view of territorial expansion.

Robert Carneiro (1970, 1978) observed that there has been a general decrease in the number of autonomous political units and an increase in their size over time. According to him, when human groups were organized as hunter-gatherer economies, their political organization corresponded to that of independent bands or villages. He theorized that when hunter-gathering economy started to be replaced by agriculture, village autonomy was transcended and supra-community aggregation began. As political units became fewer, they also became larger. The aggregation of villages into larger units set the conditions for the emergence of a more complex political
organization: the multi-community chiefdoms, defined as “an autonomous political unit comprising a number of villages or communities under the control of a paramount chief (Carneiro, 1985:45).” The next step in the trend of polity enlargement is represented by the state a much more complex political organization where authority is centralized and divided into many specialized roles that are arranged hierarchically in bureaucratic fashion. The fusion of several states and chiefdom polities into a larger unit gives rise to an empire which represents the largest and most complex level of territorial and population aggregation.

Carneiro’s main assumption is that supra-community political aggregates were first established in areas of circumscribed agricultural land and high population densities (Carneiro, 1970). Hence in Carneiro’s model, it is expected that competition ensued in enclosed areas where good arable land is scarce and population was growing. Once the space is filled up, future expansion could only be achieved in the struggle between existing polities. This competition takes the form of war, and if one of the settlements succeeds in militarily subjugating its neighbors, a more complex polity could rise.

Population models as the prime movers of state formation or territorial expansion have been questioned and more emphasis has been placed on factional or agency models (Feinman 1991). Despite this objections I consider that Carneiros’ circumscription model remains strong both in operational terms and because it is easily adaptable to embrace factional competition as a cause of expansion. Other variables that have been correlated with the initial impetus for political centralization and territorial expansion are internal strife, maintenance of privileges for high-ranking groups, control of long-distance trade routes, and defense (Cohen and Service 1978).
4.2 Territorial expansion as a byproduct of leader’s ambitions.

Competition between independent political units of any kind and size is a product of the pulls and tugs of intra-polity (domestic) affairs. In this approach leaders and not polities make policy decisions and do so to maintain power (Bueno de Mesquita 1996, 1997, 2000). The polity is merely a metaphor for the collection of groups living within a sovereign territory. Leader’s decisions are considered to be strategic, that is they take into account expected responses by adversaries and supporters and are designed to maximize the leader’s welfare. If this occurs in modern states where the quest for personal political power guides policy choices, then it is even more certain to have occurred during pre-industrial times when the fate of patrimonial-like polities rested on the strong leadership of their rulers, kings or emperors. The cumulative effect of domestic policy choices taken by neighboring competing leaders gives rise to regional, sub-continental, continental or international systems1 in which domestic politics, foreign policy, and regional or international politics are inextricably linked.

The ultimate fear of every leader is being ousted from power. All political, leaders live in dread of being removed from government. Rulers seek to stay in power and foreign policy actions influence those prospects. Foreign policies are always linked to internal politics, especially domestic political concerns that influence leaders’ prospects of retaining or increasing their power. This is why leaders promote the welfare of those they lead (at least the welfare of the close supporters), not out of altruism, but out of a desire to stay in government and increase their personal power. The desire to hold power encourages leaders to refrain from doing excessively foolish things. Injudicious risks heighten the likelihood of being overthrown. Thus to understand the inter-polity competition of regional systems, it is necessary to analyze how leaders translate their personal ambitions into actions of government.

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1 It is advisable to reserve the term “international system” to the global affairs created after the European’s worldwide expansion of late 15th century.
Bueno de Mesquita (2000) has argued that modern international politics are governed by three important principles which I have rephrased slightly to adapt them to the pre-industrial circumstances of my study:

1. The actions leaders take to influence events in the inter-polity arena are motivated by personal welfare and, especially, by a desire to stay in power. Leaders’ concerns for the polity interest are subordinate to personal interests. If the two coincide, then so much better; if they do not, then leaders will chose what they believe to be best for themselves (Bueno de Mesquita 2000:2).

2. Inter-polity relations cannot be separated from domestic politics. Every foreign policy action is undertaken in the shadow of the domestic political consequences the action is expected to produce. Therefore, if a foreign policy is expected to achieve beneficial long-term consequences for a polity but in the short term will result in the ouster of the leader, then that policy will not be pursued (Bueno de Mesquita 2000:2).

3. Relations between polities and between leaders are driven by strategic considerations. As such foreign policy decisions are designed to influence regional affairs. To be effective in this they must be taken with an eye toward the reaction they will create. The reaction expected from a policy choice is compared to the reaction anticipated from other policy options. Leaders pick the policy they believe will produce the best outcome for themselves knowing that at the same time rivals are choosing policies to enhance their own well-being (Bueno de Mesquita 2000:2).

This philosophical orientation forces one to distinguish between the interests of individual leaders and the interests of the polities they lead. This compels one to explore questions about the extent to which one can speak meaningfully about any
polity having a collective interest. All of politics is concerned with making choices about the acquisition and allocation of scarce resources. In intra-polity affairs groups and individuals compete for special advantages, particularly over control of power and wealth (Mann 1986). These collective forces (rather than individual choices) will shape the authoritative allocation of resources. This means that political decisions about who gets what are determined by the political influence of each participant group or by the political consequences of the decisions. Intra-polity politics involves the selection by leaders of policies and actions designed to keep them in power. In inter-polity affairs, leaders must worry that not only might their foreign policies mobilize domestic opposition capable of overthrowing them, but they may also irritate a foreign rival that will spark attack and possible defeat. Thus leaders must balance their ambition to pursue particular policy objectives against their need to avoid internal and external threats to their political survival.

Inter-polity interactions are motivated by leaders’ preferences of certain goals over others. These preferences are tempered by the power to pursue those goals and by perceptions or beliefs about the costs and benefits associated with seeking one goal over another. At the same time leaders must also judge the preferences, power, and perceptions of the people whose support they need or whose opposition they must avoid to retain the rulership. Power is about mobilizing resources to alter the behavior of others; it is an instrument for promoting and achieving goals. Therefore, it is a mistake to think of the quest for power as the ultimate goal of leaders or of the polity they represent. Rather, power is the servant of ambitious men and women prepared to take risks to advance the objectives they hold dear. Leaders may misjudge the amount of resources or the degree of power they can mobilize on behalf of their polity or miscalculate the level of political support that will follow from their pursuit of articulated preferences. Perceptions may lead rulers to take greater risks than they had intended or to forego opportunities they did not realize they had.

Rivals may know this and attempt to mislead their adversaries. Opponents capable of jeopardizing a leader’s authority may arise from within the polity or from
outside it. Usually threats to power and authority arise from competing elites who desire to hold government. Such competition is at the heart of succession crises in hereditary regimes and authoritarian dictatorships. But threats to a leader’s authority can also come from ordinary people. Mass riots and grassroot revolutions sometimes lead to the overthrow of leaders. Being overthrown means that a leader loses control over the selection of a polity’s goals and the mobilization of the resources needed to enforce government actions. Failure carries with it a real risk of banishment, or even execution. For leaders, the potential rewards of being in power must outweigh the accompanying risks. Domestic politics strongly influences relations between polities and to understand how leaders behave toward one another, researchers must examine how leaders deal with changing circumstances, political ambition, and risk.

I suggest here that territorial expansion is a byproduct of the domestic affairs of the expanding polity to meet two fundamental challenges: 1) the quest for security and 2) the pursuit of wealth and satisfaction. Security is the ability to fend off external challenges to the sovereign authority of the polity and its leader in order to maintain the regional status quo. Wealth or satisfaction is the ability to bestow benefits on those followers whose support is necessary to fend off internal challenges to the authority of the political leadership. Security is sought to minimize risks while wealth is pursued to fulfill ambition (Morrow 1991).

**Territorial expansion is the process of annexing previously politically independent or “vacated” areas. It is the incorporation of people and territory through the overthrow or subjection of rival leaders by any method.** A variety of costs are incurred by territorial expansion. When the decision to annex another polity is made, the rulers or decision makers must assess the probability of success or failure of their choice, calculate its expected costs, and determine the expected utility of the enterprise compared to alternatives. Expansion costs must be borne by someone, and those costs act as a drag on self-interested and ambitious political leaders. When followers bear costs that are not accompanied by worthwhile rewards, they will likely to become dissatisfied. Such dissatisfaction increases the risk that they will overthrow
their leaders. Thus a too-costly choice can lead to loss of power, the ultimate political cost (Lamborn 1991).

Self-interested actors are concerned with both the benefits that they gain from their actions and the costs they shoulder. When costs are expected to exceed benefits from a particular action, that action becomes unattractive. Costs and benefits can take both pecuniary and nonpecuniary forms. Pecuniary benefits include the financial and political gains from a successful expansion. Pecuniary costs include the price in time and effort to expand. There can also be nonpecuniary costs and benefits. These include the psychological gains from outmaneuvering an opponent or the psychological price paid in shame, guilt, or grief for engaging in ruthless behavior. If it happens that pecuniary and nonpecuniary considerations pull a leader in opposite directions, then the ultimate choice will depend on the relative magnitude of all costs and all benefits, both pecuniary and nonpecuniary. Leaders have to calculate the expected utility (net gains and losses), of the returns if a policy choice proves successful. Those who ignore the costs and benefits of their actions, and who are blindly compelled by circumstance or context, cannot survive for long except through luck. Instead of luck, leaders are more likely to rely on calculated risks. Expected utility estimates allow leaders to make calculated risks. By assessing the alternative consequences that might arise from a course of action, rulers can compare the costs and benefits of those consequences with the cost and benefits associated with alternative course of action.

\[^2\] This has been formally expressed by the following equation:

\[
EU_{\text{action}} = P_{\text{action}}(B_{\text{action}} - C_{\text{action}}) + (1-P_{\text{action}})(B_{\text{inaction}} - C_{\text{action}})
\]

Where:

- \(EU_{\text{action}}\) = Expected Utility of implementing the action
- \(P_{\text{action}}\) = Probability of success of the action
- \(B_{\text{action}}\) = Expected Benefits from the action
- \(C_{\text{action}}\) = Expected Costs from the action
- \((1-P_{\text{action}})\) = Probability of failure of the action
- \(B_{\text{inaction}}\) = Expected Benefits of not taking the action

Based on Bueno de Mesquita (1997; 2002).
4.3 Territory and competition.

But why does a polity need a territory? I think the most straightforward answer is to procure the necessary resources for its own reproduction (the biological reproduction of its population and the reproduction of its social structures). On the one hand natural resources and primary productive activities are spatially contained in areas over which specific groups can claim exclusive rights, which represents an economic-oriented action of territoriality. On the other hand territory is used as a defensive mechanism that groups used to protect what they have through a simple message that trespassers will be prosecuted. The territory has a survival value: it offers security from external aggressive groups and security of food supply (Ardrey 1966). But territory is also a source of power and perhaps this is the most important factor associated with territorial competition and expansion. There is a consistent link between territory and polity power. Power is associated with demographic strength and economic resources that are generally related to land size. This is especially true in a pre-capitalism context.

Now then, how much territory is required to fulfill such needs? This is a difficult question which does not have a straight answer. Nevertheless, I list here some key-variables involved in determining the “ideal” size of a polity’s territory size. If we consider the economic and social use of the territory, then the spatial size of a polity will depend on its total population size, population density, topography, productivity of the environment, spatial allocation of ecological resources, and the prevalent mode of production in which the polity develops. The mode of production is the major way in which societies arrange the mutually dependent relations among nature, work, technology, social labor and social organization. I use this Marxist term, because it deals holistically and historically with the “occurring set of social relations through which labor is deployed to wrest energy from nature by means of tools, skill, organization, and knowledge” (Wolf, 1982:75). The historically dominant mode of production impacts the allocation of power among the social groups in the polity, which determines a differential level of food and goods consumption for each group,
that can be directly correlated to a territorial size. Polities are composed of individuals, families, and larger social groups that compete internally for resources and power. Hence, in the end, territorial expansion is just the physical manifestation of the internal social struggle for power between elite and subject groups of the polity, as well as the inter-polity competition between regional elites. Thus, the required “living space” of any polity is not effectively fixed for all time but will vary historically as the result of this intra and inter-polity competition.

4.4 Territory as a source of conflict.

It has been proposed that territorial expansion is just a byproduct of leader’s struggle to stay in office as long as possible. But how does territorial acquisitions serve such ambition and how does territory impact on leader’s decisions? The territory is a finite resource itself and the desire to obtain more might produce inter-polity conflict and war (Ericksen, 1980). Yet it would be determinism to characterize conflict over territory as inevitably leading to war. Some territorial exchanges are settled peacefully through a variety of non-violent mechanisms including purchase, exchange and marriage alliances.

The ecological perspective offers insight into the relationship between territory and conflict (Sprout, 1965). According to this perspective macro-regional actions are conditioned by the milieu of environment factors a polity faces. As mentioned above, this environment includes demography, technology, resources availability, and geography. It should be emphasized that polities respond to their environment, but the environment does not compel leaders to perform particular actions. Key variables influence the leader’s assumptions about, or perception of, the environment, which poses some limitations on possible actions taken by a polity. This has been called “environmental possibilism” and describes how the milieu can enhance or inhibit the ability of a polity to act (Sprout, 1965).
Geography does not dictate that conflict will occur between two polities. Indeed, it might be said to be only one of several factors that constitute the environment in which polities decide to use military force or not. Nevertheless, the location, size, climate, and natural resources of a polity are a function of its geography. Correspondingly, some actions are more or less feasible because those characteristics. For example, an isolated polity may find it easier to defend itself than one that shares many borders with hostile groups (Goert and Diehl, 1992).

The spatial dimension of political action may be observed in the ability of polities to exercise their sovereignty in certain areas, a phenomenon correlated with the friction of distance, which Boulding (1962) has labeled as “zones of variability”. In some areas a polity’s power may be strong and viable, while in others its degree of influence is either more constrained or nonexistence. The power of a polity is strongest within the areas they have govern sovereignty, and less viable as they move farther from their home base. This has been called the “loss-of-strength gradient” and represents the degree that a polity’s military and political power diminishes as it attempts to influence other polities and events farther away from its home base (Boulding, 1962). For example, the Aztec Triple Alliance exercised different degrees of domination over its subject provinces depending on the time-distance that separated them from Tenochtitlan (Berdan et al., 1996). Hence, polities are inherently constrained by geographic limitations (such as great distances) in the selection of policy options, including the decision to go to war. This has an implication for decision calculus of rulers. Although geography may eliminate many possibilities from the menu of choice for leaders, many still remain. Even though many courses of action are possible, geographic factors may make the odds of success for some actions better than others.

Conditions, such as shared borders or proximity, influence the interaction opportunities available to polities. Polities close to each other interact more than those farther apart. In the same way, geographic factors may permit sustained interaction between polities, allowing for more conflict or cooperation opportunities.
Geographical concerns have some impact on the willingness of polities to engage in war. Willingness relates to the process by which leaders recognize opportunities and then, given these opportunities, become willing to choose war as a possible action (Starr, 1978). The geographic proximity or strategic importance of an opponent may make a polity more or less willing to attack an opponent.

Beyond facilitating conflict, territory can be a source of conflict as polities struggle to enhance their military and economic opportunities (Goert and Diehl, 1992). Territorial conflict may result from the importance of territory for economic, political, historical, or ethnic reasons. Many territorial disputes are attributable to the characteristics of territory itself. It is the value of territory in the dispute that may be the keys for assessing whether polities fight or resolve their differences peacefully. The value of a given piece of territory varies according to the perceptions of the polity or polities involved in a dispute.

Nevertheless, certain intrinsic characteristics of territory can be recognized as valuable regardless of whose perspective is considered. One intrinsic attribute of a territory’s importance is its natural resource base: the availability and control of fertile agricultural lands, minerals, energy sources, and water. While the resource base is intrinsically important, it must be recognized that the presence of those resources is not always a guarantee that a territory will be immediately perceived as having great value. If a polity is unable to take advantage of the natural resources within its borders, then some of the value of that territory is lost. The conflict that occurs over resources takes place not only as a result of the simple desire to own those resources, but also as a result of the desire to control the allocation of those resources.

Controlling the land area is one solution to a situation in which access to vital raw materials is restricted (Koch et al. 1960). Territorial sovereignty also provides markets for the controlling polity. New land offers not only sources of raw materials, but also the ability to trade the products made from those raw materials to the other groups through both mercantilist and capitalist modes of production. Another intrinsic
value of territorial control is the land itself. A fertile area could greatly enhance the food production or export capacity of the polity that rules it. Yet, land also has more than agricultural and economic potential, it can provide the space needed for economic development and expansion. Territory can also have a powerful unifying ideological component related to ethnic or national pride.

When a polity assumes sovereignty over a land area, it also gains some control over the people living in that territory. This can be a tremendous benefit if the population is large and the working age people are educated and skilled. Such population can assist in economic development by permitting economies of scale and offering the prospect for a large army. It is necessary to remember that until capitalism, a polity’s productive capacity was directly proportional to the size of its population. Henceforth, additional territory could provide the population resources needed to meet challenges from rivals. Other dimension of territorial importance is the ethnic composition of its populace. Polities may believe that they have a claim on a given area because they share a common race, religion, language, or national origin with the population of a disputed territory. A given territory may have little economic value, but in specific situations, that territory may take on great importance in the eyes of the disputants because of its history, location, or population characteristics.

Nevertheless, not every territorial acquisition is beneficial to the sovereign. An area may be rich in a valuable resource, yet complicate a polity’s ability to defend itself. Although one normally thinks of a large population as a contribution to power (which often is the case among pre-industrial polities structured under a tributary systems), it can also pose problems of integration and political control. The addition of unproductive numbers of individuals to a population could strain available resources and harm the economy (modern capitalist societies have this perception). Furthermore, extensive territorial holdings and commitments may draw resources away and raise the administrative costs of the polity. In effect, too much territory can have negative returns in the long run; territorial acquisition may resemble an
investment curve that entails diminishing and eventually negative returns at specified point.

4.5 Deviations from the ideal shape of the polity: Von Thünen rings.

Through the use of spatial analysis, I have created a simple model to predict the direction of the spatial expansion and infer some of the political costs involved in such movements. The basic principle that I am using is that the spatial growth of a polity’s territory will be directly correlated with the political and economic costs involved in its enlargement. Spatially, the territorial expansion of a polity will follow the lines of least resistance and cost (Ratzel 1999).

In many cases the growth of states preserves for long periods the same direction with the object of obtaining political benefits, for there is an advantage in following the line of country most favorable to the movements, or rather successions of movements, by which this growth is effected. So people make for the coasts, pass along the rivers, and spread over plains. Others push their way up to the limits of the country accessible to man, the incentive being the advantage of filling up a territory. To the same case belongs the growth in the direction of least political resistance (Ratzel 1999:528).

Costs will be a function of intra-polity and inter-polity competition, natural barriers, social circumscription, transport and war technology. Therefore, a spatial analysis of the direction of the expansion, the length and area of newly annexed territories and the morphology of the polity’s boundaries at different times, provide insights into the political, administrative, and economic strategies that a polity adopted to successfully expand.

In what direction will a polity expand within a complex political landscape with natural and social circumscription? Can any general patterns of territorial expansion be delineated? An approach to the problem is through the use of geographic models designed to explain the economic rationality of productive

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3 Thünen’s rings are concentric circles around a settlement where agricultural activities are carried out and costs of transportation are estimated. The circle has the highest accessibility from the center to the
activities and urban sprawl (Hagget 1966; Goodall 1974). For simplicity I will focus only on the competition between pre-industrial polities with an agricultural economic base, although the models can be adapted to industrial and hunter-gatherer societies.

First I assume that the original territorial morphology of an isolated polity over an isotropic surface will resemble Von Thünen’s model (Von Thünen 1875), in which different land uses (agriculture, regal-ritual, and residential) are distributed in concentric rings surrounding a central point where the capital of the polity is located (Sjoberg 1960; figure 4.1A). Regal-ritual and high status residential land use are located in the core of the system (ring 1), another ring of agricultural land use and scattered peasant houses will surround this core (ring 2), and ring 3 represents the outermost hinterland surrounding the inner rings. This third ring may be used as a reserve for forestry and hunting resources as well as to expand the agricultural frontier. In the same way, it works as a buffer area between competing polities.

Complex stratified polities have been defined as multi-community territorial units organized in a hierarchical fashion (Carneiro 1985). In such units political and economic relations are monopolized by the polity's capital and controlled vertically in a dendritic settlement system in which there is no horizontal relation between subjugated towns (Smith, Carol 1982). A model of what this might look like is represented in figure 4.1B. Subject villages reproduce land use distribution of rings 1 and 2, but on a lesser scale than that found at the capital. All the settlements in the system share ring 3 as hinterland. The area over which an isolated polity will exercise sovereignty is a function of the administrative and transportation costs as well as population size. The larger the radius from the center to the periphery the higher the administrative and transportation costs. Furthermore the larger its population, the larger the area that the polity can control (depending on the population allocation over the territory). The maximum radial distance from the center to the periphery will be the point where benefits derived for the agricultural production (or other strategic

periphery of all the regular polygons. It minimizes movements and boundary costs (if areas remain constant the circle has the shortest radius and perimeter of all polygons).
Figure 4.1 Ideal structure of a pre-industrial polity located on an isotropic plain.

Figure 4.2 Ideal morphology of polities' boundaries on an isotropic plain.
resource) in the last plot of land in the outermost ring equals the administrative and political costs of increasing the radius length in one more unit. After this threshold the marginal cost of moving people and goods from the center to the periphery or backwards exceeds the benefits of controlling more territory.

Geographers have shown that hexagons are the regular polygons which allow the greatest amount of packing into an area, consistent with minimizing movement and boundary costs (Hagget, 1966). That is to say, in the colonization of an isotropic plain by several political units, the ideal boundaries of packed polities may transform from the circles of figure 4.2A into the hexagons of figure 4.2B. Once this critical point has been reached, the only way polities may attempt to put more land and more people under their control is by seizing its neighbor’s territories through economic and political competition and warfare (territorial expansion). “People move constantly, it has seldom occurred in history that such movements have taken place over unoccupied areas; as a rule they take the form of encroachment and usurpation, or small territories, with their inhabitants, are annexed to larger ones” (Ratzel 1999: 529).

No polity will be able to dominate its neighbors in a homogenous natural environment where all have more or less the same population size, socio-political organization and warfare technology. When this occurs the result will be some form of peer polity interaction (Renfrew, 1986). But if one of the polities is able to transform its institutions to achieve more efficient administrative costs, to increase its population, or to innovate its warfare technology, then it will have an advantage over its neighbors and might expand over them.

Until now we have considered the environment to be homogenous, but in the real world this is never the case. If socio-political variables remain constant, variation in land fertility and other resource availability might provide a locational advantage for one polity to dominate its neighbors. It is possible to state that the combination of socio-political and environmental factors set the conditions for territorial expansion.
The concentric circular structure of the polity and its hexagonal variant modeled here are too idealized to examine the actual costs that any expansive polity has to face, and the shape that their borders will take. In his analysis Von Thünen produced a modified diagram in which the original rings may be altered by competing centers, land fertility differentials, topographic features, and/or the presence of cheaper transport routes (Hagget, 1966). The ideal rings in figure 4.3A are affected by the presence of a competing polity (figure 4.3B) that restricts expansion in that direction. Similar restrictions can be caused by topographic barriers (figure 4.3D). Conversely, the existence of a river might lower the cost of movement and provide fertile land along its margins (figure 4.3C), prompting expansion in that direction. Sometimes natural constrictions will influence political expansion, while in other occasions political competition will be of greater importance. Whatever the case the interaction of both variables will shape the boundaries of the polity. Comparing deviations of actual political expansion to the theoretical ones, provide insights into the causal factors behind them. As a rule of thumb, irregular geographic frontiers tend to be clues to overlapping ideological groups, to unresolved conflicts.

4.6 Patterns of territorial expansion.

As a spatial phenomenon territorial expansion may take several forms depending of several limiting or advantageous geographic and political conditions. “The state in its growth selects the geographically advantageous positions, occupying the good lands before the bad, and, if its growth is accompanied by encroachment on the territory of another state, it takes possession of the important points, and then advances toward the less valuable parts (Ratzel 1999:528).”

It is possible to propose the operation of 4 major morphological patterns in the spatial growth of political units: 1) lateral concentric-axial, 2) sprawl, 3) infilling and 4) coalescence (Goodall 1974; Gutiérrez 1998; figure 4.4).
Figure 4.3 Morphological distortion of the ideal structure of polity caused by other geographic variables. Von Thunen (Haggett, 1966).

Figure 4.4 Theoretical spatial patterns of political expansion.
4.6.1 Lateral Concentric-Axial pattern.

A lateral concentric pattern is evidenced when a polity spreads out evenly and centrifugally over its immediate contiguous neighbors. This expansion can be partial (taking only some plots of good land, forest or some small villages), or total (defeating the political capital and the rest of settlement system). Most of the time, the initial conquest of a polity is nodal-oriented. That is to say, it focuses on the subjugation of the polity's settlement system and its communications network (roads and ports). However, because each conquered settlement controls a specific hinterland, it can be considered that, with time, expansion is continuous and territory-oriented.

A variant of the lateral concentric pattern is axial expansion; where the existence of a transportation route (a river or an incised long valley) molds the direction of expansion into a linear pattern. I propose that the lateral concentric pattern can be observed with more frequency during both the earliest and latest moments of an expansion process. In the early moments of expansion polities focus on access to more agricultural land and they compete for the fertile areas of their hinterlands. This could be observed in the expansion of Rome over Latium and Campania (Polibious, 1962; Gibbon, 1952), and the expansion of the Aztecs over the rich areas of Chalco and Xochimilco (Berdan et al., 1996). In the latest stages of a polity's growth this pattern comes to predominate once more. This is due to a logistic problem caused by the large size when successfully expanding polities, reach their economic limits and augmenting their productivity by annexing contiguous and more distant territories. One difference is that in this late stage the polities may not be looking for agricultural land, but rather preciosities.

Axial expansion, as a derivation of lateral concentric expansion may occur by accident due to the topographic features of the region or where the expanding polity is following a trade route.
4.6.2 Sprawl pattern.
The pattern of sprawl expansion represents discontinuous political growth and it is represented by leapfrog expansion. This occurs when a polity expands into the territory of a non-contiguous neighbor, passing through or around the territory of an intermediate, independent political unit. A good example of sprawl is the early 19th century conquest of Portugal by France, where the king of Spain consented to allow French armies to cross Spanish territory. The sprawl pattern also includes encircling a strong or undesirable polity that remains surrounded by the annexed territories of the expanding unit. The leapfrog enclosure of Tlaxcala during the spread of the Aztec empire is an example of this type of discontinuous expansion. Another example of territorial sprawl occurs as a result of sending colonies to distant places to settle enclaves. This strategy was widely used by Greek polities in the Mediterranean Sea (Thucydides 1954).

4.6.3 Infilling pattern.
Infilling takes place when areas that were bypassed in the first waves of territorial expansion are conquered because they were either initially too strong or they were political allies. However, “once conquest was well under way and significant disproportions arose in the size of neighboring political units, it became easier for the larger units to defeat and absorb the smaller ones (Carneiro 1978: 214).” Infilling can be understood as a strategy of territorial consolidation (once France dominated Portugal, it was easier to invade and annex Spain).

The Sprawl and Infilling strategies work together. I propose that discontinuous leapfrog expansions occur most often during the intermediate stages of a polity’s growth. Encircling or detouring around a strong polity occurs repeatedly throughout history. For instance, Rome during its expansion avoided the neighboring Samnites region for several decades. In the same fashion the Aztecs had to wait several decades before they could subject Chalco. The infilling pattern starts to operate almost immediately after a sprawl expansion has taken place and functions as
a continuous strategy to consolidate the political control of the territory. This process can occur directly through the defeat of competing polities or indirectly through ideological processes of subordination caused by economic dependence on a hegemonic power. The infilling pattern is also present in the re-conquest of rebel subjects.

4.6.4 Coalescence pattern.

The **coalescence pattern** is the attainment of political power by the union of small territories. It represents the fusion of two or more polities that come together. This blending might occur through the creation of a federation or league where all the partners preserve their own autonomy but collaborate and help each other in the face of military and political problems. The formation of a league with the intent to expand is an economic strategy designed to distribute the costs of expansion among several partners. Curiously this pattern can be found in the very early stages of the expansion process, when core polities unify to defend themselves against a common aggressor. The Latin League, the Triple Alliance, and the 13 American Colonies are good examples of this process. The formation of a successful league in early in time may predetermine the presence of sprawl and infilling patterns in a later stage. This is because allies may be subjugated by the strongest member of the league at a later point in time. Again these events could be observed in the dissolution of the Latin league and the political subordination of Tezccoco and Tlacoapan to Tenochtitlan and even during the American civil war.

Finally we need to realize that these patterns are not mutually exclusive and they all may operate simultaneously in different parts of the polity. As I have argued above there are economic and social causes behind the success or failure of a polity's territorial enlargement and the main focus of research should be to identify and study those factors. Nevertheless, I believe that one way to do this is through the sequential analysis of the polity’s territorial morphology at different points in time. The advantage of this approach is that it permits combing both historical and
archeological information and allows inferring some socio-economic and logistic strategies behind the territorial expansionism.

4.7 Agents of expansion and administration of newly annexed territories.

For Ratzel (1999) the three main causes of territorial expansion were commerce, faith, and civilization. He believed that religion and politics were important causes of expansion, but these factors were far surpassed by the immense influence of commerce. “Ideas and wares are passed on from one people to another. Animated by the same impulse and following the same path, are frequently found together ideas and wares, missionaries and merchants, drawing people closer and assimilating them, and thus preparing the ground for political approach and union (Ratzel 1999: 528).”

In a way, the territorial expansion of any polity is the accumulated result of human decisions. This provides a tool for analysis, because one needs to differentiate whether expansion is promoted and financed by private entrepreneurs or by centralized bureaucratic institutions.

We need to identify what mechanism or mechanisms are used to enlarge the polity: colonization, direct invasion, or alliance building. To do this we must examine the nature and degree of political control over the new annexed territories. Although a polity may defeat another polity in an amazing short span of time, it is an entirely different matter to administrate and control conquered regions.

There are two ways in which an expanding polity can control the new territory. The first is the direct political management of the population and territory of the conquered polity through the elimination of the native rulers, and the imposition of centrally designated governors supported by military garrisons and/or colonists brought from the core of the expanding polity; this is properly known as territory-oriented control (Machiavelli 1950; Luttwak 1976; Doyle 1984; Hassig 1988). Following this approach one core imposes political domination over the sovereignty of a previously independent polity through territory-oriented expansion and
administration. The second strategy would be hegemonic-oriented control, where the
government of the conquered areas remains in the hands of local rulers and the
conquering unit exercises only an indirect control over the territory and its resources
(client polities). It needs to be remembered that great political influence can be
exercised through indirect means (like economic dependence) without necessarily
annexing, occupying, or even militarily defeating a subordinate polity.

Territory-oriented expansions render greater political control over defeated
polities than hegemonic expansion (Luttwak 1976; Hassig 1988), but the
administrative costs are also greater. Transportation and administrative costs are
critical variables in the adoption of one or the other of these managerial strategies. It
would be expected that areas with an efficient transportation system composed of
fleets, roads, and ports might be able to extract more goods from conquered areas and
would be more interested in exerting a direct political control. In contrast we expected
to find indirect political and territorial control in areas which lack an efficient
transportation technology and where goods and people can not move very far without
incurring great expenses. Nevertheless, one must take in consideration that the same
polity can use both managerial strategies at the same time in different sectors of its
sphere of action, and even at different phases of its growth (Luttwak 1976).

In this dissertation I use territorial expansion to refer to the annexation of new
polities into the political and economic sphere of a dominant polity by forceful or
diplomatic means without making reference to the way in which the defeated polity
was administrated.

4.8 Chapter overview.

Territorial expansion is the process of annexing previously politically
independent or “vacated” areas. It is the incorporation of people and territory through
the overthrow of rival leaders by any method.

The acquisition of territory is only a secondary feature in the political
upheavals of antiquity. Power, slaves, and treasure are the real prize. Territorial
expansion is a byproduct of political competition between different factional groups within the polity. Leader’s ambitions are the main drive to expand and control more territory. Nevertheless, as the appreciation of the political value of land becomes greater, territory becomes the measure of political strength and the prize towards which the efforts of a state are directed. In this moment territory itself becomes a source of conflict.

Spatial expansion follows the lines of least cost and maximum benefit. This assumption provides an opportunity to create a geographic model to infer political strategies through the morphological analysis of territorial shape at each stage of its expansion. In this dissertation territorial expansion will be classified on the basis of four spatial patterns of growth: 1) lateral concentric-axial, 2) sprawl, 3) infilling and 4) coalescence. Each pattern identifies different strategies used by ambitious leaders to achieve their goals. Tlapa-Tlachinollan expansion will be analyzed under the light of this models and assumptions.
Chapter 5. An interpretation of Tlapa-Tlachinollan’s expansion process and its strategic choices.

“We have done nothing extraordinary, nothing contrary to human nature in accepting an empire when it was offered to us and then in refusing to give it up. Three very powerful motives prevent us from doing so—security, honour, and self-interest—. And we were not the first to act in this way. Far from it. It has always been a rule that the weak should be subject to the strong; and besides, we consider that we are worthy of our power” (Thucydides I 76).

This chapter provides my interpretation of how Tlapa-Tlachinollan took over eastern Guerrero. I utilize the information contained in the available ethnohistorical sources. I revise the place names contained in the five local pictorial documents using the Codex Mendoza as a baseline to interpret the glyphs in the codices of Azoyú. I also propose a probable identification of each glyph with an actual *pueblo* in eastern Guerrero. The growth of Tlapa-Tlachinollan is divided in eleven stages of territorial expansion. Each stage was recreated based on the sequence and direction of the expansion and the territorial size reached by Tlapa-Tlachinollan as portrayed in the ethnohistoric documents. Finally, several scenarios of how Tlapa-Tlachinollan expanded are hypothesized which will be tested against archaeological information in the next chapter.

5.1 Interpretation as a recreation of the past.

“With understandable skepticism, archaeologists in the past have been disinclined to base their conclusions upon data found among the abundant contradictions, the serious errors, and the outright fantasies so common in some colonial documents. The prehispanic traditions, with the important exceptions of the historical codices, very often lack a sense of chronology and tend to mix history with myth… Our documentary sources, then, are indispensable both for giving us leads worth investigating and for enabling us to interpret archaeological data more fully;
but none of them standing alone can be accepted as establishing adequately the facts it sets forth (Paddock, 1966:367)."

In the quotation John Paddock summarizes the five basic problems and assumptions present in all research that combines both archaeological and ethnohistorical data. These are: 1) the reliability of the documentary sources, 2) the reliability of the archaeological data, 3) the use of documentary accounts to generate research questions and hypothesis, 4) the use of documentary information to interpret archaeological data, and 5) the combination of both kind of information to enhance our interpretation of past events.

I support Paddock’s assumptions concerning the use of documentary accounts to generate research questions and hypothesis in archaeology. Of course it is also true that the combination of both archaeological and ethnohistorical information enhance our interpretation and reconstruction of past events.

Joyce Marcus (1992) suggests that the problem of identifying myth, history and political propaganda in Mesoamerican writing, can be resolved by using several independent written sources. This is a sound solution to minimize errors of interpretation. Having several independent written sources certainly help us (as interpreters) to re-think and critically recreate past human action. Nevertheless, the dichotomy between political propaganda-myth and “true-western-like” history is theoretically unfortunate.

As scholars we are the ones that make the history by trying to answer questions about past human actions (Res gestae). Documents as well as archaeological materials acquire the posthumous character of historical evidence, not because the men who made them thought of them as historical evidence, but because we think of them as historical evidence. History is not a story of “true” successive events or an account of change. According to Collingwood (1946:218) “historical knowledge is the knowledge of what mind has done in the past, and at the same time it is the redoing of this, the perpetuation of past acts in the present. Its object is therefore not a mere object, something outside the mind which knows it; it is an
activity of thought, which can be known only in so far as the knowing mind re-acts it and knows itself as so doing.”

5.2 The pictorial documents of the Mixteca-Tlapaneca-Nahuatl region and their political content.

Zelia Nuttall (1902) revolutionized the study of codices when she proposed that the Zouche-Nuttall codex portrayed the activities of historical persons. Following this orientation scholars such as Spinden (1935), Caso (1949), Nicholson (1967), Spores (1967), and Smith (1973) made important contributions to Mixtec ethnohistorical studies. They recognized that the persons, places and events portrayed in Mixtec documents can be considered historical and used to study the social aspects of the groups that produced them.

Based on these propositions, recent scholars have proposed new lines of investigation, one of them being the analysis of the political agendas contained in the documents. Troike (1978), Furst (1990), Monaghan (1990), Jansen (1990), Marcus (1992), Pohl (1994), and Hill Boone (2000) have established a solid methodology, based on a philological approach for interpreting the Mixtec pictorial histories. These studies have as their goal of understanding how Mixtec royal families justified their right to rule and how they passed their sovereignty down from generation to generation. A similar group of scholars have followed a parallel line of research using the Aztec writing tradition to interpret the history of Nahuatl political units (Galarza 1979; Lockhart 1992).

I have studied five codices from eastern Guerrero using this methodology. These codices are the Codex Azoyú 1, the Codex Azoyú 2, the Palimpsest of Veinte Mazorcas, the Lienzo of Chiepetlan 1 and the genealogical Lienzo of Tlapa-Azoyú1. I have worked on new readings for some portions of Codex Azoyú 1 (Vega Sosa 1991)

1 See Jiménez and Villela (1998) for a general description of each document in Spanish. For descriptions in English, see Glass and Robertson (1975), also see Harvey (1971). For an overview of Codex Azoyú 1 in English see Vega (1992).
that have resulted in a completely new interpretation for the Palimpsest of Veinte Mazorcas (Barlow, 1961), the Codex Azoyú 2 and the Lienzo of Tlapa-Azoyú. As a result of this the Palimpsest of Veinte Mazorcas can be recognized for the first time as part of the group of the previous studied codices of Tlapa-Azoyú. Throughout this chapter I use the interpretation of Vega Sosa as a baseline for reading the obverse pages of the codex Azoyú 1. However, I have corrected or raised questions about some of her place name identifications and I have also reinterpreted and reanalyzed the majority of the political events depicted in the document.

The pictorial documents used in this research were painted between A.D. 1530 and 1565 and were used in the Spanish courts by the indigenous elites of Guerrero to claim political and territorial rights under the colonial system. This creates biases in the narration in favor of certain ruling lineages and polities, mainly the lords of Tlapa-Tlachinollan. Consequently, such biases leave some doubt about the historical veracity of the recorded events. Nevertheless, from the point of view of a strategic analysis the most important factor is not to determine if these events really took place, but how the Indian elites recreated their past in order to fulfill their political agendas (Collingwood, 1946). In other words, studying these documents provides insight: 1) into the political ideologies and aspirations of the Mixtec, Tlapanec, and Nahuatl elites in Guerrero; 2) how they perceived, imagined, and manipulated their past; and 3) how they justified their political actions. Since their inception, the five codices from eastern Guerrero were designed to record the lives and deeds of the polity’s leaders. It is likely that the painters modified some of the recorded events to place some lords in better light, adding political propaganda to the documents. As a result it is difficult to use these documents at face value. It is even harder to prove that the events portrayed in the codices really happened or that they happened in the way that they are depicted.

The problem becomes more complex when one evaluates the contradictory readings and interpretations proposed by different scholars. As interpreters we are also recreating the past according to our present experiences. I recognize that my
recreation of the Mixtec-Tlapanec-Nahuatl prehistory is biased by my academic prejudices. I believe, for instance, that the rulers of Tlapa-Tlachinollan evaluated all the internal and external costs and benefits related to the expansion of their polity. Furthermore, I believe they were economically rational agents that maximized their self-interest and individual welfare. I also think that their actions were taken with the unique goal to stay in office as long as they were able to do so. I am not saying that they actually sat down in a room of their palace or tecpan with pen and paper trying to construct a formal expected utility equation. But they certainly took into consideration all the factors involved in expansion including the expected risks and expected rewards. The mere existence of native documents narrating complex political events indicates that they were not beginners in political philosophy and that they strategically planned their most crucial state actions.

Here, I regard as that the narration depicted in the codices of Azoyú is the blue prints of a plan to take over eastern Guerrero. This approach will allow me to ask why the rulers of Tlapa-Tlachinollan were interested in the conquest of specific places. What did such polity have in order to be targeted as a desirable place to conquer? Certainly the expected utility of conquest was higher than if they did not to conquer. The other way around also provides good insights into the problem. If Tlapa-Tlachinollan did not claim to have conquered a neighbor polity, was it because the expected costs to conquer such a place were higher than the expected benefits of having conquered it, or that the probability of success was low?

5.3 The Geographic setting of the Tlapa-Tlachinollan expansion.

In any good game, the first thing that one needs to know is the spatial location of all the players. In this case I am interested in the geographical location of the political capital of each polity (figure 5.1). In addition to major political centers, I also tried to locate some of the secondary centers that were mentioned in the documents that were strategically important. I started by locating the 14 tributary pueblos mentioned in the Codex Mendoza that composed the province of Tlapa; as
Figure 5.1. Geographical location of the main political units subordinate to Tlapa.
well as the 6 *pueblos* that were part of the neighboring province of Quiauhteopan; and the 8 *pueblos* of the province of Tlacozaútitlán; as well as the 6 *pueblos* of the province of Yoaltepec.

I deliberately began with the settlements mentioned in the Codex Mendoza (folios 39r and 40r), because the place names of this document as well as their possible location have been carefully studied and interpreted by a number of scholars (Peñafiel 1885; Barlow 1992; Berdan and Anawalt 1992; Berdan *et al.* 1996; Pedro Carrasco 1999). The Codex Mendoza provided the safest baseline for interpreting the place names depicted on the local codices. The iconographic representations of each *pueblo* are depicted in figures 5.2a, 5.2b, 5.3, 5.4 and 5.5 along with their names in Latin characters, according to the original interpreter of the Codex Mendoza. One also finds a translation of the Nahuatl name into English based on the interpretations and translations of Peñafiel (1885), and Berdan and Anawalt (1992).

In making use of these place names, I undertook several queries in a digital database created by CONAPO (Mexican National Council of Population) which contains the names of all the extant settlements in Guerrero and Oaxaca up to the year 1995. I located the spatial coordinates of dozens of possible candidates in a GIS program whose names had something in common with the place names in the codex. Once I did this, I extensively reviewed the colonial literature that provided information about the area, searching for the same names and more geographic information of their colonial position. I reviewed the *Suma de Visitas* (1905), the *Relación de los Obispados de Tlaxcala, Michoacán, Oaxaca...* (1904), the Memorials of the Bishop of Tlaxcala (Mota y Escobar 1939), and the *Relaciones Geográficas del siglo XVI* (1982-88).

The proposed locations made by previous researchers were very valuable and eased the positioning of most of the place names (Gerhard 1986; Vega 1989, 1991; Vélez 1998, Rubí 1998 and Carrasco 1999).

Field corroboration, following the methodology established by Byland and Pohl for the Mixteca of Oaxaca (1994), was then undertaken for all the places
Figure 5.2a. Place names of the Aztec Province of Tlapa.

**Tlapa or Tlappan.** “On the Dye” or “Place of the Tlapaneca” (Berdan and Rieff Anawalt, appendix E, 1992:219). Present day, Tlapa de Comonfort, Guerrero. Tlapa was a subordinate village of Tlachinollan, until it became the residence of the Aztec calpixque.

**Xocotla.** “Where There Are Many Fruits” (Berdan and Anawalt, appendix E, 1992:226). The Suma de Visitas describes one pueblo named “Xucutla” located in “La Costa del Sur” (as they used to call the Pacific coast of Guerrero). According to the Suma de Visitas this pueblo was located in a mountainous and dry area. The Bishop of Tlaxcala, Mota y Escobar, reported that he had lunch at Xocotla, while traveling from Tlapa to Huamuxtitlan. Moreover, the people of Alpuyeca refers to a small archaeological site located nearby San Jose Buenavista as Xocotla. In Alpuyeca itself there is also a large archaeological settlement called Las Minas, which may be another possible candidate for Xocotla.

**Ichcateopan.** “On the Temple of Cotton” (Berdan and Anawalt, appendix E, 1992). This pueblo appears as **Ychacatempa** in the Suma de Visitas (Del Paso y Troncoso, 1905:136), which states that it is a “Cabecera” under the Jurisdiction of Tlapa. Present day Ixcateopan, municipality of Alpoyeca, Guerrero.

**Amaxac.** “On the River that Divides into Channels” (Berdan and Anawalt, appendix E, 1992:171). This pueblo is recorded in the Suma de Visitas as “Atlimaxaque”. Present day Atlamajac, municipality of Tlapa.

**Ahuacatla.** “Where There Are Many Avocados” (Berdan and Anawalt, appendix E, 1992:169). The modern pueblo of Ahuacatitlan, located 16 kilometers to the east of Tlapa, in the Municipio of Taxtiaquilla, is the strongest candidate to be the ancient Ahuacatla. During survey, I located a large site with a ball court between Mexquititlan and Ahuacatitlan.

**Acocozpan.** “On the Very Yellow Water” (Berdan and Rieff Anawalt, appendix E, 1992:195). This town is modern Alcozaucua, which has the same translation as Acocozpan (Carrasco 1999, Vélez 1998).

**Yoalan (Yoallan).** “Place of Night” (Berdan and Rieff Anawalt, appendix E, 1992:229). The Suma de Visitas states that this pueblo was a Cabecera subordinate to Tlapa. The archaeological ruins of Yoallan are located 600 m to the south of Igualita, in the municipality of Xalpatlahuac.

Huitzamola (Huitzapula). “Where Huitzamola Abounds” (Berdan and Anawalt, appendix E, 1992:189). The pueblo of Huitzapula was the ancient Cabecera of what it is at present the municipality of Zapotitlan Tablas. Now the pueblo and communal lands are under the jurisdiction of Atliltac. The archaeological ruins of the ancient site of Huitzapula can be seen on a nearby hill of present Huitzapula.

Acuitlapan. “On the Water Dung Heap” (Berdan and Anawalt, appendix E, 1992:189). The Suma de Visitas recorded this pueblo as Cuytlapa. The present pueblo is called Teocuitlapan and is located in the Municipio of Atliltac. I was not able to find a Prehispanic site around Teocuitlapan, but some walls of the colonial church are still visible. It is very likely that the Prehispanic settlement of Acuitlapan had been Texmelincan.

Malinaltepec. “On the Hill of Grass” (Berdan and Anawalt, appendix E, 1992:190). The pueblo of Malinaltepec is the political head of the municipality of the same name. I have not been able to locate an archaeological site of importance near the present town. According to the Lienzo of Malinaltepec (Dehouve, 1982), Malinaltepec was founded in its present location during the second half of the XVIth century. It is possible that the prehispanic settlement of Malinaltepec was a neighborhood of Texmelincan.

Totomixtlahuaca. “Place of the Bird-Hunter’s Plain” (Berdan and Anawalt, appendix E, 1992:220). According to the Suma de Visitas, Totomixtlahuaca was a Cabecera subordinate to Tlapa. It is present day Totomixtlahuaca, and for long time it was the political head of the present time municipality of Tlacoapa.

Tetenanco. “On the Stone Wall” (Berdan and Anawalt, appendix E, 1992:213). In the Suma de Visitas, Tenango is recorded as a Cabecera (head town) subordinated to Tlachinollan. Currently it continues to be an “Agencia Municipal” of Tlapa. According to the Lienzo de Chiepetlan 1, in prehispanic times there was an ongoing war between Chiepetlan and Tlachinollan. Perhaps Chiepetlan became subordinate to Tlachinollan after the Aztec organized the tributary structure of the region in AD 1486.
Quiyauhteopan (Quiyauhteopan). “Outside the Temple” (Berdan and Anawalt, appendix E, 1992:178). This settlement was the head of the tributary province of Quiyauhteopan. There is no present day pueblo with that name. Gerhard (1986) thinks that it was an Aztec military garrison that had control over the Ollinala-Cualac-Cuamuxtitlan region. Paucic located the possible ruins of this site in a spot name Tepan, in the Tenayo hill, to the north of present time Olinala (Vélez, 1998:450). This hint needs further field confirmation. The subordination of Cuamuxtitlan (Huamuxtitlan) to Quiyauhteopan also needs a reappraisal.

Ollinala (Ollinal, Olinalan). “Place of Much Movement” or “Place of Many Earthquakes,” (Berdan and Anawalt, appendix E, 1992:178). According to the Suma de Visitas, this pueblo consisted of 10 Barrios (quarters) and six main Estancias (subjects). The ruins of the regal-ritual core of this political unit are located one kilometer to the south-east of present Olinala. Unfortunately, these ruins have been almost destroyed by looting.

Quauhtecomatla. “Where There Are Many Gourd Trees,” (Berdan and Anawalt, appendix E, 1992:178). According to Paucic, the main ruins of this site are located at a place named Cuauhtzontecomatlan (Vélez, 1998:450), which corresponds to the present town of Zontecomatlan, in the municipality of Olinala. This information needs to be corroborated.

Qualac. “In the Place of Good Drinking Water,” (Berdan and Anawalt, appendix E, 1992:200). The present time pueblo of Cualac is today the political head of its own municipality. It seems that the prehispanic location of the ancient settlement was on the top of the Xistepetl hill, where I have registered evidence of a large prehispanic settlement.

Ychcatla. “Where there is Much Cotton” (Berdan and Anawalt, appendix E, 1992:178). According to Paucic this settlement was located on Ichcatla hill, in the municipality of Olinala (Vélez 1998). Carrasco (1999:280) proposes that it was a subordinate of Tenango Tepexi. It may also be the town of Ixcamilpa de Guerrero, in Puebla.

Xala. “Where There Is Much Sand” (Berdan and Anawalt, appendix E, 1992:223). It has been suggested that the ancient Altepetl of Xala may correspond to the present town of Xalmolapa in the municipio of Cualac (Vélez 1998: 450).
Figure 5.4. Place names of the Aztec Province of Yoaltepec.


**Ehuacalco.** “In the House of the Skin” (Berdan and Anawalt, appendix E, 1992:186). It seems to be present Calihuala, Oaxaca, from Caleuallan (Carrasco, 1999:280).


**Ychcaatoyac.** “On the River of Cotton” (Berdan and Anawalt, appendix E, 1992:229). It is located in the province of Amusgos, also called Ayotzinapa, adjacent to Xicayan, municipality of Tlacachistlahuaca, Guerrero (Velez, 1998:452; Carrasco, 1999:281).


**Quauhtecomatzinco.** “On the Little Gourd Tree” (Berdan and Anawalt, appendix E, 1992:201). Paucic thought that this pueblo was Santa Catarina in Ahuacuotzingo (Velez, 1998:446); Carrasco (1999:279) notes that it was a subordinate village of Olinala. I suggest that the best candidate is San Antonio Tecomelan, in the municipality of Ahuacuotzingo. This point needs field validation.

**Ychcatlan.** “Where There Is Much Cotton” (Berdan and Anawalt, appendix E, 1992:229). Present Ixcatla in the municipality of Zitlala, it was a subject of Tlacozaauhtitlan (Velez, 1998:446; Carrasco, 1999:279).


**Zacatla.** “Where There Is Much Grass” (Berdan and Anawalt, appendix E, 1992:183). Paucic suggests that it is present day San Juan, municipality of Ahuacuotzingo (Velez, 1998:449). This needs field validation.
contained in the province of Tlapa as well as for some of the place names in the province of Quiauhteopan. Contending candidates with similar names were re-evaluated using all the information available, eliminating those that failed using both documentary materials and field tests. The provinces of Yoaltepec and Tlacozahtitlan were not visited at all and I only used them here for reference, relying entirely on the documentary research and on my digital database for locating these *pueblos*.

The results of these multi-stage analyses are shown in figure 5.6. In spite of all my efforts several problems remained and future researchers will be well advised to re-evaluate all the information at hand if they want to go beyond the reconstruction attempted here. This is especially true for the identification of Tetenanco, which most authors think is Tenango Tepexi, but Rubí (1998) claims is actually Hueycatenango. For cases like Malinaltepec, and Acuitlapan there is good information about their colonial position, but I have not been able to identify their prehispanic locations. This compels me to think that such places were re-settled after the conquest. Totomixtlahuaca for example has a large ruined colonial convent but little evidence for Prehispanic occupation. In other cases the problem is not the scarcity of Prehispanic evidence, but rather the abundance of data. For example, in cases like Ocoapan or Chiepetlan there are two or even three archeological sites of the same age and size that might well be the original “pueblo Viejo” (ancient settlement).

I can summarize the problems that I had during this research as follows. Sometimes I was sure I was in the right *pueblo* based on the documentary evidence, but there was no archaeological data to support or corroborate it. At other times I had too many archaeological sites and not enough place names to assign to them. The worst situation of all was when I had neither a contemporary *pueblo* in the database nor an archaeological site to assign a given place name found in the codices. Having many ruins with no names and many place names with no ruins was the most frustrating part of my research. I know for sure that some sites and place names can
Figure 5.6. Geographical location of the Pueblos mentioned in the Codex Mendoza as tributaries in the provinces of Tlapa, Tlacoauttitlan, Quiauhtetopan, and Yoaltepec. Interestingly there is an area around Huamuxtitlan where no place names were recorded, in spite of huge large Postclassic period sites. This may indicate independent or political autonomy for the towns in northern sector of the Huamuxtitlan Valley.
be matched, but I did not dare to do it forcibly. Destruction of the archaeological evidence made field validation of the documentary candidates even more difficult.

I applied the same methodology to the identification of the place names found in the codices of Azoyú 1 and 2. These documents depict 26 differentiated icons that might correspond to the same number of place-names. Some of these symbols show up repeatedly with slight differences. Sometimes it is easy to ascertain that the documents are making reference to the same place in a different stage of the narration, but at other times it is difficult to know if a new place with a similar name is being introduced. From figures 5.7a to 5.7g, one can see the iconographic representations of such place names and a short discussion of their position on the landscape. Figures 5.8 and 5.9 show some other place names depicted on the Palimpsest of Veinte Mazorcas and the Lienzo of Chiepetlan 1. Finally, figure 5.10 depicts the spatial position of the most important settlements mentioned in the codices Azoyú 1 and 2.

With this background we can begin to explore the movements of individual polities during the incremental evolution of Tlachinollan’s territory and analyze some of the strategic choices made by their lords based on the circumstances they faced.

5.4 A brief description of the territorial expansion of Tlapa-Tlachinollan.

The main interpreters of Codex of Azoyú 1 claim that the polity of Tlachinollan was founded in year 3 Ollin of the Tlapanec calendar, A.D. 1299-1300 (Toscano 1943; Vega 1991). This assertion was made based on the year sign represented in folio 1 of the codex. To be honest, there is no sure basis to claim that this was the year in which the polity was actually or mythically founded. Indeed when one examines the reverse side of the codex, it is easy to realize that the folio 1 was not actually the first page of the codex. What is found is a late Colonial scene on the reverse side that is incomplete because some pages were ripped off. This means that at least two pages at the beginning of the codex are missing. We do not know what was written on those missing pages and I prefer not to speculate. Anyway from
Figure 5.7a. Place names depicted in the Codex Azoyú 1.

**Tlachinolticpac.** “On Top of the Scorched Countryside” (Berdan and Anawalt, appendix E, 1992:215; Vega, 1991:22). This is the first place name of the Codex Azoyú 1 (folio 4) and is repeated again on folio 24. There is no modern town with such a name. Nor is it mentioned in Suma de Vistas. Just by etymology, one might surmise that it was a Parcialidad or modular part of the political unit of Tlachinollan. If this was the case, it should have been contained in the area of occupation of Tlachinollan, perhaps on the top of the Cerro Contlalco. In this place I found elite and residential terraces surrounding platforms around a plaza on this hill. One other possibility exists as a potential candidate for the archaeological site. I have encountered a large archaeological site to the north Contlalco, across the river from Tlapa. This site is on a hill known as the Coquera or Cerro Quemado (Scorched Hill), which it may also be ancient Tlachinolticpac. In any event, this place was a pueblo related to the lords of Tlachinollan, thus it does not represent a conquest.

**Tototepec.** “On the Hill of the Bird” (Berdan and Anawalt, appendix E, 1992:220; Vega, 1991:22). This is the second place name depicted in the Codex Azoyú 1 (folio 8), and is repeated in a slightly different form on folio 30. It is listed as a town subjected to Iguailita (Yoallan) in the Relacion de los Obispados of 1571. This is the first polity conquered by Tlachinollan between A.D. 1349-1355. It is now Tototepec in the municipality of Tlapa, where there are two archaeological sites either of which may be Postclassic Tototepec. One is pueblo Viejo and the other is Cerro Machete. The area around pueblo Viejo is called Yoso None, which means “The Plain of Maize” in Mixtec. Cerro Machete is called “Yu Cuchu”, which means “The Hill of the Sharp Stones”. I suggest that Cerro Machete is Postclassic Tototepec and that pueblo Viejo or Yoso None is the place of Llano de Maiz depicted on folios 18 and 19 of the Codex Azoyú 1.

**Teteltipa (?).** “On the Hill of the Rock”. Vega (1991:22) called this place Tetzotzontepetec, based on the glyph of Tezoyucan in the Codex Mendoza. Nevertheless, there is not a modern nor colonial period town of such a name in the region. Jiménez (2000) proposed that it was the place name of Texmelincan and elaborated a complex argument about the religious connections of that ancient settlement with Tlachinollan. Perhaps Jiménez is correct, but I think that in the middle of the 14th century, Texmelincan was under the control of the powerful lords of Acuitlapan, and Tlachinollan was just not strong enough to attack them. I suggest that is that at this time Tlachinollan was trying to control its nearest neighbors around the valley of Tlapa. Following this logic, I propose that this is the place name for Teteltipa, a large archaeological site located in Aquilpa, which also has the same name as depicted epigraphically.
Figure 5.7b. Place names depicted in the Codex Azoyú 1.

Tecuanapan (?). “On the River of the Beasts” (Vega, 1991:23). According to the current interpretation of this glyph, it is an important political unit whose name was Tecoaanapan. A group of noble women from the recently conquered polity of Teteltipan “On the Hill of the Rock” went there to inform and complain about Tlachinollan’s conquest. Vega Sosa thinks that it represents the pueblo of Tecoaanapa in the Costa Chica, just in the middle of Yopecingo. There is another Tecoaanapa in Ahuacoutzinco. The land around the most important archaeological site of Huamuxtitlan is also called Tecoaapa. Nevertheless, it is necessary to review the etymology of the place name to be sure that it can be interpreted as Tecuanapan.

Tlachinollan. “On the Scorched Countryside” (Vega, 1991:23). During the Colonial period, Tlachinollan, along with its Parte Caltitlan, is reported to have been the most important Cabecera de Partido (head town of the entire province) with (8 or 10) other subordinate Cabeceras and ruled over 100 subjected towns (Relacion de los Obispados…, 1571). Tlachinollan, Caltitlan, Tlachinolipac and other minor settlements merged together to create what it is modern Tlapa de Comonfort. I suggest that the prehispanic ruins of Tlachinollan are those of Contlalco. I found Postclassic sherds and Colonial Talavera ceramic in the surface of the principle plaza, which confirms that this settlement was occupied during the time span of the codices.

Tlatzallan. “On the Cleft Between two Hills”, “Quebrada de Monte entre dos Sierras” (Colin, 1966:195). Vega Sosa (1991:24) had previously identified this glyph as Caltepemaxalco, “Place of the House on the Divided Mountain”. Nevertheless, there has never been a colonial nor modern town with such a name. Just eight kilometers to the northeast of Tlapa, there is the village of Tlatzala, which etymologically has a similar meaning as Tepemaxalco “On the Divided Mountain”. The actual location of Tlatzala, is on a cleft between the Tlacuiloltzi and the Cuezcomatzin hills, which confirms the translation “on the Cleft…”. Iconographically, in the codices Azoyú 1 and 2, the house indicates that the temple was taken forcibly, it does not have phonetic value. Elizabeth Jimenez (2000) found archeological remains on this hill and she argues that it was used as a stronghold.

Huilotepec(?) “On the Hill of the Mourning Dove” or Cacalotepec(?) “On the Hill of Raven” (Berdan and Anawalt, appendix E, 1992:175, 189; Vega, 1991:24). Vega Sosa suggests that this place name corresponds to Huilotepec, a modern Huixolotepec is located on a hill near Teocuitlapa in the municipality of Atlíxtac.
Caltitlan (?) “Beside the Houses” (Vega, 1991:24). Vega Sosa proposes that this glyph represents Caltitlan, a *parcialidad* of Tlapa. Colonial documents describe that Tlapa was organized into two Parcialidades (modular sections): Tlachinollan and Caltitlan. The archaeological ruins of Caltitlan were destroyed by the urbanization of modern Tlapa, but one can still find some archaeological evidence of its existence in the Barrios of Caltitlan and Santa Anita. I, however, do not agree that this icon represents Caltitlan, indeed I do not think that Caltitlan was represented at all in the codices Azoyú 1 and 2. I have noticed that in these two codices, the house and/or temple glyphs were not used as place names. They do not add phonetic value to the place names but are used only to represent that a given place was conquered forcibly. Thus, even though Caltitlan actually existed, it was always considered as part of Tlapa-Tlachinollan and not an independent political unit.

Ocoapan (?) “On the Pine Water” or “On the Pine Canal” (Berdan and Anawalt, appendix E, 1992:220). In the analysis of the Codex Azoyú 1, Vega did not consider this glyph to be a place name. I consider it to be the place name of Ocoapan. I have already described it as part of the tributary towns of the Province of Tlapa in Codex Mendoza. I have visited present Ocoapa, in Copanatoyac, and I found two archaeological sites of similar dimensions. One of them was occupied during the Postclassic and the second appears to have been a late Postclassic-Early Colonial site.

Yoso None (?). In Mixtec means “On the Plain of the Cornfields”. This glyph in Nahuatl would be Amilyxtlahuacan. There is one town called Amlitepec in the municipality of Chilapa, between Hueyccatenango and Atitlantac. Another possible candidate is the Mixtec town of Xilotepec in Xalpatlahuac. I propose though that this place name makes reference to the archaeological site of Tototepec-pueblo Viejo, which in Mixtec is called precisely Yoso None.

Tlachco. “On the Ball Court” (Berdan and Anawalt, appendix E, 1992:215; Vega, 1991:25). Tlachco present Tlaxco in the municipality of Xalpatlahuac. I located the archeological settlement along the river that flows from Atlamajalcingo del Monte. One of the main structures of the site is precisely a large ball court, which unfortunately is almost completely destroyed.
Atlixtac. “Place of the White Water” (Vega, 1991:25). Ancient Atlixtac is still called Atlixtac, now the head town of its own municipality. I found the archaeological settlement on the southern periphery of the town, although it is very destroyed.

Quecholtenango (?). “In the Walled Place of Flamingos” (Vega, 1991:25). This glyph may represent any type of bird name plus the word Tenango, “Wall”. Indeed there is a modern pueblo called Quecholtenango, head town of its own municipality. There is proof that this town was used as an Aztec garrison to fight and contain the Yope tribes (Velez, 1998:370). I have been in Quecholtenango and I was able to find an archaeological site in Colonia Españita, in the southeastern periphery of the town. The architecture of the site is unimpressive and had not been for the documentary references about its strategic importance, I would consider it a secondary settlement in the valley of Muchitlan. This place is 74 lineal kilometers away from Tlapa and 24 kilometers away from the nearest town under the control of Tlapa. If indeed this glyph corresponds to Quecholtenango, it would be very probable that Tlapa had had boundary wars with it, but I seriously doubt that Tlapa had conquered it.

Totomixtlahuaca. “Place of the Bird-Hunter’s Plain” (Berdan and Anawalt, appendix E, 1992:220; Vega 1991:25). Now modern Totomixtlahuaca. It appears that the Prehispanic settlement lays directly under the present town and that most of their Prehispanic structures were destroyed during the construction of an impressive early colonial Augustinian convent.

Campos de Cacao. “Fields of Cacao”. It is unclear whether this glyph was used as a place name. If it were, its translation in Nahuatl would be something like Cacahuamilpa or perhaps Cacahuatepec. Indeed there is a present pueblo called Cacahuatepec in the municipality of Copanatoyac. I did not find any archeological evidence to verify such a correspondence between the town and this place name. In the codex Azoyú 1, this place name is depicted in conjunction with Totomixtlahuaca, and perhaps makes reference to a town in the Costa Chica where cacao was cultivated in large quantities (perhaps in Azoyú itself). The interesting result to note is that after the incorporation of Totomixtlahuaca, the lords of Tlapa had access to an area where cacao was produced.
**Petlacala.** “In the House of the Woven Straw Boxes” (Vega 1991:26). In the Codex Mendoza a similar glyph represents Acapetlatlan, however, there is not such town in the region. Vega Sosa has identified this glyph as the place name for Petlacala, a colonial head town subordinate to Tlapa. I have not been able to find any large archaeological site, but there is evidence that the ancient settlement is underneath the present town.

**Oztocingo.** “Small Place of the Cave” (Vega 1991:26). Present Oztocingo in the municipality of Copanatoyac. I have found evidence of archaeological occupation in the town itself and in an area called Coatepec. It seems that in prehispanic times Oztocingo was a secondary village, perhaps related to Axoxua. Indeed in Codex Azoyú 2, the glyph of Oztocingo is replaced by a glyph that may be read as Axoxua.

**Tenochtitlan.** “Among the Stone-Cactus Fruit” (Berdan and Anawalt, appendix E, 1992:208; Vega 1991:26). Present day Mexico City. The place name of Tenochtitlan appears in both codices Azoyú 1 and 2, depicting a meeting held by Lord Rain with an ambassador of Mexico. During this meeting, Lord Rain accepted to become a client of Mexico. This agreement provoked a regional war that ended with the murder of the ruling dynasty of Igualita-Yoallan.

**Yoallan.** “Place of Night” (Berdan and Anawalt, appendix E, 1992:229; Vega 1991:27). The Prehispanic settlement of Yoallan is located 1 kilometer to the south of present day Igualita. This is a large archeological site with impressive architecture. The dynasty of Yoallan fought a war with Tlapa-Tlachinollan when Lord Rain accepted to become a subordinated state of Tenochtitlan. The lord of Yoallan, Chalchuitl, was defeated and killed along with his heir.

**Tecualoyan (?)**. “Place Where There Are Jaguars” (Berdan and Anawalt, appendix E, 1992:212). It is uncertain whether this glyph is a place name. If it is a place name, perhaps it indicates the place where Lord Rain was buried or even where he died. On the other hand, it may indicate the real or mythical cause of Lord Rain’s death by a jaguar. There is neither a present nor colonial town with such a name in the region.
Figure 5.7f. Place names depicted in the Codex Azoyú 1.

**Atlamajac.** “On the River that Divides into Channels” (Berdan and Anawalt, appendix E, 1992:171; Vega, 1991:27). There are three present day towns with such a name in the area: Atlamajac, Atlamajacingo del Río, and Atlamalcingo del Monte. The most important of them in prehispanic times was Atlamajac in the eastern sector of the valley of Tlapa, where I have found archeological evidence of a postclassic occupation. It is interesting to note that there are two different glyphs for Atlamajac are depicted at the same time in folio 7 of Codex Azoyú 2. This suggests that perhaps the Tlacuilo was referring to two different pueblos with similar names.

**Atepec (?)**. “On the Hill of Water” (Berdan and Anawalt, appendix E, 1992:172; Vega, 1991:27). No modern town has such a name. Based on the way in which the place name is depicted in the Palimpsest of 20 Mazorcas, I suggest that it represents Atlamajacingo del Monte.

**Chiepetepec.** “On the Hill of Xipe” (Vega, 1991:27). There are two towns with similar place names in the area: Chiepetlan and Chiepetepec. Vega Sosa has properly differentiated between both towns, identifying the glyph shown here with Chiepetepec. I surveyed around this town, where I located two archaeological sites. One of them is a prehispanic fortress called Tlancualtepec, and the other is an early colonial town known as Pueblo Viejo.

**Acocozpan.** “On the Very Yellow Water” (Berdan and Rieff Anawalt, appendix E, 1992:195). This town is now called Alcozauca. The prehispanic settlement of Alcozahuca is located on top of a hill the entrance of the town. This site has the largest Tecpan (palace) in all the region. This palace is larger than that of Conttalco.
Figure 5.7g. Place names depicted in the Codex Azoyú 1.

**Tetenanco.** “On the Stone Wall” (Berdan and Anawalt, appendix E, 1992:213). It is likely that this is the place name for Hueycatenango (Rubi, 1998). But it might be anyone of the other three Tenango towns in the area.

**Cozcatenango** “On the Wall of the Jewels” or **Cozcaltepec** “On the Hill of the Jewels”. Vega Sosa did not differentiate this glyph from that of Tenango. Nevertheless, in a closer comparison this glyph has an added element, a necklace of beads encircling the hill. The collar adds a phonetic value to the glyph, which in this case would be **Cozcatl** “Jewel”. A marginal gloss on Codex Azoyú 2 reads **Cozcaltepētl**, which confirms my interpretation. The codices of Azoyú 1 and 2 show that the lords of Tlapa-Tlachinollan took refuge in Cozcatenango when the Spaniards first came to the area and from where they negotiated a surrender. The Relacion de los Obispados states that a village called **Cozca-tepec** was subordinate to Chiepetlan. I surmise that this Cozcatepec is the ancient name of Tenango Tepexi. I base this assertion on a detailed drawing of a sandy dry river, which was used to show the path to Cozcatenango. These dry river bottoms are called **Xale** in the region, and in order to go from Tlapa to Tenango Tepexi on foot, one needs to walk along a wide Xale called Barranca Tenango. In addition Tenango Tepexi is located on top of a hill called **Coaxcatepetl**, lending further support to this interpretation. The ancient settlement of Cozcatatepec lays beneath the present pueblo of Tenango. One can still see a very destroyed pyramid adjacent to the basketball court of the local high school (“Secundaria”).

![Figure 5.7g. Place names depicted in the Codex Azoyú 1.](image_url)
Figure 5.8. Some place names recorded in the Palimpsest of 20 Mazorcas.

**Calpanapa (?)**. “On the Houses”. I suggest that represents of Calpanapan, a Mixtec village subject of Tlapa, located on the Tierra Templada windward, 13 kilometers to the south of Metlatonoc. Alternatively, it might be the missing glyph for Caltitlan.

**Xayaco (?)**. “On the Mask” (Berdan and Anawalt, appendix E, 1992:224). This glyph is depicted in the Palimpsest of 20 Mazorcas. It is unclear whether it was actually used as a place name or a tribute item. There is neither a colonial nor present day town with such a name in the area.

**Sacrificial Hill (?)**. This glyph is depicted on the Palimpsest of 20 Mazorcas. Barlow (1961) called it “Objetos Rituales”. From the letters of Diego Pardos, one knows that the Tlapanecos used to sacrifice the prisoners of war on top of ritual mountains. In my interpretation of the Palimpsest of 20 Mazorcas, the lord of Yoallan, Chalchihuitl, was taken to such a place to be sacrificed. It might be any high mountain near Igualita or Tlapa, where present day Tlapanecos and Mixtecos continue to pray to San Marcos for rain.

**Teponaz(ixtlahuacan)**. “On the Plain of the Teponaztli” (Barlow 1961). This glyph is depicted in the Palimpsest of 20 Mazorcas. I do not think that it represents a pueblo, but a rather uninhabited place where a major battle between Yoallan a Tla pa took place. Perhaps near Atlamajalcingo del Monte.

**Ahuexotla (?)**. “Water Willow”. The Relacion de los Obispados reports that a village called Ahuexutla was subordinate to Igualita-Yoallan. I suggest that it may represent present day Ahuejutla, a small village to the north of San Jose Capulin, in the municipality of Alcozauda.

**Tlachco.** “On the Ball Court”. Barlow interpreted it as Tlaxiaico, Oaxaca, because of the raindrops on the Ball court. Tlaxico is 100 linear km away from Tlapa and does not appear to be related to any other place name in the document. I suggest, however, that this glyph represents Tlaxco, a village conquered by Lord Flag of Quetzal Feathers (Lord Rain’s father).
Figure 5.9. Some place names recorded in the Lienzo of Chiepetlan 1.

**Axoxuca (?)** “On the Green Water”. This glyph is depicted on the Lienzo de Chiepetlan 1 (Galarza, 1972). The actual phonetic value of the glyph is unclear. Based on the relative spatial location of the place name in relation to other known place names, Galarza interpreted it as Copanatoyac. I disagree with this identification. If one follows Galarza’s methodology, then this place name should be located near Axoxuca. Just as a curious aside remark, the people of Tlapa say that if one looks carefully to the rocky hill where Axoxuca is located, one will see the figure of a huge head carved on the vertical rock wall. I looked carefully for several minutes, but I was never able to see anything. I was called “incredulous”. But perhaps that is the meaning of the head element in glyph.

**Tehuixtla (?)** “Place of Spines on the rock”. Its phonetic value is unclear. Galarza interpreted it as Tlaquiltzinar. I disagree and I think that a better identification is Tehuixtla. There is a place with this name recorded on the 1:50,000, INEGI map for Xalpatlahauc. According to the Lienzo of Chiepetlan 1, an important meeting of local rulers with an ambassador from Tenochtitlan was held in this place.

**Atliztac** “Place of the White Water”. Galarza interpreted this glyph as Axoxuca. I disagree with this interpretation. If one analyzes the place name of Atliztac on the Codex of Azoyu 2, one may see the close similarity between both glyphs. Moreover, the position of this place name on the Lienzo matches closer with the geographic location of Atliztac.

**Metate (?)** “Place of Metates”. Galarza (1972) suggests that this glyph represents Metlatonoc. I found scarce archeological evidence in this town, but in the neighboring town of Cochoapa Grande there is a late Postclassic early Colonial site in a spot known as pueblo Viejo. Metlatonoc was a subject village of Tlapa. In document AGN, Tierras, vol. 1869, exp. 3, there is a place named Metate in the territory of Alcozaucua.
Figure 5.10. Spatial location of the place names depicted in the Codices Azoyú 1 and 2
A.D.1300 to 1320 the codex does not provide any geographical information. It only depicts the figures and names of four different rulers.

5.4.1 Stage 1 (A.D. 1349-1355).

The first place name in the codex is shown in folio 4, making reference to Tlachinolticpac. We know that Tlachinolticpac was an integral component of Tlachinollan, so this glyph is apparently making reference to the place of residence of Lord House in the center of the valley of Tlapa. I assume that from late 13th century to the first half of 14th century, Tlachinollan was able to dominate and keep control of its immediate hinterland in the valley and surrounding mountains, an area representing approximately 48 square kilometers and comprising three quarters of the valley area (figure 5.11). It was not until the year 1349 A.D. (folio 8) that the Codex of Azoñú 1 shows its first conquest. This was Tototepec (Cerro Machete), located 10.5 km to the south of Tlachinollan. Because there is not another polity between Tlachinollan and Tototepec, I believe this expansion followed a lateral concentric

2 Interestingly some of those rulers use calendrical names like in Mixtec codices, while others use personal names like in the Aztec pictorial documents with no relation to calendar days. Vega (1991) interpreted this as the representation of the Lord’s ethnic affiliation. I think that she might be correct, but one needs to be careful with this. Those using calendrical names are not to be automatically recognized as Mixtecs, and those using personal names with no numerals as Nahua or Tlapaneccs. For example, in folio 25 of Azoñú 1, there is a personage whose name was 12 Eagle, presented in the Mixtec way. But in codex Azoñú 2, the name of same person was depicted with a sky band and a descending eagle (Cuauhtemoc?) with no numerals. Another example is given in folio 11 of codex Azoñú 1; here a lord is represented as 1 Jaguar with a Decorated Serpent as a nickname, and on the same folio he was represented just as Jaguar-Decorated Serpent. Did these two people have double ethnicity or are the painters using either the “Mixtec” or the “Nahua-Tlapanecc” names indistinctly? Again, on the reverse of Azoñú 1, in folios 5,D and 6,D, one observes that nobles with “Nahua-Tlapanecc” names are having children who are named in the “Mixtec” fashion. In the Lienzo of Tlapa-Azoñú, one sees several intermarriages of people with Mixtec and Nahuafl names and their sons and daughters were named using both traditions. As I have already explained in chapter 3, the ethnic relations in the area go beyond naïve interpretation of ethnicity. Thus, one needs to remember that the people of the region identified and attached themselves to a given ruling dynasty and not to a nation or ethnicity. A given ruler had equal sovereignty on Mixtecs, Tlapanececs or Nahua. It is even difficult to be sure about the “ethnicity” of a specific ruler because the constant intermarrying. Nor should we forget that Nahuafl names are used extensively in colonial documents because this language was the lingua franca in the Spanish courts.

3 The remaining eastern quarter of the valley was under the control of Atlamaxac.
Figure 5.11. Approximate area under the control of Tlachinollan around A.D. 1300 (48 sq. km).

Figure 5.12. First stage of expansion, A.D. 1349-1355. Conquest of Tototepec (Cerro Machete). Area 78 sq. km.
pattern (see chapter 4). The annexation of Tototepec, a Mixtec village closely related to Yoallan, increased the territory of Tlachinollan to 78 square kilometers (figure 5.12).

5.4.2 Stage 2 (A.D. 1356-1362).

Almost immediately\(^4\) or perhaps a couple of years later, Tlachinollan’s lords dominated Teteltipa (folio 9, Azoyú 1). This seems to have been a very important conquest for Tlachinollan which was celebrated with 16 human sacrifices (figures 5.13 and 5.14). Teteltipa was located 19 km to the east of Tlachinollan along the margins of the Atentli River. Based on the information from the Codex of Azoyú 1, there does not seem to have been an independent political unit between Tlachinollan and Teteltipa. As a result I believe that Tlachinollan expanded lateral and axially along the river basin, increasing its area up to 113 sq km. In the same folio the mysterious polity of “Tecuanapan” is depicted. Two ambassadors (both women) are depicted describing the conquest of Teteltipan to the lords of that place. The codex does not provide more information about how that polity’s interests were affected by Tlachinollan’s actions. Nevertheless, such event suggest that there were other powerful polities that could counterbalance and put checks on the ambitions of Tlachinollan’s dynasty. Thus the smaller and weaker polities might have used this strategy to deal with Tlachinollan at these early stages of expansion. Obviously such a strategy did not work for Teteltipa; its place name was depicted again in folio 10, but this time was to celebrate a cycle of 52 years of the Tlapanec calendar. Such celebration confirmed the total dominium of Tlachinollan over this place.

\(^4\) The dates of expansion are given according to the 7 years period represented in each folio of the Codex Azoyu 1. More detailed dates are obtainable for some conquests using the chronology of the Codex Azoyú 2, which represents a period of 8 years in each folio.
Figure 5.13. Folio 9, Codex Azoyú 1. Conquest of Teteltipa (1356-1362).

Figure 5.14. Second stage of expansion, A.D. 1356-1362. Conquest of Teteltipa. Area 113 sq. km.
5.4.3 Stage 3 (A.D. 1412-1418)

For 40 years Tlachinollan did not increase its territory, or at least it did not defeat any major foe that were worthy of mention in the codex. It seems that Tlachinollan experienced internal distress between A.D. 1398 to 1419 that led to dramatic changes in its power structure. Lord Lizard succeeded to power after Lord Stone Flag died around the year 9 Movement (A.D. 1398). As soon as Lord Lizard took power, Lord Monkey, who was the co-ruler of Lord Stone Flag, vanished from the story and it is unknown when he died, because his burial bundle was never represented. Nevertheless, in folio 17 of codex Azoyú 1, a male named 3 Monkey was sacrificed in Huilotepec. From the Lienzo of Tlapa-Azoyú we know that 3 Monkey was a high status noble in Tlachinollan and that he was in the line of succession. His father seems to have been Lord 1 Jaguar-Decorated Serpent, who was ephemerally in power from A.D. 1370-1376 (folios 5.D and 6.D, reverse Codex Azoyú 1). I am not sure if Lord Monkey and the nobleman named 3 Monkey were the same person. Whether or not they were the same individual, it is possible to infer that Lord Lizard was somehow forcing the normal rules of succession. No doubt this put stress on the social structure and the allocation of resources among different groups within the polity.

Followers of Lord Lizard needed to be rewarded for their support and generous gifts needed to be strategically distributed among opponents to calm them down. Public display and generosity was necessary to gain support from the commoners. This should have put pressure on the financial revenues of the polity and I think that this was the moment when Tlachinollan’s nobles decided to blame neighboring competing polities for all their problems. Lord Lizard needed more financial resources and trying to get them from the neighbors was perhaps his best and only way to stay in office. Around A.D. 1410 he is depicted practicing a mysterious ceremony in folio 16 of Azoyú 1 in which he wore a jaguar costume very similar to that represented on a Classic period slab of Costa Chica (figures 5.15 and 3.22). A human was sacrificed during the ritual, offerings are made to the divinities,
Figure 5.15. Lord Lizard makes offerings to the gods before the expansionist process of Tlachinollan.

Figure 5.16. Third stage of expansion, A.D. 1412-1418. Conquests of Tlazallan, Ocoapan and Huiltepec. Area 298 sq. km.
and then Tlachinollan embarked in the most successful and fastest expansion of its political history. According to Tlachinollan’s accounts they were unbeatable for 70 years and overpowered all the polities south of Tlachinollan. If the Aztecs had not conquered them, who knows what they might not have accomplished. At least that is what the Colonial Caciques were telling the Spaniards in the sixteenth century.

Codex Azoyú 1 depicts three place names conquered by Lord Lizard (folio 17, Azoyú 1): Tlazallan, Ocoapan and Huilotepec all of which were annexed in the same 7 years of expansion (A.D. 1412-1418). Tlazallan is a fortress site located on a hill 7 kilometers north of Tlapa. This site controlled the narrow passage that connects the valleys of Tlapa and Huamuxtitlan (figure 5.16). With the conquest of this site Tlachinollan: 1) protected itself from incursions from the powerful polities along the Huamuxtitlan valley, and 2) got control of trade flow with such polities (this is a lateral concentric expansion pattern). Ocoapan is located 22 km to the southeast of Tlachinollan on the Tierra Fría tier and along the trade route to Costa Chica. Perhaps some small independent villages were bypassed during the annexation of Ocoapan, but I think that this expansion again followed a lateral concentric pattern. This was not the case of Huilotepec, which was located in an area controlled by the prestigious lineage of the Tlahuisicalera lords of Cuitlapan (Dehouve, 1995:51).

Although a little bit confusing, the Lienzo of Tlapa-Azoyú tells us that a marriage alliance was celebrated between the Tlahuisicalera and Tlachinollan lineages, but I am not sure of who married whom. Both a Tlahuisicalera nobleman and Lord Lizard are shown marrying a woman with the same name (4 House). I think that the most probable interpretation is that Lady 4 House was actually the daughter of the Lord Tlahuisicalera and that she was given in marriage to Lord Lizard. Whatever the case, a marriage alliance was celebrated between Cuitlapan and Tlachinollan and this event facilitated the political ambitions of Tlachinollan (figure 5.17).
Figure 5.17. Strategic marriage alliance between the rulers of Tlachinollan and the Tlahuiscalera lords, the rulers of Cuitlapan. Huilotepec was probably annexed to Tlachinollan as part of this marriage alliance (Lienzo of Tlapa-Azoyú).

Figure 5.18. Fourth stage of expansion, A.D. 1426-1432. Conquests of Yoso None, Tlaxco and Atlitac. Area 630 sq. km.
Perhaps this was a strategic marriage to release tension between both polities. As part of the alliance it is probable that Huilotepec was given to Tlachinollan. At this stage the mighty lords of Cuitlapan and rulers of Texmelincan were losing their grip as a result of Tlachinollan’s expansion. The result was that it was perhaps more beneficial to establish an alliance with them rather than risk a direct war. Becoming “allies” of Tlachinollan by marriage would be the best way for Cuitlapan to keep its regional status quo without fighting Tlachinollan. With this agreement Lord Lizard received a small tributary village and tied Tlachinollan to a very prestigious lineage. I think this is why a Huil(…)tepec is represented as a pueblo associated with the genealogical lines of Tlachinollan in the Lienzo of Tlapa-Azoyú (figure 5.17).

Perhaps the most valuable thing that Lord Lizard gained from this agreement was that it avoided an expensive and uncertain war with Cuitlapan, obtaining its neutrality and even its support in future conquests. Because Tlachinollan got a tributary town spatially separated from its former territory, this expansion may be classified as a sprawl pattern. During this stage of expansion, besides gaining access to high mountain forest resources, Tlachinollan obtained control of strategic defensive points to protect itself from the northern polities along the Huamuxtitlan valley. Meanwhile in the south its policy was to expand over places considered to be trading posts and at the same time to create strategic alliances with key polities like Cuitlapan to continue its advance to the Pacific Coast.
5.4.4 Stage 4 (A.D. 1426-1432).

The folio 18 of Azoyú 1 depicts the mortuary bundle of Lord Lizard, and the image of his successor Lord Calandra Lark-Arrow. This lord does not seem to have been Lizard’s son, thus it is likely that the polity continued experiencing succession conflicts. Lord Calandra Lark-Arrow probably faced the same problems as Lord Lizard and he probably had no other choice but to continue with Lizard’s expansionist policy. He was very successful and pushed the borders of the polity out further than any former lord. According to folio 18 of Codex Azoyú 1, his first conquest was of Yoso None (On the Plain of the Cornfields). This campaign lasted a couple of years because the same place name was repeated again in the next folio. From A.D. 1426 to 1432, Lord Calandra Lark-Arrow also conquered Tlaxco and Atlixtac (figure 5.18). In the cases of Yoso None and Tlaxco, Tlachinollan was expanding laterally and concentrically from the previous conquered area of Tototepec. It is unclear to me what strategy was behind these two conquests. Tlaxco and Yoso-None both have good agricultural lands and the precipitation rate for that area is higher than in the dry valley of Tlapa; perhaps Tlachinollan is trying to secure additional food staples. Nevertheless, this expansion represents encroachment of the fertile valley of Yoallan and maybe this was its hidden objective. Yoallan, however, was a powerful polity and its ruling lineage was closely related to Tlachinollan. So Tlachinollan had to wait 35 years to take over Yoallan. With the conquest of Atlixtac, Tlachinollan gained total control of the trade route with Chilapa, Tepequacuiloco, and the area of Tlacozautilcatitlan. It also reinforced its northern frontier which was subject to

5 Vega Sosa (1991) named this individual “Lord Flag of Quetzal Feather”. But, according to the Lienzo of Tlapa-Azoyú, the actual Nahuatl name is Tzacuamitzin Teuhtli which might be translated as Tzacua (Calandra Lark); Mitl (Arrow) and Tzin (Reverential); “Lord Little Calandra Lark Arrow”. The glyph of this personal name was also used like war insignia for the commander and officer called Huitznahuatl (Thorn Speech), who was like a constable in the administrative structure of the Aztec Empire (Berdan and Anawalt, 1992).

6 The narration of Codex Azoyú 2 (folio 1) diverges from Codex Azoyú 1 (folio 19). While Codex Azoyú 1 claims that Atlixtac was conquered, Codex Azoyú 2 says that it was Atlamax instead. It might be that Vega and I are misinterpreting the glyph in Codex Azoyú 1. I will continue with the Atlixtac identification though.
constant pressure from Nahuatl polities and immigrant groups from Central Mexico. Spatially this represents a continuous lateral concentric pattern of expansion.

5.4.5 Resistance (A.D. 1433-1439).

It seems that Lord Lizard’s wife (4 House) was related to the ruling family of Totomixtlahuaca (a branch of the Tlahuiscalera) because two of his sons, Deer Antlers and Flag-Eagle-Fire\(^7\), became Tlatoque of that place (figure 5.19). These sons are represented in folios 20 and 21 of codex Azoyú 1 in full Tlatoani insignia. In folio 20 (A.D. 1433-1439) Lord Flag-Eagle-Fire is commanding the conquests of Tlazallan and Quecholtanengo. Tlazallan was previously conquered in A.D. 1412 which indicates that the place had revolted. Re-conquering a rebel village represents an infilling pattern of expansion in which Tlachinollan is incurring administration costs to consolidate its territorial control and maintain the status quo without gaining anything in return. Perhaps in this moment Tlachinollan was starting to experience diminishing returns in its spatial growth.

I have already discussed (in figure 5.7d) that the identification of the glyph of Quechultenango is doubtful. I will consider it to be Quechultenango to follow the current identification accepted by most scholars, with the observation that this place might actually be any fortified site throughout the area. For logistic and strategic reasons I do not think that Tlachinollan was able to conquer Quechultenango in the valley of Muchitlan. Basically Quechultenango was too far and completely outside of the general direction of expansion that Tlachinollan had been following. This compels me to think of alternative possibilities. So far I have been describing Tlachinollan’s expansion as if it were completely isolated from the Mesoamerican context. Well this was certainly not the case. By A.D.1439 the Triple Alliance had already defeated Aztcapotzalco in the Basin of Mexico and had started its first incursions into

\(^7\) Vega (1991) considers that Lord Flag-Eagle-Fire is Lord Flag of Quetzal Feathers (Lord CalandraLark Arrow). Nevertheless, folio 3,D anverse of Codex Azoyú 1 depicts him as different person.
Figure 5.19. Folio 3,D, Codex Azoyú 1. Genealogical connections between the lords of Totomixtlahuaca and Lord Lizard.

Figure 5.20. Resisting a possible Aztec encroachment, A.D. 1433-1439. Area 630 sq. km.
Guerrero. Between A.D. 1438 and 1440, the neighboring province of Tepecuacuilco was subjected and from A.D. 1441 to 1468 all of northern Guerrero and parts of the Mixteca of Oaxaca were annexed to the Aztec Empire (Hassig 1998; Berdan et al. 1996; Vega 1997). Thus I would propose that folio 20 of Codex Azoyú 1 is representing the first successful defense of Tlachinollan against the encroachment of the Nahuatl polities and the Triple Alliance. Between A.D. 1433-1439 Tlachinollan may not have been trying to expand but was just using its strength and resources to keep its hegemonic position in eastern Guerrero (figure 5.20).

5.4.6 Stage 5 (A.D. 1440-1446).

Folio 21 of Codex Azoyú 1 depicts the conquest of Totomixtlahuaca and Fields of Cacao. Lord Deer Antlers is depicted sitting over both places. I have already mentioned that Lord Deer Antlers’s mother was related to the ruling family of Totomixtlahuaca. I believe it is likely that he got the rulership by a normal process of succession. Again Tlachinollan expanded through that old beneficial marriage alliance celebrated 30 years before between the lords of Cuitlapan and Lord Lizard (figure 5.21). Fields of Cacao may represent a similar situation to that of Totomixtlahuaca. I believe that Fields of Cacao is a town in the Costa Chica, possibly Azoyú or a site nearby. When I was in Azoyú I was told about an archaeological site called *Capulin Chocolate* around the town of San Luis Acatlán, but this does not necessarily mean anything.

In any case, it is likely that the lords of Tlachinollan finally made their dreams come true; they controlled the trade route with Costa Chica along with a couple of tributary towns from it, without even fighting. Tlachinollan should have almost doubled its size with this annexation. I think several independent villages got trapped in Tlachinollan’s new territorial shape, but they should have been rapidly incorporated into its political sphere. It is at this point that the morphology of the schematic borders of the polity starts to make sense. One may see a continuous axial expansion following the main corridors to the coast. I think that for the first time
Figure 5.21. Fifth stage of expansion, A.D. 1440-1446. Annexation of Totomixtlahuaca. Area 1408 sq. km.

Figure 5.22. Tlachinollan was unexpectedly raided in A.D. 1447. Petlacala and Axoxuca-Oztocingo were conquered in retaliation.
Tlachinollan’s leaders got a good share of the benefits produced by the trade route between the Tierra Caliente and the other ecological tiers. In their role of middlemen they may finally have obtained large revenues and made use of them to buy the support of strategic political allies.

5.4.7 Stage 6 (A.D. 1447-1453).

The year is A.D. 1447 and the Aztecs were knocking at the door. Huehue Moteczuma’s military campaigns in northern Guerrero and Oaxaca are at their peak. The neighboring altepeme of Yohualtepec, Tepecuacuilco, Tlacozauhtitlan and Quiyahuteopan were already defeated or were in process of being overwhelmed. Security became an important issue for the leaders of Tlachinollan. Suddenly they were forced to forget about the coast and start to worry about their northern frontier. In the folio 3 of Codex Azoyú 2 the Tlachinollan temple is depicted in flames, perhaps as a result of an unexpected raid from one of the northern Nahautl villages (Figure 5.22). I think Tlachinollan leaders were complacent about Nahautl groups settling in small villages in the northern and western sector of the Atentli River, but this attack was a serious wake up call, not because it seriously threatened the political structure of the Tlachinollan polity, but because it was humiliating and its prestige was diminished. Retaliation was urgently needed. Lord Calandra Lark-Arrow ordered an attack on Petlacala and Axoxuca-Oztocingo. These places were quickly defeated. This pattern of expansion would seem to be a lateral concentric expansion, but I think Tlapa already had control of those territories. Thus it is more like an infilling pattern where Tlapa is just consolidating its territory (figure 5.23). Marginal annotations in Latin characters along folios 23 and 24 in codex Azoyú 1 list the names of at least 15 Nahautl settlements which it supposedly conquered at this time. It is clear that the policy of Tlachinollan toward the Nahautl immigrant groups had changed dramatically.
Figure 5.23. Sixth stage of expansion, A.D. 1447-1453. War with the northern and western Nahuatl villages. Conquest of Petlacala and Oztocingo-Axoxuca. Area 1637 sq. km.

Figure 5.24. War of Tlachinollan against the northern Nahuatl villages, according to the Lienzo of Chiepetlan 1.
In this critical moment, however, Lord Calandra Lark-Arrow died. His son Lord Rain succeeded him in the day 14 Deer (A.D. 1454). For a while Lord Rain followed the war against the Nahuatl villages, represented by the Lienzo of Chiepetlan 1, an independent Nahuatl source (figure 5.24). A military frontier was established along a strip of fortified villages on both margins of the Zizintla River. I think some of these villages sought help from Tenochtitlan and Huehue Moteczuma shifted his attention to this attractive polity.

Rather than a direct attack on Tlachinollan, Huehue Moteczuma tried to negotiate a diplomatic agreement with Lord Rain. According to the Lienzo of Chiepetlan 1 a high status Aztec official was sent to the area. He met with several local rulers, but specially with lord Rain. The codices of Azoyú 1 and 2 depict this meeting (Figure 5.25). Bee was the name of the Aztec ambassador and what he basically offered Lord Rain was the opportunity to become a client state of Tenochtitlan. If he accepted he would be allowed to keep his office and be recognized as the general lord of the whole region by Tenochtitlan. Furthermore, he could count on the help of the Aztecs to continue his expansion southward to the coast. In exchange the lords of Mexico wanted a share of the tribute and obedience. It seems that the deal was convenient for both sides because Lord Rain was then depicted wearing the Aztec royal insignias. According to Codex Azoyú 1, he was given the Aztec title of *Huitznahuatl* (Thorn Speech) which was the position of constable for the entire province. According to the Codex Azoyú 2 he received the title of *Tlacatectli* (Lord of Men) which was the position of provincial governor (figure 5.26). Further evidence that Lord Rain accepted the deal is shown in the folio 1R, on the reverse side of Codex Azoyú 2, where Lord Rain is depicted as the first Tlapanec *tlatoani* that paid tribute to the *calpixque* in Tlapa (figure 5.27).

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8 This title was represented with a Maguey Thorn in the hands of Lord Rain.
9 This title was represented with the turquoise diadem (*Xiuhuitzolli*) above Lord Rain’s head.
Figure 5.25. Meeting between Lord Rain and the Aztec ambassador in A.D. 1461.

Figure 5.26. Aztec titles received by Lord Rain after his alliance with Tenochtitlan.

Figure 5.27. Lord Rain is shown as the first Tlapanec lord to pay tribute to the calpixque in Tlapa (Codex Azoyú 2; folio 1-reverse).
5.4.8 Stage 7 (A.D. 1468-1474).

The alliance between the Aztecs and Lord Rain might be considered something like treason within his “polity”. But we must remember that in this patrimonial state he was the polity. In general terms it was probably better trade off than running the risk of losing the whole polity. With this agreement he avoided direct Aztec warfare for more than 20 years (the “official” conquest of Tlapa according to Codex Mendoza took place in A.D. 1486). Nevertheless, this event affected the interest of other independent rulers in the area who certainly considered Lord Rain a traitor, especially the still powerful polities of Cuitlapan and Yoallan.

Lord Rain’s decision disrupted the internal cohesion of the lineages at the regional level and we see something that evolved into a general armed conflict represented by the first layer of paintings of the Palimpsest of 20 Mazorcas (figures 5.28, 5.29). The Codex Azoyú 2 informs us that Lord Rain or his forces were either attacked or contested in Huilotepec, a former modular constituent of the Cuitlapan polity (figure 5.30). One may remember that Huilotepec became attached to Tlachinollan in A.D. 1412 by a marriage alliance between the Tlahuiscalera lords with Lord Lizard. Immediately after Lord Rain was attacked most of the polities in eastern Guerrero either sided with a coalition formed by Yoallan-Cuitlapan or Tlachinollan. It seems that some altepem like Atlamax and Totomixtlahuaca had internal struggles between different noble lines that ended with killing of the opposite faction; this event is represented in the Palimpsest of 20 Mazorcas (figure 5.31).

By reading the document from bottom to top, one first sees the polities that allied themselves with Tlachinollan and then those who allied themselves with Yoallan (figures 5.32 and 5.33). I think that the little feet in the document can be interpreted as a variant of the chevron band in Mixtec codices which is the ideographic representation of war and conquest (Hill Boone 2000:35). I believe that the six place names located on the bottom of the palimpsest are those polities that formed Tlachinollan’s coalition. These are the places where the little feet go to and return from a central place, represented by running water and a hill in which a battle
Figure 5.28. Division of the 16 and 17th century scenes from the Palimpsest of 20 Mazorcas (Barlow, 1961).
Figure 5.29. Early 16th century layer of the Palimpsest of 20 Mazorcas.
Figure 5.30. Lord Rain is challenged in Huiltepec, a modular component of Cuitlapan (Codex Azoyú 2; folio 5).

Figure 5.31. Depiction of factional struggles in the polities of Atlamaxac and Totomixtlahuaca between competing noble lines during the Yoallan-Tlachinollan conflict. The lords depicted with flags were killed.
Figure 5.32. Polities that allied Tlachinollan.

Figure 5.33. Polities that allied Yoallan-Cuitlapa
took place nearby. The suggested meaning is that warriors from those polities were sent to the “Plain of the Teponaztle” nearby Atlamajalcingo del Monte to fight a battle and then returned home. Otherwise, the feet that go only one direction, from the battlefield and never return, are the places that sided with Yoallan-Cuitlapan and were attacked by the Tlachinollan’s coalition. It is interesting to note that the polities that sided with Tlapa-Tlachinollan were predominantly Nahuatl and Tlapanec, whereas those who helped Yoallan were Mixtec and Tlapanec. So it is likely that what is represented is a rebellion of the ancient Mixtec-Tlapanec lineages against Tlachinollan’s rulership which at this time was becoming predominantly Nahuatl.

In the center of the document we have the outcome of this conflict (figure 5.34). It seems that the forces of Tlapa-Tlachinollan’s coalition headed to Atlamajalcingo del Monte, a place near Yoallan territory where they fought the Yoallan-Cuitlapan warriors. Tlapa-Tlachinollan won the battle because from here feet extend to Yoallan itself. A line of prisoners tied with a rope is presented to Lord Rain who was in Tlaxco, a Mixtec polity nearby Yoallan that was conquered by his father Lord Calandra Lark-Arrow in A.D. 1426. On top of the scene we see that the warrior Bird captured Lord Chalchihuitl in the place called Sacrificial Hill (or Lord Chalchihuitl of Yoallan is taken to that place to be sacrificed).

To know the final fate of Lord Chalchihuitl we have to turn back to the codices of Azoyú. He is depicted alive in Codex Azoyú 2 and then dead in Codex Azoyú 1 along with a male named 12 Eagle and a baby female, perhaps his son and daughter. After this, Lady Coacuey (Skirt of Serpent), Lord Rain’s wife was sent as an ambassador to Cuitlapan to settle the peace with Lord Fish-Feathers of the Tlahuiscalera lineage (figure 5.35). I guess it was at this moment that the mighty lords of Cuitlapan, Huitzapula, Acatepec and Texmelincan surrendered to Tlachinollan (figure 5.36). With this expansion Tlachinollan almost doubled its territorial size. It will always be unclear if Tlachinollan would have been capable of defeating both polities without the support of the Aztecs and the Nahuatl villages. We must keep in mind that from this point on all the conquests of Tlachinollan are made in Aztec
Figure 5.34. A battle took place in a field near Atlamajalcingo del Monte. After this Yoallan was attacked and its lord, Chalchihuitl, was captured by Warrior Bird. Warriors Deer and Rabbit informed of the outcome of the battle to Lord Rain, who was waiting in Tlaxco, near Yoallan. A line of tied prisoners was presented to him. Lord Chalchihuitl was taken to Sacrificial Hill and killed.
Lord Chalchihuitl (Jewel Bead) was killed during the conquest of Yoallan.

Figure 5.3. Folio 25 Codex Azoyú 1. Lady Coacuey (Lord Rain’s Wife), making peace with the Lord of Cuitlapan (Fish-Feathers). Below, one may see the people who died with Lord Chalchihuitl: 12 Eagle (a male according to Codex Azoyú 2) and “Cradle” (a baby female according to Codex Azoyú 2). The cradle glyph was used in the Codex Mendoza to depict children younger than 3 years old.
Figure 5.36. Seventh stage of expansion, A.D. 1468-1474. War of lineages. Yoallan and Cuitlapan were defeated. Area 3157 sq. km.

Figure 5.37. Eighth stage of expansion, A.D. 1475-1481. Conquest of Atlamaxac and Ixcateopan. Area 3753 sq. km.
representation. This means that Tlachinollan itself created the tributary province of Tlapa.

5.4.9 Stage 8 (A.D. 1475-1481).

Lord Rain died in 11 Ehecatl (A.D. 1477) having ruled Tlachinollan for 21 years. After his death a conflict over succession erupted in Tlachinollan between Lord Monkey,\textsuperscript{10} perhaps his brother, and his son Xihuacoatl (Turquoise Serpent). According to folio 7 of Codex Azoyú 2, Lord Monkey was killed. In the process Atlamaxac and Ichcateopan were conquered (figure 5.37). I believe these places supported Lord Monkey and were punished. However, the conquest of Atlamaxac caused more damage than benefit. This place located just 2 kilometers to the west of Tlachinollan should have been like Texcoco to the Tenochtitlan. I think that this conquest seriously weaken the internal cohesion of the polity, causing turmoil and uneasiness. It is probable that the Aztecs felt that the administration of the province was endangered and decided to conquer it and get rid off any opposing group. Codex Azoyú 2 lists the names of 18 high status individuals that were killed between A.D. 1486 and 1494.

5.4.10 Stage 9 (A.D. 1489-1495).

After the Aztec take over, Tlachinollan annexed the altepetl of Atlitepec in A.D. 1489 (Atlamajalcingo del Monte; figure 5.38). I do not see any strategic importance in this conquest once Yoallan was no longer an enemy. It seems that this place was a troublemaker though. The Palimpsest of 20 Mazorcas depicts it in the center of the Yoallan-Tlachinollan conflict and it apparently revolted around A.D. 1510 and needed to be reconquered. This makes me think that in this moment Tlachinollan’s lords were trying to quell any future problems they thought might develop. Lord Xihuacoatl died in A.D. 1498 having spent most of his political life

\textsuperscript{10} This is a different Lord Monkey than in Stage 3.
Figure 5.38. Ninth stage of expansion, A.D. 1489-1495. Conquest of Atlamajalcingo del Monte. Area 3899 sq. km.

Figure 5.39. Tenth stage of expansion, A.D. 1503-1509. Conquest of Chiepetec and end of Tototpec revolt. Area 4000 sq. km.
trying to avoid losing his office; in the process he lost the advantageous position that his father had negotiated with the Aztecs.

5.4.11 Stage 10 (A.D. 1503-1509)

Lord Green Corn assumed office after the death of Lord Xihuacoatl. Between A.D. 1503 to 1509 he suffocated the rebellion of Tototepec. In the same period he was able to conquer the fortress of Chiepetepec located east of Tlapa along the path to Chilapancingo and Olinala (figure 5.39). Although advantageously located, I do not think this annexation brought a lot of benefit to the polity. Indeed I think it is only a process of infilling where Tlachinollan took over a blank spot in the province.

5.4.12 Stage 11 (A.D. 1510-1516)

Just six years before the Spaniards conquered Tenochtitlan, Tlachinollan made its last conquests. Paradoxically, this time Lord Green Corn along with the Aztecs managed to conquer the important polity of Alcozauca and the fortress of Tenanco (Hueycatenango). It seems that Tlachinollan was trying to recover its former glories. With the conquest of Alcozauca, the tributary province of Tlapa finally merged with the province of Yoaltepec in the state of Oaxaca. Although a lateral concentric expansion for Tlachinollan, it was simple an infilling strategy for the Aztecs. By this time they were preparing to take over the Costa Chica and especially the Mixtec Kingdom of Tututepec in the Mixteca coast. I think the strategy here was to isolate Tututepec and cut it off from trade partners in the tierra fría and tierra templada. On the other hand, by conquering Hueycatenango they were protected the western villages of the province, subject to Cuitlapan and Atlixtac, from any raiding from the Yope tribes. Thus in the east they were trying to establishing positions to invade the Tututepec Kingdom while along the western side they were sealing the border with the untamable Yopes (figure 5.40).
Figure 5.40. Eleventh stage of expansion, A.D. 1510-1516. Conquest of Hueycatenango and Alcozahuca. Area 4620 sq. km.
5.5 Some remarks on the expansion process.

Around A.D. 1522, Tlachinollan’s Lord Flames negotiated the capitulation of the province to the Spaniards in Cozcatenango (Tenango Tepexi). The lords of Tlachinollan were not allowed to conquer any other province or any other village. Now they had to fight a new kind of battle. The Spanish courts became the new battlelines where they had to defend the deeds and glories of their ancestors. The tlacuilo and the lawyer became the front line soldier to defend their precious land against internal conflict and external encroachment of the Spaniards.

Previous interpretations of Codex Azoyú I have created the image of a mighty polity with enough muscle to go after any other polity in the area. I think that this is a false image of Tlachinollan. Although a powerful and gifted polity, Tlachinollan was no more powerful than either Cuitlapan, Yoallan, or Alcozauca. Moreover it is unlikely that it would have been able to conquer these places alone. Military force was certainly used to conquer places, but Tlachinollan’s leaders made extensive use of non-military means including diplomacy and alliances. This strategy proved its real valuable in the annexation of important places such as Totomixtlahuaca. Through marriage alliances they tied themselves to the most important polities of the region, obtaining in the short run neutrality or support, and in the long run the possibility to claim the subordination of villages through normal procedures of succession.

We have seen how internal conflicts of dynastic succession contributed to an explosive expansion of the polity. For sure that is not the only explanation for a complex phenomena like the territorial expansion, but it provides insights into the role of its ambitious leaders. Security and wealth were factors that fueled Tlachinollan’s expansion. They needed aggressive policies to defend its fertile valley from being taken over by other polity and to control the wealth produced in the region. It is necessary to distinguish two main periods in Tlachinollan’s expansion: 1) one before A.D. 1461 when the polity was expanding using its own strategies and resources, and 2) the other after A.D. 1461 when Lord Rain dealt with Aztecs. After
the Mexico-Tlachinollan alliance one needs to evaluate both Lord Rain’s ambitions together with those of the Aztec.

5.6 Hypothetical patterns of expansion.

I described the step by step pattern of territorial expansion undertaken by Tlapa-Tlachinollan and inferred some of the geopolitical strategies used by Tlachinollan’s leaders to overpower the region. Here I will propose hypothetical scenarios of political competition in the geography of eastern Guerrero. These scenarios will be tested in the next chapter with archaeological material.

5.6.1 Scenario 1. Areas of high conflict.

I have identified the probable geographic position of all the place names that are depicted in the folios 39r and 40r of the Codex Mendoza (figures 5.6) and I have done the same for the place names of the codices Azoyú 1 and 2 (figure 5.10). If one puts all these locations together (figure 5.41), one sees a network of settlements that cover the mountainous area from Chilapa, Guerrero to Silacayoapan, Oaxaca, and from Huamuxtitlan to Ixcatoyac, both in the state of Guerrero. I believe that this map (figure 5.41) represents a good sample of the Postclassic settlement system of the region based on these pictorial documents.

Although it is likely that these do not represent all the late Postclassic settlements in the area, they may be considered a representative sample of key regional sites. These settlements exploited localized natural resources to reproduce their biological, socioeconomic and political structures. Because of the cost of friction (Hagget 1966:162), it is likely that resource utilization would be organized in a way similar to Von Thünen’s land use rings discussed in chapter 4. Based on the spatial distribution of these settlements it is possible to estimate what the mean radii for these

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11 In the case of those mentioned in the Codex Mendoza, they were not necessarily the most important settlements, but for sure they were attached or nearby the most important concentrations of Postclassic population (Hodge, 1996).
Figure 5.41. Geographical location of the pueblos mentioned in the Codex Mendoza and codices Azoyú 1 and 2. The positions of Huamuxtitlan and Metlatonoc were added from other sources (Gerhard, 1986; Galarza, 1972).
rings of resource utilization might have been under the territorial control of each settlement following a theoretical scenario of peer polity interaction in an early state module\textsuperscript{12} (Renfrew, 1996). I assume that each settlement controlled a circular area whose radius around its core was approximately a half of the mean observed distances to its nearest neighbor.

In this model the central ring will include the regal-ritual core and residential lands of the polity while ring 2 will contain the immediate agricultural hinterland of the polity (see chapter 4). Ring 3 is the buffer area between polities. I calculated the middle distance from each settlement to its nearest neighbor and then I calculated the mean and standard deviation of all the middle distances (Table 5.1). I obtained a mean of 4.35 km. and standard deviation 3.11 km. I will use these statistics as the minimum and maximum radii of a circle around which each polity maintained exclusive control before trespassing other’s territory. This means that, given the proposed scenario, each polity would have had economic and political control over an area ranging from 38.26 to 85.27 square kilometers. The standard deviation of 3.11 kilometers shows a great variability in the distances to the nearest neighbors indicating that some settlements are widely interspersed while other are clustered\textsuperscript{13}.

\textsuperscript{12} In such scenario all independent political units are highly competitive and are trying to achieve political dominance over the others. None of them is able to dominate the system though. One expects to see a very homogeneous political landscape in which each settlement has more or less the same size and hierarchy, and controls a similar catchment’s area.

\textsuperscript{13} The nearest neighbor measure Rn was 0.98 which means that the distribution of settlements in the area were located at random (for perfect randomness Rn value must equal 1). But that is because the settlements of the periphery (Ichacatoyac, Jicayan, Tuliman, Quecholtenango and Silacayoapan are having a great influence on the mean value of the observed distance. If such places are removed from the sample the Rn tends to values much lesser than 1, showing a tendency to cluster.

\begin{align*}
Rn &= \frac{Do}{De} \\
Do &= \sum_{i=1}^{n} di \\
De &= \frac{1}{2} \sqrt{\frac{A}{n}} \\
D_e &= 0.5(A/n)^{0.5}
\end{align*}
As a rule of thumb, I propose that wherever Thünen’s rings 1 and 2 of two different polities overlap, the chances are high that political and territorial competition may ensue. Clustering may indicate a situation of competition and conflict for scarce, reliable, and localized resources (Carneiro, 1970, 1978, 1985; see discussion in chapter 4).

I have plotted three rings around each settlement in figure 5.42. The yellow ring has a radius equal to the mean middle distance to each nearest neighbor (MMDNN); this ring represents the agricultural hinterland in my adaptation of Von Thünen’s model. A green ring was drawn with a radius equal to MMDNN + 1 standard deviation (7.40 km). This may be best thought of as the outmost ring 3 used to represent the territory and political buffer between centers. The red ring was drawn with a radius equal to MMDNN – 1 standard deviation (1.24 km). It represents ring 1 of the model containing the regal-ritual core of the polity as well as its inner residential land use.

From figure 5.42 one may identify several clusters of overlapping catchment territories. Clustering is especially high around Tlacozauitlan, Olinala-Huamuxtitlan, and in the valley of Tlapa. The latter cluster embraces an area running from Chiepetlan in the north to Yoallan in the south and from Chiepetepec in the west to Ixcateopan in the east.

What is it going on in those areas where regional settlements are clustered so close to one another? Later in this chapter I will address this question for the valley of Tlapa. Whatever caused this clustering the concern here is whether competition within these clusters contributed to the expansion process of Tlapa-Tlachinollan.

Where:
Rn=nearest neighbor measurement
Do=Observed distance=8.7
De= Expected distance=8.92
A=Area= 16896 sq. km.
n=size of sample= 53
di=distance to the nearest neighbor (see figure 6.3).
Table 5.1. Estimate of the mean middle distance to the nearest neighbor for the places mentioned in the Codex Mendoza and codices of Azoyú 1 and 2.

<table>
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<th>No.</th>
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<th>Distance to NN (Km.)</th>
<th>(Distance to NN)/2; (Km.)</th>
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Figure 5.42. Thunen rings based on the mean of the middle distances to the nearest neighbors (MMDNN). Yellow radius=MMDNN=4.35 km; Red radius=MMDNN-1 Standard Deviation=1.24 km; Green radius= MMDNN+1 Standard Deviation=7.40 km. When red or yellow circles overlap there is chance of political conflict.
5.6.2 Scenario 2. Sequence of the expansion.

When the sequence of conquest is analyzed sequentially and numbers are assigned to consecutive conflicts reported in the codices of Azoyú 1 and 2 (Table 5.2 and figure 5.43), it is difficult to find an overall, logical strategy of territorial expansion. Instead Tlachinollan’s expansion resembles a sequence of uneconomic, non-planned skirmishes whose leaders were just solving problems on an ad hoc basis (figure 5.44). Nevertheless, I seriously doubt that Tlachinollan’s leaders gained control of more than 100 villages by pure chance alone.

When the individual conflicts are aggregated by stages of expansion using the 7 year framework provided in each folio of Codex Azoyú 1, the panorama becomes more understandable (figure 5.45). We see that in stages 1 and 2 and part of stage 3, Tlachinollan’s leaders engaged in the competition for control of its immediate hinterland. The codices of Azoyú do not show how Tlachinollan took over the western side of the valley of Tlapa perhaps because these events occurred before A.D. 1300. What the documents depict is how Tlachinollan defended itself from its nearest hostile neighbors outside the valley and how it attacked and defeated them. In these first stages of expansion Tlachinollan was both securing resources and beginning its expansion as an act of self-defense. I think both interpretations are complementary and not mutually exclusive.

During the third stage of expansion there is a shift away from simply controlling its agricultural hinterland. Tlachionallan’s leaders expand into territory controlled by the rulers of Cuitlapan. I propose that the intentions behind this move were to gain access to the cacao, feathers shells, fish and other valuable products available along the Pacific coast. Gold and gemstones in the area around Cuitlapan might also have attracted the attention of Tlachinollan. One must remember that the main tributary product of the Tlapa province to Tenochtitlan was gold.

Two places conquered during the fourth stage (Yoso-None and Tlaxco) may reflect the consolidation strategy started in the previous stage or may have threatened the control of Tototepec. I believe that Yoallan was a competing unit, although
Table 5.2 Stages of expansion and sequence of conflicts.

Stage 1.
1. Tototepec (1349 A.D.)
Stage 2
2. Teteltipa (1356 A.D.)
Stage 3
3. Huilotepec (1412 A.D.)
4. Tlazallan (1412 A.D.)
5. Ocoapa (1412 A.D.)
Stage 4
6. Yoso None (1426 A.D.)
7. Atitztac (1426 A.D.)
8. Tlaxco (1426 A.D.)
Stage (Resistance)
9. Quecholtenango (1433 A.D.)
10. Tlazallan (reconquest, 1433 A.D.)
Stage 5
11. Totomixtlahuaca (1440 A.D.)
12. Fields of Cacao (1440 A.D.)

Stage 6
13. Oztotzinco (1447 A.D.)
14. Petlacala (1447 A.D.)
Stage 7
15. Yoallan (1468 A.D.)
16. Cuitlapan (1468 A.D.)
Stage 8
17. Atlamaxac (1475 A.D)
18. Ixcateopan (1475 A.D)
Stage 9
19. Atlamajalcingo del Monte (1489 A.D.)
Stage 10
20. Chiepetepec (1503 A.D.)
21. Tototepec (reconquest, 1503 A.D.)
Stage 11
22. Alcozauc (1510 A.D.)
23. Atlamajalcingo del Monte (reconquest, 1510 A.D.)
24. Hueycatenango (1510 A.D.).

Figure 5.43. Sequence of conflicts according to the codices of Azoyú 1 and Azoyú 2.
The actual position of number 12 (Fields of Cacao) is unknown.
Figure 5.44. Scenario of uneconomic, non-planned sequences of conflict.

Figure 5.45. Different stages of expansion (from 1-11) organized according to a 7 year framework. Letter R represents the stage called “resistance”, where there was not territorial growth.
according to the genealogical Lienzo of Tlapa-Azoyú, its leaders belonged to the same linage as the lords of Tlachinollan. It is likely that Yoallan and Tlachinollan were allies at this stage and the defeat of Tlaxco and Yoso-None related more to Yoallan’s conflicts with those places than to Tlachinollan’s direct interests.

The conquest of Atlixtac in this stage on a different and distant front may reflect problems of security in relation with threats coming from the Tlacozautitlan or Chilapa areas. As a result, this conquest gave Tlachinollan control of an important trade center on the route to Chilapa and the valley of Morelos via Tlacozautitlan.

During the fifth expansion stage, Tlachinollan’s efforts to get to the coast were finally rewarded. I think that the plan to possess a direct access to the coast was first envisioned around A.D. 1412 during the third stage of expansion. Although it took Tlachinolan 28 years to accomplish this plan, the benefits were great. We can get some idea of the pecuniary benefits that Tlachinollan received from controlling a town on the coast from the Suma de Visitas. This document informs us that in the middle of the 16th century the coastal town of “Azoyuc” paid each year 62,000 cacao beans in tribute to “Tlachinulan” (Tlachinollan) as well as 56 pesos of gold and 4,000 cacao beans every 80 days to the Calpixque (tribute collector) of Tlachinollan.14.

Examination of figure 5.45 reveals that Tlachinollan’s expansion followed a pattern of leapfrog sprawl and infilling after stage 5. This curious pattern suggests both territorial consolidation and the practice of a complex pattern of diplomacy among the polities closer to Tlachinollan. Once Tlachinollan subjugated its outermost polities, it shifted its attention to the domination of its allies.

The sixth stage of expansion focused on domination of the Nahua villages in the western sector of the valley of Tlapa. It is interesting that this is the point when Tlachinollan had to forget about its expansion to the coast and turn its attention to its

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14 I consider very interesting the reference that “Azoyuc” had political boundaries with “Totomiztlabaca” (Totomixtlahuaca), this may give more support to the idea that Field of Cacao might be Azoyú, Guerrero.
northern frontier. This was also the last stage of Tlachinollan’s expansion as a completely independent polity.

During the seventh stage of expansion Tlachinollan defeated the powerful polities of Cuitlapan and Yoallan, but this time, in the name of Tenochtitlan. At this time Lord Rain was the Huitznahuatl (constable) and Tlacatectli (governor) of the Aztec province of Tlapa. From the Palimpsest of 20 Mazorcas we know that this was a conflict of major dimensions. Lord Rain together with the northern Nahua villages and Aztec forces completely modified the ancient structures of regional power and destroyed the foundations of the traditional Mixtec and Tlapanec lineages that had ruled the area since A.D. 900. No doubt this was the most important conflict that Tlachinollan’s leaders faced throughout its Prehispanic history. It reflects its renewed interest in controlling access to the coast, this time for the Aztecs. Tenochtitlan and Tlachinollan’s ambitions matched perfectly.

During the 8th stage of expansion Tlachinollan defeated several of its old allies (Atlamaxac and Ixcateopan). I have already proposed that this was due to a problem in succession between Lord Monkey and Lord Xihuacoatl. The conquest of Ixcateopan finally opened the doors of the fertile valley of Huamuxtitlan. Unfortunately Tlachinollan could not enjoy this conquest because of the internal political distress that it provoked.

The Aztecs finally took over and Tlachinollan became another tributary province subject to the Triple Alliance. Even if the leaders of Tlachinollan continued to be recognized as the native lords of the region, I guess they lost some of the prestige that Lord Rain once had. This is the moment when the village of Tlapa became the true political center of the Montaña region and when Aztec officers began to administrate the province from it. It appears that at least one Tlacochcalcatl
(military governor), two Huitznahuatl (constables) and one Calpixque (tribute collector) were appointed to Tlapa

The 9th and 10th stages represent conflicts of territorial consolidation. In stage 11 we see the conquest of Alcozaucan, an important Mixtec polity, and the subjugation of the fortress of Hueycatenango. At this stage Tlapa-Tlachinollan seems able to have maintained military campaigns in different parts of the polity.

After conquest it is likely that Tlachinollan and the defeated polity became allies. The lords of these subjugated polities could always appeal to Tlachinollan for help in case of local conflict with independent neighbors. Tlachinollan could easily have taken advantage of these types of local problems and used them as an excuse to invade independent polities. But in the same way Tlachinollan’s leaders could have gotten drawn into local conflicts that they wanted to avoid because of their role of “magistrate”. It seems possible that allied leaders undertook some of these conquests but Tlachinollan took credit for them in the codices. These scenarios provide alternative explanations to the sometimes chaotic order of conquests.

So far I have assumed that each military operation emanated from Tlachinollan. Logistically this is an oversimplification of the problem. Figure 5.46 provides a better idea of how military movements were made. The basic assumption to create such figure was that each new conquest started either from Tlachinollan or from the closest place previously subjugated. Supplementary support or help might have arrived from other close allies or subordinated villages.

When the information is arranged in this way, one observes how some settlements become strategic nodes into a network of military flows. This is especially true for Tototepec, Ocoapan, Teteltipan and Atlitlac. Some of the axes in the figure duplicate actual paths and communication routes of the area. Examples

15 Based on the depiction of two individuals in folio 9 of Codex of Azoyú 2, who hold the banner insignias reserved to the Huitznahuatl officers in Codex Mendoza. The Lienzo of Chiepetlán 1 depicts a modified glyph of the Tlacochcalcatl (“Keeper of the House of Darts”; Berdan and Anawalt, 1992, I:237) near to Tlachinollan’s place name. A Calpixque officer was depicted attached to the place name of Tlapa in folio 1 of the reverse side of the Codex Azoyú 2.
Figure 5.46. Different stages of expansion and the probable pattern in which military movements were undertaken.

Figure 5.47. Shifts in the mean center of Tlachinollan’s settlement system after each stage of expansion. Note that after the conquest of Totomixtlahuaca (stage 5), the mean center shifted northwards during stage 6. After the 8th stage of expansion (A.D. 1475) the mean center stabilized near Ocotequila.
include the axes of Tlapa-Ocoapan-Totomixtlahuaca-Costa Chica, Tlapa-Tototepec-Yoso None -Tlaxco-Atlamajalcingo del Monte, and Tlapa-Teteltipa-Atlixtac.

It is hard to demonstrate archaeologically that the territorial expansion of Tlachinollan actually took place. Nevertheless, in chapter 6 I evaluate the sequence of expansion against the actual size of the archaeological sites. And I compare the relative power of a site with the order of its conquest. I predict that sites conquered after A.D. 1461 should be more powerful than those conquered during the first stages of expansion.

5.6.3 Scenario 3. Direction and rate of the expansion.

The strategy of expansion is a physical reflection of the goals and political ambitions of Tlachinollan’s leader. With this idea in mind I have calculated the arithmetic mean center of the polity’s settlement system for each stage of expansion. The arithmetic mean center is a statistical analysis for areal distributions concerned with identifying the central tendency or the “center of gravity” for a group of points16 (Smith, 1975:189). I plotted shifts in the settlement system’s mean center in figure 5.47 beginning with its first conquest in A.D. 1349. It is interesting to see Tlachinollan’s fast expansion in a southwestern direction until A.D. 1440. After that point there was a dramatic shift to the north with the center of the polity eventually stabilizing around Ocotequila. The stabilization of the mean center after 8th stage indicates that the polity was growing lateral concentrically by annexing polities adjacent to previously conquered areas. In a way this shows a slow down in the original impetus of Tlachinollan’s expansion. One may guess that in stage 8 diminishing returns to scale had begun, and Tlachinollan reached a threshold where the costs of expansion were higher than the benefits.

\[ \bar{X} = \frac{\sum_{i=1}^{N} X_i}{N} \quad \bar{Y} = \frac{\sum_{i=1}^{N} Y_i}{N} \]

Where: Xi and Yi = coordinates of the individual points; N= Total number of points.

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16 This is expressed mathematically: \[ \bar{X} = \frac{\sum_{i=1}^{N} X_i}{N} ; \quad \bar{Y} = \frac{\sum_{i=1}^{N} Y_i}{N} \]
In a way this pattern reflects both the ambitions and weaknesses of Tlachinollan’s leaders. Why the rush to go south followed by a shift to the north? If one remembers the regional environmental data presented in chapter three, the answer is a straightforward ecological one; they did not find the northern sector of the Montaña profitable enough to expand in that direction. While true in general terms this explanation does not take into consideration all available data. Some areas of the northern Montaña like the small valley of Olinala and the larger Cañada de Huamuxtitlan valley are quite fertile. Why not to conquer these areas? I think that Tlachinollan did not do it, not because they did not want to, but because they were not able to.

During a 221 year period (A.D. 1300-1521) Tlachinollan grew from 48 to 4619 sq. km. This represents an annual rate of 2.08%\(^{17}\) doubling its size every 32 years. In absolute terms Tlachinollan increased its size by 20.6 sq. km. per year\(^{18}\). If we divide Tlachinollan’s growth in two main periods, one during its pre-Aztec expansion and another under the Aztec influence, we see two distinct growth curves. During its pre-Aztec expansion (A.D. 1300-1461) Tlachinollan grew at a pace of 2.19% per year following an S-shape logistic curve (figures 5.48 and table 5.3). Its rate of expansion rises to above 5% annually, in three points in time which are followed by a slow down in its rhythm of expansion.

\[^{17}\] \[ r = \left( \frac{P_t}{P_0} \right)^{\frac{1}{t}} - 1 \]

Where:
- \( r \) = rate of growth
- \( P_t \) = population observed at time \( t \)
- \( P_0 \) = population observed at time 0
- \( t \) = time elapsed between time 0 and time \( t \).

\[^{18}\] All the statistics were calculated according with the information provided by the codices of Azoyú 1 and 2. Other sources like the Relación de los Obispados and the Suma de Visitas may increase considerably the territorial size of this polity.
Figure 5.48. Area of territorial acquisition during each stage of expansion and the cumulative area. In general terms note the S-shape of the expansion, which indicates a logistic growth of the polity.

Table 5.3. Area of territorial acquisition during each stage of expansion and annual rate of growth.
The pact celebrated between Lord Rain and Huehue Moteczuma’s ambassador injected new energy into the expansion. From A.D. 1461 to 1521 Tlachinollan grew 2,982 sq. km. which represent annual increments of 49.7 sq. km. per year. Perhaps this new phase of expansion was stimulated by the elimination of structural problems that had restrained Tlachinollan’s growth. Coordinated use of both local Nahua warriors and Aztec forces enabled Tlachinollan to engage the ancient Mixtec and Tlapanec dynasties of Yoallan, Cuitlapan and Alcozaua.

Nevertheless figure 5.49 illustrates that this dynamism lasted only a short time. After the conquest of Yoallan and Cuitlapan the expansion curve bends downward indicating diminishing returns in the territorial acquisition. During the period of Aztec influence the annual rate of growth was always less than 3.18% and for the first time in Tlachinollan’s history, one can see annual rates of less than 1%. The Spanish interrupted Tlachinollan’s growth and we do not know whether it would have continued to expand toward the coast or into the Yope region. Whatever strategy was adopted I do not think that its rates of growth would have exceeded 2%. Chances are that it was approaching a zero growth rate, and its cycle of expansion was over. What we do know is that the province remained unified during most of the Spanish administration until it finally collapsed back to its original modules in late 18th century.

I think that one way to archaeologically test these rates of expansion would be through a systematic program of excavation in the regal-ritual core of Tlachinollan, trying to correlate programs of palace constructions with these oscillating rates of growth.
Figure 5.49. Annual rate of expansion. Note how Tlachinollan’s growth was more dynamic during its early stages of expansion. There is a breakpoint at A.D. 1461 to show the different dynamism of the territorial growth between Tlachinollan’s pre-Aztec expansion and that after Aztec political influence. The polity grew more in absolute terms during the Aztec influence, but at a slower pace.

Figure 5.50. Ideal shape of Tlachinollan if located on an isotropic plain with no political or economic competition.
5.6.4 Scenario 4. The ideal shape of the borders and the costs of expansion.

The average distance separating Tlachinollan from its subject polities has been estimated at 23 km. This means that at least 50% of the regal ritual cores of subordinated places could be reached in a day’s walk. The farthest political centers from Tlachinollan’s rule were located 50 km away and could be reached in a 2-3 days walk depending upon topographic conditions. I have drawn two circles around Tlachinollan, one with a radius of 23 km and the other with a radius of 50 km. I assume that the political power of Tlachinollan would be strongest at the center of the first circle and diminish in an outward direction producing a “loss-of-strength gradient” (see chapter 4). I also assume that the ideal shape of Tlachinollan, if it were located in an isotropic plain without competition, would be a circle somewhere between ring 1 and ring 2 in size (figure 5.50). When the ideal territory shape is contrasted with the polity as described by the codices of Azoyú 1 and 2 (figures 5.51 and 5.52), it is striking to note the southwestern direction of its expansion. The polity is so distorted that its political capital is located near its eastern margin rather than in its center.

This pattern is telling us something about the costs of expansion. Theoretically polity enlargement should follow lines of minimum cost. If the topography alone is used to predict the direction of growth, then Tlapa should have expanded to the north along the fertile bottom land of the Tlapaneco river valley. However, the opposite was true with most expansion occurring over rugged terrain to the southwest. I think that political barriers were the cause of this pattern. I propose that Tlachichinollan did not expand to the north and to east of the Montaña because the cost of conquest was higher in these directions than it was to the southwest. In same way, it did not expand to the north during the Aztec political influence because that area was already organized as an Aztec tributary province administered from Quiauhteopan.

I have suggested that the strip of land where both Quiauhteopan and Tlapa provinces meet was a high conflict zone (figure 5.42), and that the Lienzo of Chiepetlan 1 supports this proposal. But, can this be observed archaeologically? I
Figure 5.51. Comparison between the ideal shape of the polity and the shape of Tlachinollan’s territory during its last stage of independent expansion (A.D. 1440-1447).

Figure 5.52. Comparison between the ideal shape of the polity and the shape of Tlachinollan’s territory after A.D. 1510. Under the Aztec political influence.
propose that if this was a conflict zone, then throughout this area archaeological sites would be built in protected places with well developed defensive features. I would also expect to find powerful polities to the north and east of the valley represented archaeologically by large sites with high concentrations of population. I will test this idea in chapter 6.

5.7 Chapter overview.

Tlapa-Tlachinollan’s expansion transformed an average size polity into the dominant kingdom of eastern Guerrero. From A.D. 1300-1521 it expanded its territory from 48 sq. km. to 4,620 sq. km doubling its size every 32 years. The first stages of expansion were explosive with averages annual rates of growth above 5%. During its independent expansion it grew in a logistical way, losing impetus around A.D. 1450’s. as a result of harassment by Nahuatl groups encroaching its northern frontier. It may also be related to structural problems related to the administrative organization of the polity.

After Lord Rain established a pact with the Aztecs, the polity experimented a renovated surge of expansion. Although it increased its territorial size more than ever in absolute terms, its rate of expansion declined. Problems of succession seem to have encouraged the first stages of expansion. The ambition to control the trade route to the coast was probably the major driving force for Tlachinollan’s leaders.
Chapter 6. An archaeological analysis of the territorial expansion of Tlapa-Tlachinollan.

And so King Motecuhzoma, seeing that he and his people were at peace, that he was loved and respected but also feared, was determined to build a house for his god…

Four dignitaries then were sent to summon the rulers, in the name of the king of Tenochtitlan… After these lords had arrived and have been accommodated… Motecuhzoma and Tlacaelel requested their presence… Motecuhzoma spoke to them, “…I wish you to consider seriously that our god… has no dwelling place where he can be worshiped. We have decided to build a sumptuous temple dedicated to his name… I command you that as soon as you return to your cities you order your subjects to come to this project bringing the necessary materials of stone, lime, wood, and anything else that may be required for the construction. All this will redound to your honor and happiness. Let there be no negligence; let every man put his shoulder to the task so that it can be finished quickly.”

“O masters, O Aztecs,” the rulers of those cities responded, “…We have heard your command and it will be done as well as quickly as possible, since it is our duty to obey in this and in all things you wish to command…”

They were ordered to bring heavy stone for the foundation and light stone for the building, together with lime and wood… Then each one returned to his city, where he advised his people to get ready the material for the temple, a task that was done immediately and diligently.

(Durán 1994: 130-132).

Ethnohistory has provided excellent information about political competition in eastern Guerrero and how Tlapa-Tlachinollan became the region’s dominant power. The next step is to overlay the archaeological information and see where archaeology and ethnohistory take opposite directions. Nevertheless this comparison cannot be mechanical. Archaeological evidence needs to be interpreted in terms of human behavior and how this behavior leaves its mark on the landscape. In this chapter I test the hypothetical scenarios provided by the ethnohistorical documents. Settlement pattern distributions, site area, public architecture and trend surface analyses of Postclassic ceramics are the major archaeological markers used during these tests.
6.1 The Archaeological markers.

In chapter four I discussed general processes of political growth and expansion. The question is how are these patterns recognized through archaeological remains. Is it possible to demonstrate archaeologically the territorial control of the dominant core over a subjected province? One can presume that material remains in the form of architectural styles or the frequency of core-produced objects provide clues about subordination? Historical evidence indicates that the most successful expansive polities provoked radical changes in the languages, technology, political institutions and even the gene pool of its subjects. Although in theory all this can be traced and used by archaeologists, in practice it is a difficult undertaking, specially for areas where domination was shortlived or when control was hegemonic. It is possible that trans-cultural expansion and the domination of an autochthonous cultural area by a polity from a completely different cultural area may be easier to identify (e.g. European expansionism over America, Africa and Asia). The situation examined here is one of intra-cultural expansion and domination.

Scholars interested in empires are the ones who have undertaken recent studies of expansionism from the point of view of archaeology (Alcock et.al. 2001). I think that the same processes used to describe large pre-industrial empires also apply to lesser political entities and that is why I have used of the neutral term polity throughout this thesis instead of state or empire. This could be polemic, especially when we are presented with large lists of traits that need to be fulfilled to differentiate between empires and non-empires1. But what I want to rescue from this discussion are of the archaeological markers used to detect territorial expansion archaeologically, not the proper identification of an empire.

1 According to Katharina Schreiber (2001:71), empires are states that expand, usually rapidly, and at least initially by conquest. Empires are subcontinental in size and have a population in the millions. Empires control diverse ecozones, and they are diverse culturally; they are organized to handle this diversity. Empires have central administrations; they support themselves through the extraction of tribute or the payment of taxes. Empires maintain standing armies. Empires maintain sovereignty over all people and territory in their realms.
Many theoretical tests have been proposed to identify the expansionist process from archaeological contexts (Alcock et al. 2001). Nevertheless, few have produced reasonable results using actual archaeological information. Schreiber (2001:71) stresses one important attribute of imperial expansion that I think is applicable to most expansionist processes. This is that a successful expansive polity may “grow so rapidly that to an archaeologist it may appear as a single episode”. If this is true it presents an important obstacle to the archaeological study of territorial expansion.

Nevertheless, diachronic studies have been used to monitor change before and after the expansion process. Michael Smith has found that previous to the Aztec expansion over the Valley of Morelos, imports from the Basin of Mexico are equal to imports from other parts of Morelos. After the Aztec domination the Basin of Mexico became the dominant source for imported ceramics. Furthermore, “the regional ceramic data suggest a declining level of wealth or standard of living at many of the sites after Aztec conquest (Smith 2001:152).” Interestingly Smith’s data also shows an increase in cotton spindle whorls and spinning bowls from pre-Aztec to Aztec domination, which could be related to increased tributary demands of cotton cloth.

In the case of military domination, it has been suggested that the presence of military garrisons at strategic locations provides direct evidence for the existence of standing armies (Schreiber 2001:71). It remains to be seen if such garrisons were built to maintain control over a subject area or if they were built by the threatened polity to avoid domination. In any case military infrastructure provides the best clues for programs of aggressive expansionism. If the expansive polity posses a material culture different from their rivals (which is very difficult to recognized in areas of peer polity interaction), then the spatial extent of its dominions may be inferred. This requires caution, however, because trade of portable objects can create larger areas of spatial interaction than the actual area of direct or indirect political control (Schreiber 2001:72).

Another effective archaeological marker of expansionism is provided by settlement pattern information. The basic assumption here is that the capital of an
expansive polity who imposes tributary obligation to subject areas will achieve prominent size and will become hierarchically the dominant settlement within the system. There certainly are exceptions to this rule (e.g. Sparta after the Peloponnesian war, Thucydides, I 10), but most of the historical known cases support this assumption. I will develop this idea further in this chapter where I will give a great weight to changes in settlement patterns.

6.2 Correlating ethnohistorical and archaeological data.

The best way to evaluate whether the codices and archaeology diverge is to see how accurately the documents guided us to the location of Postclassic archeological sites. My survey was designed to find the key sites mentioned in the documents. In order to reduce the area of eastern Guerrero to a manageable size, I decided to visit only the towns located in the Aztec tributary provinces of Quiauhteopan and Tlapa. For logistic reasons I concentrated the key site survey to the immediate areas influenced by Tlapa-Tlachinollan, otherwise the cost of the research would increase exponentially.

The first step was to create a list of candidate towns whose names had similar orthography or phonetic value to the place names found in the codices. I refined this list using additional Colonial documentary sources to reduce the number of towns to visit. The sources used for this purpose include the Suma de Visitas, the Relación de los Obispados, the Relaciones Geográficas del Siglo XVI, and Los Memoriales del Obispo de Tlaxcala. Documentary reduced the final list to 32 towns that were visited during the Key site survey (table 6.1). A questionnaire was used to evaluate how closely a place name depicted in the documents corresponded to an actual archaeological site. If it did, then I wanted to know if the archaeological site was occupied during the Postclassic period and how large and complex it was. Sites were dated to the late Postclassic period on the basis of ceramic types that included Type 1 Tlapaneco Burdo Grano Blanco (T1BGB), Type 2 Tlapaneco Burdo Laminar (T2BL), Type 3 Tlapaneco Burdo Laminar Mica (T3BLM), Aztec wares (Type 4), Type 14
Table 6.1. List of towns with similar names that were selected to be visited during the key site survey and the results obtained.

<table>
<thead>
<tr>
<th>Town's name</th>
<th>Visited</th>
<th>Archaeological site</th>
<th>Postclassic ceramics</th>
<th>Size Ha.</th>
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<td>Yes</td>
<td>Yes</td>
<td>13</td>
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<td>Alcozahua</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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<td>Allamaxac</td>
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<td>Yes</td>
<td>Yes</td>
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**Unknown:** 1) the site was very destroyed by urbanization or agriculture; or 2) The survey was only partial.

**Not Surveyed:** I was unable to survey the area because 1) no permit was granted by owner or local authorities or 2) the town was not visited.
Mica Olinala (T14MO), and Guinda Sobre Blanco (Type 23). The site size was calculated using the total continuous area over which archeological remains were found. The complexity of the site was inferred from the number of structures (mounds, terraces, and plazas), and the presence of ballcourts and fortifications. I was also interested to know if there were any local oral traditions that could be associated with the events narrated in the codices.

If the geographic information contained in the codices was reliable and the interpretation of the place names was correct, then I expected a high percentage of success in locating Postclassic archaeological sites. Because I believed that the sites mentioned in the documents were important in the regional system, I expected to find large sites with specialized structures such as ballcourts and defensive fortifications. The results of the key site survey are shown in table 6.1. I visited 28 of the 32 selected towns, only two of which I was not able to survey. Thus my list was reduced to 26 towns, that considered my sample of “expected successes”. From this list two sites returned negative results (Malinaltepec and Teocuitlapa) and are considered to be “failures”. Thus, I obtained a net balance of 24 “observed success” which means that 92% of the time a place name in the codices guided me to an archaeological site in the field. This was a high rate of success, but the question remains as to how many of those sites were actually Postclassic in date. Ceramic analysis indicates that 22 of the 24 sites have definitive evidence of Postclassic ceramic presence, which means 84% observed successes compared with the 26 expected successes.

With regard to settlement size I assumed that a site had to have at least 113 households be considered a site of importance. This number represents the median number of the tributary households living in a Colonial Cabecera town\(^2\) in the region during 16\(^{th}\) century. I could not estimate the number of households in my survey, but I estimated that the average residential space occupied by a household in a contemporary rural town in the region was around 300 sq. m. (house and courtyard).

\(^{2}\) Estimated from a sample of 12 Cabecera towns mentioned in the Relación de los Obispados.
Assuming that there were not open spaces between residential areas, then a settlement of 113 households would have occupied a minimum area of 3.4 hectares. Again 21 out of 24 sites were larger than 4 hectares (80% of observed successes compared with the 26 expected success). Xolmolpan was the only site that failed the test, and in two cases I was not able to estimate the site size accurately (Petlacala and Tlazalan). I decided not to evaluate the field of “number of structures” in table 6.1, because most of the architectural structures have been destroyed by present urbanism and agriculture. Nevertheless, I can say that seven of the 24 sites had ballcourts and most of them had 5 or more standing structures, some of considerable volume.

Oral tradition was useful to find abandoned settlements that do not show up in maps or demographic databases. Examples include Tlachinolticpac (Cerro Quemado-Coquera), Teteltipa, Yoso None, and Xocotla. Oral tradition was also helpful to know what settlements were considered to be “Pueblos Viejos” and when or how some of them were abandoned and moved to different places. Nevertheless, oral tradition was useless for clarifying events reported in the codices of Azoyú.

I recorded accounts of ancient rivalries between towns, especially those who share borders, no matter what their ethnicity. I also heard interesting stories in several towns. For example in Huitzapula they talked of “wars” against “Mexicans”. In Quechultenango somebody told me that the town was a stronghold to combat the Yopes. In Olinala I heard about an interesting war between the good king Olinalatzin and the bad king Temalacatzin and how they fought each other to control the valley of Olinala; in this case Temalacatzin lost the war and was expelled to the north of the valley. In the Mixtec town of Tototepec in the municipality of Tlapa, somebody told me that they are descendents of “8 Deer”. The inhabitants of the small town of Ixcateopan in the municipality of Alpuyeca, claimed that this town was the “true Ixcateopan” where the last Aztec emperor, Cuauhtemoc was born. I need to say,

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3 Based on the la Mota y Escobar (op. cit.), I already suspected that such place was either Alpoyeca or San José Buenavista.
however, that most of these oral accounts came from interested local schoolteachers who have had contact with other scholars, history books, and published codices.

It could be the case that the region is packed with archaeological sites and that the results obtained in table 6.1 are meaningless, because choosing towns at random would give similar results. I decided to choose 23 towns at random that were not mentioned in the codices and visit them to compare the results. I was not able to visit three of them so my statistics will be calculated with what I found in 20 towns (table 6.2). Basically only 4 towns out of 20 (20% of successes) had some archaeological evidence of previous habitation\(^4\). Only 2 of these four sites were occupied during the Postclassic period representing a 10% of successes rate. Furthermore, two of these sites were larger than 3.4 hectares and only one had architecture.

These results suggest that the documentary sources reliably locate archaeological sites that composed the regional Postclassic settlement system. Of course there are still many problems with these identifications. One cannot be sure that the site found really corresponds to the place named in the document. It is always possible that it is a coincidence to find an important regional site beside the colonial or contemporary town that has a similar phonetic name to a glyph in the codex. It might well be, but that is why I used several independent sources at the same time to minimize such errors.

A worse problem is when the codices are silent. Neither the Azoyú codices nor Codex Mendoza depict a number of important Postclassic sites along the northern valley of the Tlapaneco River in the Cañada de Huamuxtitlan. This is a special group of three major sites around the town of Huamuxtitlan: Humuxtitlan-Tecoapa,

\(^{4}\) The main problem with this area, which lacks air photo mosaics and it is of difficult topography, is that one is very dependable of local guides and informants. The jealousy of the local authorities needs to be considered also. It has happened to me in several towns that during a first visit I have been told that there is no archaeological evidence, and in a second or third visit I discover that they were just being cautious. This may decrease dramatically the reliability of the key site survey, however, it continues to be a good approach to areas with scarcity of research or difficult topographic conditions.
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Table 6.2. List of towns that were randomly chosen to survey to compare with the key site survey in table 6.1
Figure 6.1. Important Postclassic sites not mentioned in the codices. Interestingly this trio may well rival Tlapa-Tlachinollan in size. Northern sector of the Huamuxtitlan river.

Figure 6.2 Distribution of Postclassic sites in the northern sector of the Montaña region. Note the concentration of sites along the rivers.
Huamuxtitlan-Los Cuartos and Cuateteltzin-Coyahualco (figure 6.1). These sites together rival Tlapa-Tlachinollan in the size of their public architectonical display.

Gerhard (1972: 321) thinks that “Cuauhmuchtitlan” was an independent kingdom controlled by the Mexican garrison at Quiauhteopan. But if that is the case, I do not understand why such an enormous altepetl was not registered in the Codex Mendoza when smaller ones were reported.

To avoid this kind of bias I decided to intensify the key site survey in the high Montaña, visiting more towns than those mentioned in the documents. In the same fashion an independent survey conducted using transects every 300 meters was undertaken on the alluvial plain and piedmont of the valleys of Huamuxtitlan and Tlapa identifying more Postclassic sites than were mentioned in the codices.

6.3 Testing the scenario of areas of high conflict.

In chapter 5, I presented the possibility that competition between sites was high along the main valleys of the Tlapaneco River and especially around the valley of Tlapa. Perhaps the aridity and unreliability of the rainfall in the northeastern sector of the Montaña forced sites to cluster around springs as well as along the edges of the rivers. Agriculture is impossible in this northeastern sector of the region during the dry season (November-April) and risky during the rainy season (May-October; see agricultural discussion in chapter 2). Nevertheless, irrigation agriculture is possible along the margins of the Tlapaneco River and yields crops all year. Such land is quite scarce and political and aggressive territorial competition for its control seems to have ensued.

This proposition can be tested archaeologically. But first we need to see the distribution of the Postclassic sites in the region (figure 6.2). Sites are concentrated along the valleys and near the permanent streams. This pattern becomes clearer when one analyzes the settlement system together with the average rainfall during the rainy season (May-October). It is proposed that in more arid areas the concentration of settlements around permanent water sources is denser (figure 6.3). This reinforces the
idea of a correlation between regional competition and the control of small valleys where irrigation was possible.

In the case of Tlachinollan, security should have always been its main concern and early in its development it should have structured an efficient defensive system. Figures 6.4 and 6.5 show the distribution site sizes in the region that I believe may be used as a proxy to infer the concentration of political power. Figure 6.4 illustrates that the largest sites in terms of occupied area are clustered around Tlachinollan in the eastern portion of the valley of Tlapa. With respect to size Tlachinollan is several times larger than the sites located around it.

Things are a little bit different for the long narrow valley of Huamuxtitlan (figure 6.5) where there were two clusters of large sites instead of one. One is located in the northern sector of the valley around Huamuxtitlan-Tecoapa and the second is in the southern sector which contains the three sites of Ixcateopan, Xocotla and Alpuyeca-Las Minas. The fact that there are two clusters of sites at opposite ends of the valley may indicate that the valley was politically divided into at least two polities. Another difference of the valley of Huamuxtitlan is that the sites located along it are more homogenous in size. Even though Huamuxtitlan-Tecoapan is larger than other sites in the valley, it is not several times larger. Why is it different in the case of Tlachinollan? I believe this is the first clue that the archaeological evidence provides to suggest that the Tlapa-Tlachinollan’s political system grew beyond its fertile valley.

But how might control of a valley’s irrigation system have helped Tlachinollan’s leaders to expand? Following a political approach, I assume that control of the irrigation system promotes agricultural intensification and is in the self-interest of the leaders as it increases their prestige and power. Agricultural surplus can be utilized to create and acquire prestige objects that attract people (Earle 1997). The link between agricultural intensification based on elite management and territorial expansion becomes clear when we understand that the territory under the sovereignty of a polity is the source of its power.
Figure 6.3. Distribution of Postclassic sites in the northern sector of the Montaña region. Note the concentration of sites along the rivers, especially in the area with the lowest rainfall during the rainy season (700-800 mm.).

Figure 6.4. Concentration of sites weighted by area size. Note the concentration of the largest sites in the eastern portion of the valley around Tlachinollan.
Figure 6.5. Concentration of sites weighted by area size. Note the concentration of the largest sites in two clusters: one in the northern sector of the valley around Huamuxtitlan and the second between Ixcateopan and Alpuyeca.

Figure 6.6. Distribution of irrigation fields in the basin of the Tlapaneco River.
Polities are composed of individuals, families, and larger social groups that compete internally for resources distributed over space. Hence in the end, territorial expansion is just the physical manifestation of the internal social struggle over resources between elites and subject groups within the polity. It is what motivates the inter-polity competition between regional elites.

I originally hypothesized that Tlapa-Tlachinollan was able to expand at the expense of its neighbors due to a combination of locational advantages. Its two fundamental advantages were its strategic position on the trade route between the coast and Central Mexico, and the amount of irrigation land that it controlled. Using a multi-spectral Landsat image I calculated that there are 3,130 ha. of alluvial land supporting irrigation farming in the valleys formed by the Tlapaneco River (figure 6.6). I proposed that in prehispanic times a similar amount of highly productive land was monopolized by a few polities distributed along the Tlapaneco River.

Nevertheless, Tlachinollan originally had control over 12.7% of the flood plain (398.8 hectares\(^5\)). This was enough to give it a significant advantage over neighboring polities without irrigation land and those distributed throughout the Sierra Madre del Sur mountain range.

Other polities located in the valley of Huamuxtitlan controlled more irrigation land (73.9%, 2314 ha.) and represented the principal rivals of Tlachinollan. Nevertheless, The Relación de los Obispados reports that during the early 16\(^{th}\) century, two important altepeme from the valley of Huamuxtitlan (Xocotla and Alpuyecan) were politically subordinate to Tlachinollan. Similarly the Codex Azoyú 2 tells us that Ixcateopan was conquered by Tlachinollan in A.D. 1475. What this suggests is that somehow Tlachinollan managed to dominate those polities and obtain control over 30% of the irrigated land in the southern valley of Huamuxtitlan. Only the northernmost polity of Huaxmuxtitan could avoid Tlachinollan’s control and

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\(^5\) This the amount of irrigation land in the small valley of Tlapa.
remained independent along with the Nahua polities in the province of Quiauhteopan-Olinala.

While this hypothesis explains the distribution and nature of the archaeological remains along the Tlapaneco River, it has one problem. During my field research I realized that the irrigation fields were not natural alluvial deposits, but were hand-made (anthropogenic) constructions. These fields were built as artificial enclosures across the rocky valley floor to direct and preserve the deposition of alluvial soil (see chapter 2). This directly impacted my primary assumptions. I had taken for granted that there was a fixed amount of land available for irrigation and that the possession of those plots was the target for the early stages of Tlachinollan’s territorial expansion. But with this new evidence I realized that the amount of irrigable land and good alluvial soil was variable through time and that their growth or contraction was dependent on human choice and management. Since it was apparent that large areas of irrigation fields were artificially built, I had to consider that centralized leadership may have encouraged and perhaps even supervised their construction and expansion.

Fortunately the way the Trompezón irrigation system is constructed leaves conspicuous archaeological traces that help reconstruct when and how it grew (see chapter 2). I hypothesized that it is possible to correlate periods of growth in irrigation areas with political events in the Montaña of Guerrero, specially the territorial expansion of Tlapa-Tlachinollan in the 15th century. From the codices Azoyú 1 and 2 and the Relación de los Obispados I estimated that in a period of 221 years (A.D. 1300 to 1521) Tlachinollan was transformed from a small polity of 48 sq. kilometers to a regional power holding sway over more than 4000 sq. kilometers, and a population of over 150,000 people that was distributed across 112 large settlements. The early frenetic growth of Tlapa needed to be financed and I propose that this was done by intensive farming in the core of valleys of the Tlapaneco River. I think that Tlachinollan’s leaders encouraged the construction of more Trompezones and the expansion of existing ones.
From the Codex Humboldt Fragment 1 (figure 6.7) we know that Tlapa-Tlachinollan nobility had exclusive rights over the best plots of irrigated land within the valley, supporting the idea of elite management and centralization of the “Riegos”. To build and maintain a Trompezón requires the united effort of several households. Seventy eight percent of contemporary Trompezones are less than 25 hectares in size and can be built by 14 to 20 households (figure 6.8). Although only 10% of present day Trompezones are larger than 100 hectares, these plots (larger than 100 hectares) comprise 64% of the total area of the system and require the attention of a large number of households. The presence of large plots enclosed by perimetric barriers may indicate some kind of concentration and centralized managements of the largest plots.

Nevertheless, the issue here is not how many people it takes to build a Trompezón, but who has the right to build it and make use of the alluvial banks. For example, based on the agricultural census for the State of Guerrero (INEGI 1991) we know that in the municipality of Alcozauca only 46 households had access to irrigation plots while the remaining 2,076 households practiced cultivation using rainfall agriculture. This means that only 1 out of 45 households (2%) had access to irrigated areas, creating a group of privileged and wealthy households that are producing two crops per year.

In summary, political expansion has a high cost and agricultural intensification may be one of several strategies used to cover them. In Tlachinollan’s case, I believe that the ruling families had control over the scarce irrigated land and used their surpluses to trade and compete with other lineages. The available space for a Trompezón system like the one found in the Tlapaneco river valley is scarce. Demand for irrigation land to finance elite agendas may have increased competition among polities, and acted as a variable in the process of political elaboration.
Figure 6.7. Above: Distribution of agricultural fields on the alluvial banks of the Tlapaneco River among individuals of high status, according to the Codex Humboldt Fragment 1 (detail). Below, schematic reconstruction of the irrigation fields depicted in the Codex Humboldt fragment 1 on the basis of the actual location of the river edge, Tlapa and the road that runs through the southern piedmont of the valley. Twenty four individuals of high status shared a Trompezon system of some 110 hectares, most of this area continues to be irrigated land, but the city is encroaching on it.
Figure 6.8. Frequency of agricultural fields distributed by the area of cultivation; 78% of the plots are smaller than 25 hectares.
6.4 Did Tlachinollan really expand?

Evaluation of the ethnohistoric documents indicates they are reliable sources of information especially with regard to the location of major communities and their status within the regional system. Are they equally reliable regarding the expansion of Tlapa-Tlachinollan? There are a variety archaeological approaches that can be used to identify the dominium of one society over another (Berdan et al., 1996; Schreiber, 2001; Barfield, 2001; Smith, 2001). Most of them rely on data procured from controlled excavation with an established chronology. Unfortunately, I do not have that kind of data for eastern Guerrero. Thus the only approach I can employ here is an indirect test through the analysis of the Postclassic settlement patterns.

Let’s assume that Tlachinollan actually succeeded in subjugating its neighbors and imposing a tributary system over the defeated polities. The system would be composed of Tlachinollan along with its modular components at the core of the system from which it administered its conquered domain. Within this domain were 9-12 large and formerly independent political centers that in their turn exercised political power over many smaller settlements. This means we should expect to find at least a three level administrative system in this region within which Tlachinollan would be the principal community.

One can safely assume that each administrative level of the system would have mobilized resources to pay for administrative costs and the maintenance of local managers and native rulers. Carol Smith (1982) has shown that in tributary systems like this the horizontal political and economic relations between subjugated settlements are minimal. Instead relations are monopolized by the political core and controlled by a strict vertical settlement system. In geography this type of system is known as a “dendritic” system. It generates a primate settlement system in which the capital appropriates the largest share of the resources produced in the territory and does not tolerate competition with other sites within its political sphere of control (figure 6.9). In such a system the political and economic importance of the subject settlements diminishes progressively according to the administrative distance that
Estimation of the q values from the Postclassic sites registered in the territories supposedly controlled by Tlachinollan.

<table>
<thead>
<tr>
<th>Settlement System in</th>
<th>Sites larger than 1hectare</th>
<th>q value</th>
<th>R square</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scenario a: A.D. 1447</td>
<td>31</td>
<td>1.0953</td>
<td>0.91</td>
</tr>
<tr>
<td>Scenario b: A.D. 1510</td>
<td>54</td>
<td>1.0626</td>
<td>0.8852</td>
</tr>
</tbody>
</table>

Estimation of the q value from all the Postclassic sites registered so far in the regional system

<table>
<thead>
<tr>
<th>Settlement System in</th>
<th>Sites larger than 1hectare</th>
<th>q value</th>
<th>R square</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scenario c</td>
<td>75</td>
<td>1.0620</td>
<td>0.8511</td>
</tr>
</tbody>
</table>

Log-Normal distribution:
\[ R^*P^q = K \]

Where:
\( P \) = Settlement size (area of the settlement).
\( R \) = Settlement Rank (from 1 to the \( n^k \); 1 is the largest site and \( n^k \) is the smallest site).
\( q \) = Slope of the regression line.
\( K \) = constant

Table 6.3. Results of the q value for the regression lines of each scenario.
separates them from the capital.

In order to determine if an actual distribution of archaeological sites was organized into a dendritic settlement system, I used the rank-size rule or the log-normal distribution to examine the distribution settlement size (Hagget 1966:101). The log-normal distribution assumes that there is a regular relationship between the size of settlements and their rank in the system. It also assumes that under normal conditions a settlement system should contain a few large settlements, slightly more medium size ones, and a large number of small settlements. To describe this “skewed to the right” distribution investigators use the log-normal equation:

\[ R^*P^q = K \]

Where:

P= Settlement size (area of the settlement).
R= Settlement Rank (from 1 to the \( n^{th} \); 1 is the largest site and \( n^{th} \) is the smallest site).
q= Slope of the regression line.
K= Constant.

The values for q and K are estimated through the use of a linear regression between the logarithm of the rank and the logarithm of the settlement size. From empirical tests in worldwide settlement systems the value of q has been interpreted as follows: if \( q = 1 \) then the observed distribution equals the theoretical distribution where the second largest settlement in the system is a half the size of the largest one, and the third largest settlement is exactly a third of the size of the largest one, and so on. If \( q > 1 \) it represents a primate system where the largest settlement is “excessively” huge compared to the other settlements. When \( q < 1 \) it means that medium size settlements are relatively large. When the value of q tends to \( \alpha^6 \) then one says that there is only one settlement in the region. And if q equals or tends to 0, it means that all the settlements have exactly the same size.

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6 The \( \alpha \) represents the infinity: a number larger than the largest positive number one may propose.
By applying the log-normal test one can describe in quantitative terms the settlement distribution. Berry (1961) has shown empirically that a q value larger than 1 indicates a system where one settlement dominates the political and economic landscape. Such q values have been found in countries where there were capitals of empires (Vienna, Austria and Madrid, Spain) or in countries where one settlement became a colonial enclave for the exploitation of a peripheral region (Mexico City, Mexico). Based on these assumptions, it is possible to propose some hypotheses for the case of Tlachinollan. These hypotheses can be used in turn, as proxy solutions to archaeologically test Tlachinollan’s ascendancy over a vast region. Although they will not prove that Tlachinollan really conquered the other places, they will indicate that Tlachinollan, using different mechanism (perhaps conquest among them), did become the dominant center of the region.

**Hypotheses:**

1) Tlachinollan was the dominant center of a primate settlement system for the territories it claims to have conquered.

This statement would be accepted if q>1 or q tends to $\alpha$. It would be rejected if q=0 or q<1. If q=1 the hypothesis is neither accepted nor rejected. Instead q=1 would indicate that the settlement system follows the ideal log-normal distribution in which the first center is expected to be twice as large as its next competing one, three times larger that the third competitor, and four times larger that the fourth, etc. If one obtains this value it still indicates that the largest settlement is more important than its competitors. It might still indicate that Tlachinollan expanded, just that the regional settlement system as a whole did not become a primate system. This is the famous chain of vassalage cited in Hagget (1966:100): “each cluster appears to occupy some definite place in the [settlement] hierarchy, the whole system appearing as …as chain, almost a feudal chain of vassalage, wherein one [settlement] may stand tributary to a
bigger center and yet be a metropolis of a sizeable region of its own”.

If q=0 then the supposedly conquered territories were not a primate settlement system. The value of q=0 would indicate a homogeneous landscape where all the centers have the same size and hierarchical position. Although, obtaining a value like this would not disprove that Tlachinollan expanded and formed a tributary system, it would make such events very doubtful, at least archaeologically. If q<1 then we are facing a similar condition as q=0, although, in this situation it might have happened that Tlachinollan conquered foes with similar size but was not able to extract large amounts of resources from them. This value would be the worst that one can get during the test of the hypothesis, because its degree of indeterminacy.

2) One would expect to find large regional sites in areas not conquered by Tlachinollan or that were conquered in the latest stages of expansion. I assume this because these unconquered settlements may have kept their resources to satisfy their own political and economic agendas. When evaluating all the settlements in a wider region beyond Tlachinollan’s borders, I would expect to see a value of q<1 as a result of unconquered independent neighbors maintaining dominium over their settlement systems similar to that of Tlachionallan. If q=1 or q>1 it will indicate that one center is more important than the others whether it was Tlachinollan or not.

To calculate the q value the algorithm requires inputting the population size for each settlement. I do not have this information, but I do have the area occupied by each site in hectares which I used as a surrogate. I estimated the q value in three different scenarios in Tlachinollan’s expansion: a) using only the archaeological sites contained in the area controlled between A.D. 1300 to 1447 (Independent expansion), b) using the sites contained in the area controlled from A.D. 1300 to the final stage of

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7 Keep in mind that one is applying the log-normal distribution to the whole system and the value of q is the slope of the regression line of all the settlements. It shows the trend of the distribution.

8 The coefficient of correlation (R square) between the population size and the area size of contemporary cities in Mexico is more than 0.80, which allows the use the area size as a surrogate of the population size (Gutiérrez, 1998). The log-normal view fails to apply to the lower ends of the
expansion, A.D. 1510, and c) using all the Postclassic sites recorded during my archaeological survey, including competing centers in the valley of Huamuxtitlan and the province of Quiauhteopan. I am using the q value in scenarios “a” and “b” just to have reference points to interpret scenario c. This latter scenario reflects the final area that each settlement covered during its development and not really the population size that each settlement had at the eve of the Spanish conquest. This is not the best solution; indeed it is a poor proxy. The best would be to calculate the q values using the area that each settlement had at the specific moment in the expansion process (A.D. 1461 and A.D. 1510). Unfortunately, this is not possible given the lack of a refined chronological sequence for the area.

One can see the q values estimated for each particular scenario in table 6.3. First it is necessary to observe that for each of the three scenarios q was larger than 1, which means that the area indeed had a primate settlement system\(^9\). The q values are very close to 1 though, which basically means that the system approaches the log-normality or rank size rule distribution. The reason for this seems to be the presence of a number of large middle size settlements which are larger than expected by the theoretical distribution.

In scenario “a” (figure 6.10), the q value was 1.0953, which indicates that the settlement system as whole has a primate structure. In this scenario there were 31 settlements larger than 1 hectare occupying a total area of 338 hectares. Tlachinollan is the largest of these covering 85 hectares or 25% of the total area. No other site approaches the size of Tlachinollan; the second largest settlement in the system is Cerro Quemado which is 3.7 times smaller than Tlachinollan. Now if one eliminates Tlachinollan from the estimation, the value of q reduces to 0.99261 representing a settlement pattern dominated by large middle-sized sites. This may indicate that Tlachinollan ascendency over others settlements in the system perhaps occurred

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\(^9\) Because we are working with logarithms slight differences in decimals are important.
recently and even explosively (Haggett 1966:106).

When scenario “b” is evaluated (figure 6.11) q value reduces to 1.0626, which indicates still a weakly primate system. An explanation for this comes from the fact that the scenario includes a number of larger sites that reduce the predominance of Tlachinollan found in the previous scenario. Indeed the second largest site in this test is Texmelincan located in the polity of Cuitlapan, which is only 1.5 times smaller than the primary settlement of Tlachinollan. Tlachinollan contained 13% of the total area occupied by 54 settlements. If one eliminated Tlachinollan from the map in figure 6.11, then Texmelincan would become the new primate center with a q value of 1.0074, closer to the log-normality. This is really interesting because it suggests that the rulers of Texmelincan-Cuitlapan were important competitors of Tlachinollan and explains why Tlachinollan always preferred to negotiate than to fight with them. It is very probable though, that Texmelincan reached most of its size during the Epiclassic period and decreased in size during the Postclassic, while other sites in Cuitlapan’s territory like Huitzapula became more prominent.

In the scenario “c” (figure 6.12), the q value is 1.0620, almost the same value as we find in scenario “b”. While I was expecting to find a value of q less than 1 for this scenario, no sites larger than Tlachinollan or Texmelican were found in a radius of 50 kilometers around Tlapa. This means that Tlachinollan was the primary center of eastern Guerrero, including those areas that were not conquered. Nevertheless, in this scenario Tlachinollan contained only 10% of the total area occupied by these 75 sites. It is very probable that sites to the north of Tlachinollan (Olinala-Cualac-Chiepetlan) were smaller than I was expecting, since these sites became tributaries of Mexico Tenochtitlan around A.D. 1450 draining resources to that mesoamerican metropolis. Nevertheless, more exploration is required around Cerro Sistepetl near

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10 Keep in mind that I am analyzing the whole settlement system through regressions. The q value is the slope of a line that indicates a mathematical “trend” in the settlement size distribution.
Figure 6.10. Results of the \( q \) value for the regression line of scenario (a): the settlement system contained in the territory controlled by Tlachinollanin A.D. 1447.
Figure 6.11. Results of the q value for the regression line of scenario (b): the settlement system contained in the territory controlled by Tlachinollan in A.D. 1510.
Figure 6.12. Results of the q value for the regression line of scenario (c): all Postclassic settlements in the region which are larger than 1 hectare.
Cualac which may also have been a large settlement\textsuperscript{11}. But even if it were, I seriously doubt that it would affect the regional q value significantly\textsuperscript{12}.

Thus we can accept the hypothesis that Tlachinollan in fact was the dominant center of a primate system. Tlachinollan was the dominant center not only for the territory under its supposed control, but also for the greater part of eastern Guerrero, including areas outside its boundaries. I need to say again that this test does not prove that Tlachinollan actually expanded and annexed other centers into its sphere of political influence. What this test tells us is that the distribution of the Postclassic settlement system does not contradict its importance as the dominant regional central place and that is a good start to start testing its political dominance, using methodological approaches.

6.5 Testing the northern frontier.

In some polities the frontiers are so indistinct as to vanish altogether. The attempt to apply our notion of a frontier, as a well defined line, to states which occupy no sharply delimited tract, has led to the worst misunderstandings. Not lines, but positions, are the essential features in these cases. Contact is avoided, and the state draws itself together, surrounding itself with a politically empty zone (Ratzel 1999: 526).

I have already mentioned that the Lienzo of Chiepetlan I describes conflict along the Zizintla River that separated the villages under Tlachinollan’s control from the Nahua villages in the north. Competition for resources and the Aztec encroachment are the most probable causes of this conflict, but one needs to question whether it is possible to observe a military frontier archaeologically? Jay E. Silverstein (2000) designed a research model to infer the existence of a military frontier between the Aztec Empire and the Tarascan State in southern Mexico. He

\textsuperscript{11} I was able just to explore its piedmont, finding large residential terraces (50 to 70 meters long and 10 to 15 m. wide).

\textsuperscript{12} Based on the morphology of the summit of Cerro Sistepetl, according to the Carta Topográfica Chilapa, 1:250,000, INEGI, I estimate that this site is not larger than 20 hectares, and would represent a middle size site.
used distributions of a variety of artifacts ranging from ceramic to obsidian to establish the existence of a frontier between these two major foes. Although my information is somewhat less robust I can evaluate the presence/absence of a similar military frontier in my area using: 1) the distribution of fortified villages along the supposed frontier and 2) the distribution of ceramics types that can be correlated with one polity or another.

Elizabeth Jiménez (2000) observed that fortified places were distributed across the area, but were especially concentrated along a strip of mountains that run from Axoxuca to Tlazala. I visited most of those places and confirmed the existence of strongholds at Chiepetpec (figure 6.13), Teteltipa (figure 6.14), Axoxuca (figure 6.15), Chiepetlan-Cuauhtepetl (figure 6.16), Chiepetlan-Quimimiteopan (figure 6.16), Tenango Tepexi (figure 6.17), and Mexiquititlan-Organal (Ahuacatitlan; figure 6.18). Other fortified sites along the Cañada de Huamuxtitlan include Alpuyeca-Mirador (figure 6.19), Huamuxtitlan-Los Cuartos (figure 6.20), and Huamuxtitlan-Plaza Vieja. (figure 6.21). Along the Igualita valley two fortified sites were found at Huipila and Tlalyahualco (figure 6.22). Jiménez (2000) confirmed strongholds at Tepeyahualco, Xochitepec, Tlazala, Cerro de la Lumbre, Chiepetlan, and Xistepetl.

The spatial distribution of these strongholds is portrayed in figure 6.23. I have divided the sites that might have been under Tlachinollan’s control around A.D. 1461 (the year in which Lord Rain made a pact with Tenochtitlan) from those that were not under its control in that year. The no man’s land that I believe existed between these two areas is illustrated in figure 6.23 by the white lines extending along the Zizintla River. It appears that Tlachinollan’s defensive strategy was to create a perimeter of fortified sites around the Tlapaneco valley and control access into it. Tlachinollan and Cerro Quemado are sites located in easily defensible positions. Tlachinollan’s size and the nature of its architecture transforms the center into a fortified settlement (figure 6.24).
Fortified area

Figure 6.13. Several views of the Chiepetepec-Tlancualtepec fortress, Guerrero.
Figure 6.14. Fortress of Aquilpa-Teteltipa, Guerrero.

Figure 6.15. Fortress of Axoxuca-Mirador, Guerrero.
Figure 6.16. Fortress of Cuauhtepetl and Quiquimiteopan, Guerrero.

Figure 6.17. Fortress of Cozcatenango, Guerrero.
Figure 6.18. Fortress of Ahuacatitlan, Guerrero.

Figure 6.19. Fortress of Alpuyeca-El Mirador and Alpuyeca-Las Minas.
Figure 6.20. Fortress of Huamuxtitlan-Los Cuartos.

Figure 6.21. Fortress of Huamuxtitlan-Plaza Vieja.
Figure 6.22. Fortress of Huipila and Tlalyahualco.

Figure 6.23. Distribution of fortified settlements in the northern sector of the Montaña Region. In blue: fortified sites under Tlachinollan’s control in A.D. 1461; in black: fortified sites not under Tlachinollan’s control in A.D. 1461.
Figure 6.24. Tlachinollan’s regal ritual core, which could have also function as a fortified site.
Thus I believe that the presence and distribution of fortified places confirms the idea that a conflict zone existed along the northern frontier dividing the Nahua villages of the province of Quiauhteopan from Tlachinollan’s territory.

Jiménez (2000) proposed that these fortified sites were located in strategic points in order to communicate with one another by visual signals. This was an interesting proposal, so I tested it using the viewshed analysis of Arcview which uses relief information of the area. I created two viewshed surfaces for the region: one using only the visibility of the strongholds under Tlachinollan’s control (figure 6.25), and the second using the set of strongholds that were hostile to Tlachinollan before the pact with the Aztecs (figure 6.26). In the case of Tlachinollan’s defensive system, the strongholds had relatively good visibility between themselves, but poor visibility of the hostile strongholds. This means that they would have had no visual contact with their foes until they were close by. The hostile strongholds did not have better visual strategic advantages; indeed they had less visibility among themselves and almost no visibility into Tlachinollan’s territory, particularly the valley of Tlapa.

Even though visual warnings were important, I do not think that they were a major concern in the location of these strongholds. Furthermore I do not think that Tlachinollan even originally built them intentionally. The small villages in the area probably moved up to these inaccessible places and fortified them as competition in the region increased. When Tlachinollan became a powerful polity and became concerned with security along its northern line, it conquered them to form a buffer line between the valley of Tlapa and the polities further north.

6.6 Testing spheres of ceramic interaction.

Schreiber (2001:72) has observed that: “Empires develop their own styles of material culture, including artifacts of various types (ceramics, textiles, metal objects, etc.) and one might look first to the distribution of these items to estimate the spatial extent of the empire. But the fact that these are indeed portable can also yield misinformation as well. Items may easily be traded or exchanged, and thus found by
Figure 6.25. Viewshed of strongholds under Tlachinollan’s control around A.D. 1461. They had good visibility among themselves, but poor or no visibility of the hostile strongholds.

Figure 6.26. Viewshed of strongholds not dominated by Tlachinollan around A.D. 1461. They had poor visibility among themselves, and almost no visibility of Tlachinollan’s territory.
the archaeologist outside the actual boundary of imperial sovereignty. Clearly a single isolated object in a foreign cultural context can be seen as a trade piece…”

Even though Tlachinollan was far from being an empire, there is strong evidence that it was the dominant polity in the region, centralizing and redistributing resources and wealth produced in the area. It is probable that in such a role it developed special tastes and styles designed to participate in the existing “world system” that linked independent polities over most of Mesoamerica (Smith 2001).

I have not found sculpture or a distinctly decorated ceramic type that can be assigned to something one might call “Tlachinollan style”. As mentioned in chapter 3, the recognizable objects with aesthetic value that have been found in the area are related more to pan-Mesoamerican styles than local ones. It is somewhat bizarre that eastern Guerrero is not directly linked to the Mixteca-Puebla decorated ceramic style given the proximity to places in Puebla and Oaxaca where this ceramic type is present (70-100 km.). In the same way, the Guinda sobre Blanco style, so common in central and northwestern Guerrero is scarce in this area.

From Bernal Díaz del Castillo’s accounts it is known that fancy wares were used as serving dishes in elite banquets (Bernal 1983). In chapter 3, I argued that elite groups in eastern Guerrero were not cut off from the broader Mesoamerican system that they had participated in it since the beginning of the Preclassic period. The fact that finely decorated ceramics are not found over a region of 5,000 sq. km. may suggest that they are using and even trading other kind of sumptuary service ware.

I think that the only regional complementary containers that might have had similar elite functions were the decorated gourds that continue to be crafted in the region today (figure, 6.27; Dehouve 1994). These vessels are aesthetically attractive and easily could have replaced ceramic service ware. Indeed the Codex Mendoza mentions that gourds were part of Tlapa’s tributary obligations to Tenochtitlan and that they were used in sumptuary situations for drinking cacao. Eight hundred gourd bowls called Tecomates, used for drinking cacao are listed as their tributary obligations (Berdan and Rieff 1992, IV:83).
Figure 6.27. Decorated gourds from eastern Guerrero. The manufacture of this craft has survived in the towns of Olinala and Temalacatzingo, but it was practiced in all the area.

Figure 6.28. Location of present day villages that specialize in the production of utilitarian ceramics in eastern Guerrero. Four villages supply the entire demand of the area. They stockpile their products in Tlapa, where they get redistributed to the whole region. Based on the regularity of forms (figure 6.29) and paste composition, I presume that a similar scenario was present in the Postclassic period.
Although this proposal remains to be proved archaeologically, it may explain why most of the ceramics collected in the region are sturdy utilitarian ceramics with little decoration beyond some traces of red slip\textsuperscript{13}. I infer the presence of village specialization in the production of ceramic utilitarian wares on the basis of the analysis of 5,457 potsherds collected in 122 sites over an area of 5,000 sq. km. A few villages supplied the entire regional demand with standardized forms and using the same clay sources, in a very similar way in which it continues to be done today (figures 6.28 and 6.29). I was interested to see whether ceramic distributions revealed a sharp break in the ceramics on either side of the frontier separating Tlachinollan’s subjects from the northern villages.

Ceramic distributions have been used to define spheres interaction and the extent of the Tlachinollan polity and its boundaries in relation to adjacent unconquered polities. I had a particular interest in defining whether the political divisions mentioned in the codices and the distribution of fortifications correlate with the distribution of ceramics.

In order to understand how ceramic types were dispersed in the region, I decided to map their spatial distribution applying surface trend analysis (Smith 1975). I estimated the percentage of presence of each type for each site. For example, in the site of Cerro Quemado, I counted 63 potsherds of the Type 1 Burdo Grano Blanco (T1BGB). Then I divided this number by the total number of potsherds collected in that site (179), which means that the percent of presence of T1BGB in Cerro Quemado was 35%. I did the same for all the sites to homogenized samples of different sizes\textsuperscript{14}. Using the UTM coordinates of each site the percentage of ceramics were interpolated in Arcview to create surfaces of ceramic distribution\textsuperscript{15}.

\textsuperscript{13} Excavations in the palaces of the region may reject the absence of polychrome ceramics.
\textsuperscript{14} It was planned to collect samples of 100 potsherds from each site, however vegetation and other difficulties related to visibility did this impossible and in some sites we could collect just a few potsherds. I decided to collect more potsherds in sites which were divided in multiple sectors.
\textsuperscript{15} I decided not to include in the interpolation all those sites whose samples size was less than 15 potsherds, in order to reduce bias caused by small samples.
Figure 6.29. Modern ceramic forms produced in three towns: Huitzapula, Tlazala and Zacualpan. There are some imports from Tuliman (molcajetes) and glass ware Cazuelas from Amozoc, Puebla. Postclassic forms are very similar to these forms.

Figure 6.30. Distribution of ceramic Type 1 Burdo Grano Blanco. Values less than 10% are not included on the map.
Maps of ceramic distribution were interpolated for the four main local Postclassic ceramics in the region. These four types are: Type 1 Burdo Grano Blanco (T1BGB; figure 6.30), Type 2 Burdo Laminar (T2BL; figure 6.31), Type 3 Burdo Laminar Mica (T3BLM; figure 6.32), and Type 14 Mica Olinala (T14MO; figure 6.33).

In these figures one may appreciate that T1BGB was widely distributed throughout eastern Guerrero, but especially with high percentages of presence in the territory under Tlachinollan’s power. Once the Zizintla River is crossed the presence of such ceramics diminishes and it is almost absent in the area around Quiauhtecapan-Olinala and Chiepetlan; this was also the case in the area around Alcozauca. I presume that this ceramic was distributed through the market system of Tlachinollan and was used primarily in those places that had access to this market. Places in conflict with this polity or in a different economic system would have access to it in lower frequency.

The distribution of T2BL is really interesting, because its highest presence was found around Chiepetlan, filling up the gap left by ceramic type T1BGB. This type (T2BL) projects itself into the territory of Tlachinollan following the route that goes to the Pacific Coast through Ocoapa. This ceramic type was rather scarce in the Valley of Tlapa. Type T3BLM has a less extensive distribution and is restricted to a small area around Chiepetlan, Coyahualco, and Xolmolapan. It is not present in the territories under Tlachinollan’s control.

The dominant ceramic in the valley of Olinala is type T14MO. Its distribution is very interesting, because the core settlements of the province of Quiauhtecapan-Olinala were located in this valley. One may see that the type T14MO embraces only the area between Olinala, Cualac, and Xolmolapa. Some potsherd of this type are present in small percentages in Huamuxtitlan and the valley of Tlapa.

When types T2BL, T3BLM, and T14MO are grouped together (figure 6.34), we see that these ceramics represent high frequencies in the northern sector on the Montaña, but with the exception of the trade corridor leading to the Pacific Coast,
Figure 6.31. Distribution of ceramic Type 2 Burdo Laminar. Values less than 10% are not included on the map.

Figure 6.32. Distribution of ceramic Type 3 Burdo Laminar Mica. Values less than 10% are not included on the map.
Figure 6.33. Distribution of ceramic Type 14 Mica Olinala. Values less than 10% are not included on the map.

Figure 6.34. Distribution of ceramic types: T2BL, T3BLM and T14MO. Values less than 10% are not included on the map.
they are almost absent in Tlachinollan’s territory. In figure 6.35 one can see where the ceramic spheres of these four Postclassic ceramic types intersect. They intersect precisely along the strip of land identified above that separate the Nahua villages from the settlements subject to Tlachinollan.

From these figures one can conclude that the area claimed to have been under Tlachinollan’s control has a homogeneous ceramic sphere, probably reflecting an articulated economic zone around Tlachinollan’s market. The northern area represents a less structured economic area that is split into several smaller spheres of exchange. It is also interesting to note the scarcity of T1BGB potsherds in the areas around Chiepetlan and Olinala, which may reflect that these areas were cut off from Tlachinollan market as a result of political conflict.

Although Huamuxtitlan should have been an important competitor, we can observe that it is included in the distribution sphere for T1BGB ceramics which may indicate strong economic ties with Tlachinollan. In the same way Huamuxtitlan is also linked to the ceramic distribution of northern ceramics, suggesting economic contacts with areas hostile to Tlachinollan. It is probable that Huamuxtitlan was exploiting the role of economic “middleman” between Tlachinollan and Quiauhteopan.

It is important to observe that Alcozauca (conquered around A.D. 1510) was not integrated to the Tlachinollan economic sphere, but instead possesses a gray ware ceramic assemblage with closer ties to the Mixteca in Oaxaca. The site of Atlixtac has insignificant percentages of T1BGB potsherds. Totomixtlahuaca and distant Azoyú reflect the same situation suggesting that, although they might have been under Tlachinollan’s political domain, they were linked to different ceramics spheres.

In summary, that the distribution of ceramics over eastern Guerrero suggests the existence of an articulated economic sphere in the areas under Tlachinollan’s control. At the same time I believe that some areas north of the valley of Tlapa were cut off from this economic sphere due to political conflict. The polity of Alcozauca conquered in the last stage of Tlachinollan expansion was not integrated with this
Figure 6.35. In green: intersection of the ceramic type T1BGB and (T2BL or T3BLM or T14MO). Note that the intrusion of northern ceramic types into Tlachinollan's territory follows the main path to the Pacific Coast.
ceramic sphere, and neither were distant settlements under Tlachinollan’s command such as Totomixtlahuaca and Azoyú.

6.7 Testing the sequence of expansion.

I have already said that it is difficult to reconstruct a sequence of political expansion using archaeological materials. This notwithstanding I think that the most powerful political units in eastern Guerrero were conquered during the latter stages of Tlachinollan’s expansion. To examine this proposition I will compare the relative size and architectonical display of each conquered settlement with Tlachinollan.

The basic assumption here is that the larger the regal-ritual complex, the more resources and labor the local leaders were able to command during their independent history before they were annexed to Tlachinollan (Schreiber 2001:73). I think that once Tlachinollan took over, most or a large share of their resources had to be channelled to the valley of Tlapa. Thus while Tlachinollan’s palaces got larger and larger, the construction agendas of the conquered polities stopped or at least slowed down. I suspect that the archaeological site plan of a subjugated polity did not change much after it was conquered. It is like a frozen picture showing the architectonic investment the day before its downfall. Of course political fortunes change and conquered polities may recover their independence and restart episodes of architectonic construction. If subjugation disrupted the construction of public buildings it may also be reasonable to assume that the original building plans would undergo changes. The result would be more eclectic buildings, mixing different architectonical styles and possessing overlapping site plans.

In the valley of Tlapa there are two standing regal ritual cores that functioned as the administrative capitals of Tlachinollan’s kingdom. I have already mentioned that Tlachinollan was composed of two partes, with two rulers in charge of the polity at the same time. These two settlements occupy a combined area of more than 110
hectares\(^{16}\). Together their regal-ritual places contained more than 50 architectonic structures consisting of plazas, terraces, mounds, platforms, and three ballcourts (figure 6.36\(^{17}\)). I am assuming that both modules of the polity shared the profits and costs of the expansion, although Tlachinollan probably received a larger share of the benefits.

The first polity and its modular constituents to be captured by Tlachinollan was that of Tototepec-Cerro Machete (Stage 1; A.D. 1349-1355). This site occupied a total area of 20.8 hectares which is 5.2 times smaller than the composite size of Contlalco (Tlachinollan) and Cerro Quemado (Tlachinolticpac or Caltitlán). I need to point out that Tototepec-Cerro Machete was a large site within its region and at A.D. 1349 may have been the same size as Cerro Quemado and Contlalco. Tototepec is located 10.68 kilometers from Contlalco on a fortified hill (Figure 6.37). By no means would this have been an easy conquest for Tlachinollan at this early stage; it may even contradict my working assumptions about the correlation between site size and time of conquest. Nevertheless, this was the first conflict with a polity outside the valley and defeating Tototepec would have provided considerable prestige to Tlachinollan’s leaders as well as land in a temperate agricultural zone. It might be that Tototepec was the aggressor given its vicinity to the valley of Tlapa and that Tlachinollan attacked it as a defensive strategy.

Teteltipa (Stage 2; A.D. 1356-1362) was the second polity conquered and is located 19.22 kilometers from Tlachinollan. This site covered a surface area of 15.8 hectares and is 6.9 times smaller than Contlaco-Cerro Quemado (figure 6.38). Although it was located in a defensive position, this site is architectonically simple. It is composed of large residential terraces and a single mound on top of the hill, which seems to have been a ritual structure. Nevertheless, it does not have a Tecpan (regal) structure nor a ballcourt. This site more than Tototepec, conforms very well with

\(^{16}\) I will use this size (110 hectares) as a constant to compare the size of the other polities.

\(^{17}\) All the figures for this comparison have been drawn at the same scale.
Figure 6.36. Relative size of both regal-ritual cores of Tlachinollan polity.
Figure 6.37. Tototepec’s regal ritual core. Conquered between A.D. 1349-1355.

Figure 6.38. Teteltipa’s regal ritual core. Conquered between A.D. 1356-1362.
what one would expect to see at an early stage of political expansion. It is a middle size polity located in a good position along the trade route leading to Chilapa and Tlacozauitlatlan but was not strong enough to resist Tlachinollan in a direct confrontation. To defeat this place Tlachinollan had to bypass the site of Axoxuca (21 hectares). It might be that this site was already part of Tlachinollan’s polity or it might be a strategy of sprawl and infilling.

During the third stage of expansion (A.D. 1412-1418), Tlachinollan’s forces focused on Ocoapan, Tlazallan, and Huilotepec. I have not been able to find the site of Huilotepec so its size is unknown, but if my interpretation of the documents were correct it would have been given to Tlachinollan as part of a dowry from the lords of Cuitlapan. Ocoapan is small site covering 9 hectares with poor architecture (11 times smaller than Conttlaico-Cerro Quemado; figure 6.39). It is located 23 km. from Tlachinollan in the Tierra Fría. This site is located in a defendable area and consists of residential terraces without a ballcourt.

Tlazalan was a fortified village located 8 kilometers to the north of Tlachinollan. I have not surveyed the site, but from Jiménez’s description (2000), I think that it did not exceed 4 hectares in size (figure 6.40). Neither of these sites were a match for Tlachinollan’s power. I think the size of the defeated settlements conforms well to the expectations of an early political expansion. The combined size of these three subjugated sites is no larger than 20 hectares, one-fourth of the size of Contlaco (85 hectares) and more or less the same size as Cerro Quemado (23 hectares).

Between A.D. 1426 and 1432 (Stage 4), Tlachinollan claims to have conquered three polities: Yoso None, Tlaxco and Atlixtac, all of them in the temperate ecological tier. Yoso None had a size of 19.1 hectares and Tlaxco covered 17.34 hectares (figures 6.41 and 6.42). Yoso none and Tlaxco are very close each other, leading me to think that they might have been conquered in the same conflict. Both sites had very well developed architecture, which unfortunately has been largely destroyed by ongoing agriculture. Nevertheless, one can still see large regal platforms
Figure 6.39. Ocoapan’s regal ritual core. Conquered between A.D. 1412-1418.

Figure 6.40. Location of the stronghold of Tlazalan. Conquered between A.D. 1412-1418.
Figure 6.41. Yoso None’s regal-ritual core. Conquered between 1426-1432.

Figure 6.42. Tlaxco’s regal-ritual core. Conquered between 1426-1432.
in Yoso None (Tototepec-Pueblo Viejo) and Tlaxco. The site of Tlaxco also has a
ballcourt. Thus for the first time Tlachinollan is facing two regular size foes at the
same time. The combined size of Yoso None and Tlaxco is 3 times smaller than
Contlaco-Cerro Quemado, but only 2.3 smaller than Contlalco and 1.6 times larger
than Cerro Quemado.

The Atlixtac site in contrast is located 40 km. from Tlachinollan on the
opposite side of the polity. It covers 17.53 hectares but has a very small regal-ritual
core. Although its architecture is again heavily destroyed by agricultural and looting
activities, it appears to have consisted of a middle size mound along with large
residential terraces (figure 6.43). In this stage of expansion Tlachinollan had to face
three middle size foes whose combined size was 2 times smaller than the combined
size of Tlachinollan’s regal ritual cores, but 2.34 times larger than Cerro Quemado
alone. Thus they might have presented a good fight to Tlachinollan if they were really
taken by force.

In the stage that I have called “Resistance” (A.D. 1433-1439), Tlachinollan
seems to have engaged in its first skirmishes with Nahua forces trying to occupy
territory in Guerrero. If this was the case, Tlachinollan would have faced
Quechultenango, a small settlement 13 hectares in size with limited architecture
(figure 6.44) but considered to have close relations with the Aztecs.

I have explained that the annexation of Totomixtlahuaca (A.D. 1440-1446)
should have been through a normal succession process. Nevertheless, I am still
doubtful about the correct position of Totomixtlahuaca in the prehispanic period.
There is evidence of Postclassic potsherds covering an area of around 14 hectares
under the present day town of Totomixtlahuaca. If this represents the prehispanic
settlement, then it would have been a middle size settlement without complex
architecture. I can not be sure of this because it is possible that large public structures
were demolished and used to construct the enormous colonial church in the middle of
the town (figure 6.45).
Figure 6.43. Atlixtac’s regal-ritual core. Conquered between 1426-1432.

Figure 6.44. Quechultenango’s architectural core.
Figure 6.45. Totomixtlaahuaca’s 16th century Agustin church.

Figure 6.46. Yoallan’s regal-ritual core. Conquered between A.D. 1468-1474.
Between A.D. 1447 and 1453, Tlachinollan engaged in wars along its northern frontier, conquering Nahua settlements and claiming them as an important conquest. Nevertheless, the archeological record shows that these places were actually small villages between 5 and 6 hectares in size and lacking public architecture. I think that Tlachinollan was using resources to chase small Nahua migratory groups along its northern frontier.

During the seventh stage of expansion (A.D. 1468-1474) Tlachinollan had to face powerful polities represented by large settlements for the first time. One of these was the site of Yoallan whose capital covered 31 hectares and contains 17 architectonic elements including a ballcourt (figure 6.46) A second entity was the Cuitlapan polity whose capital at Texmelincan covered 57 hectares and has 21 architectonic structures including three ballcourts. Within the Cuitlapan polity was the site of Huitzapula, a fortified settlement covering 23.76 hectares and containing 14 structures and a ballcourt (figures 6.47, 6.48). This means that Tlachinollan had to face two polities whose combined size of their main settlements (112 hectares) was larger than that of both Contlaco and Cerro Quemado. The size of these sites is probably why Tlachinollan did not attempt to take over these places earlier and had to wait until it celebrated a pact with Tenochtitlan. This stage of expansion conforms very well to what I was expecting: that the polities with larger regal-ritual cores were conquered after A.D. 1461. After this I think that no other site on southwestern frontier was a match for Tlachinollan.

During stage 8th (A.D. 1475-1481) the site of Atlamaxac (17.46 hectares) was conquered. While this did not require a big military effort, it provoked much political turmoil. The polities of the Cañada of Huamuxtitlan were different, however. They all had large settlements with impressive architectural constructions. It was during this stage that Tlachinollan was able to take over the southern portion of this valley conquering Ixcateopan (27 hectares), Alpuyeca-Las Minas (26.84), and Alpuyeca-El Mirador (5 hectares). and probably Xocotla (14 hectares). The total combine size of these settlements was 90 hectares, an area larger than Contlalco (figures 6.49, 6.50).
Figure 6.47. Partial view of Texmelincan’s regal-ritual core (Cuitlapa polity). Conquered between A.D. 1468-1474.

Figure 6.48. Huitzapula’s regal-ritual core. Modular component of Cuitlapan.
Figure 6.49. Ixcateopán’s regal-ritual core. Conquered in A.D. 1475-1481.

Figure 6.50. Alpuyeca’s regal-ritual core. Perhaps conquered in A.D. 1475-1481. It is represented as a Tlachinollan’s subject in the Relacion de los Obispados.
Of all these sites, Alpuyeca-Las Minas represented the most difficult site to conquer because it possessed an impressive defensive system\textsuperscript{18}.

I have not found the site of Atlamajalcingo del Monte conquered in A.D. 1489-1495. If there is such a site, I do not think it was very large. Basically the only information about the site is from the Relación de los Obispados which tell us that it was a place subordinate to Yoallan. In the tenth stage of expansion (A.D. 1503-1509) Tlachinollan defeated the stronghold of Chiepetepec-Tlancualtepec, a site that covered 17.62 hectares, and had an impressive defensive system (figure 6.51). I have already proposed that at this point in its history Tlachinollan was just filling up blank spots in its territory. But it is interesting to note how middle size fortified sites can resist encroachment for a long time.

Finally in the eleventh stage of expansion (A.D. 1510-1516) Hueycatenango and Alcozauca were annexed into the province of Tlapa-Tlachinollan. I have not surveyed the area around Hueycatenango so I do not know the size of Hueycatenango site, although I do not think it was larger than 20-25 hectares. On the other hand the capital of Alcozauca was a settlement that covered at least 21.5 hectares, although the exact size remains unclear because it is partially covered by a modern town (figure 6.52). Nevertheless, Alcozauca was a powerful Mixtec polity and its Tecpan (palace) structure is the largest in the region covering an area of 1.3-1.5 hectares and is 12 meters high\textsuperscript{19}. Two observations can be made here. First, the conquest of Alcozauca matches the proposal that large and powerful sites would be conquered in the latest stages of expansion. Second, it conforms with the idea that sites that remained independent longer were able to invest more resources in their individual programs of public architecture. It was also interesting to note that although Alcozauca is only 20 kilometers away from Tlachinollan, it was the last place to be conquered and it did

\textsuperscript{18} The site is surrounded by large agricultural terraces which retention walls might be used as defensive wall. Besides this, there was a small stronghold on the top of the El Mirador, blocking the road that runs along the eastern piedmont of the Cañada de Huamuxtitlan.

\textsuperscript{19} Contlalco’s Tecpan covers an area of 1.2 hectares and it is 14-15 meters high.
Figure 6.51. Chiepetepec's regal-ritual core. Conquered in A.D. 1503-1509.

Figure 6.52. Alcozaucua's regal-ritual core. Conquered in A.D. 1510-1516.
not participate in the exchange sphere for T1BGB ceramics. This may indicate that this polity possessed strong internal cohesion even though it was not the largest political entity in the region (Doyle, 1986).

Thus I conclude that the sequence of expansion proposed by the codices of Azoyú also conforms with the expected order of conquest that can be observed archaeologically. The largest sites were conquered in the latest stages of expansion and especially after the A.D. 1461, the year in which Lord Rain established an alliance with the powerful Aztecs.

6.8 Chapter overview.

Several hypothetical scenarios concerning the expansion process of Tlapa-Tlachinollan were created on the basis of information contained in the codices of Azoyú and Codex Mendoza. These scenarios were then tested archaeologically to evaluate the reliability of the historical interpretations made from these pictorial documents. The results were as follows:

1) It was observed that the ethnohistorical sources were very reliable guide for locating postclassic archaeological sites within eastern Guerrero and that they provide important clues about the hierarchy of the settlements.

2) It was proved archaeologically that an area of high conflict existed between the northern frontier of the kingdom of Tlapa-Tlachinollan and the southern limits of the province of Quiauhteopan. These was concluded on the basis of the presence of strongly fortified villages on both sides of the Zizintla river and a clear break in the distribution of Nahuatl ceramic types and ceramic type T1BGB associated with Tlachinollan’s sphere of political interaction.

3) I was not able to demonstrate that Tlapa-Tlachinollan expanded using archaeological data. But I did shown that Tlapa-Tlachinollan was the dominant center of a primate settlement system in eastern Guerrero. This
matches very well with the possibility that it created a tributary system over a region of more than 4,000 sq. km.

4) It was proved that the sequence and direction of the expansion taken by Tlapa-Tlachinollan followed the lines of least political cost. Previous to A.D. 1461 it only conquered small polities and it avoided the northern sector of the area; it also avoided the strong polities of Cuitlapan, Yoallan, and Alcozauca. These larger polities were conquered after A.D. 1461 probably with help from the Aztecs.

5) It was shown that the control of valuable irrigation land in the dry valley of the Tlapaneco River was important stimulus for political competition.

More research is needed in the area to understand what caused the original impetus in Tlachinollan’s expansion. Internal political competition seems to be a good cause, but this needs to be proved using different methodologies and theoretical approaches. It is also necessary to better understand the administrative structure of Tlachinollan kingdom and the changes it underwent after its successful expansion. Increased chronological control is desperately needed for the region to refine this study and provide more support to the results obtained.

Nevertheless, I can conclude that the archaeological data matches very well with the current interpretation of Tlachinollan’s expansion and do not contradict it. This is a good place to begin more indepth studies about the territorial competition and geopolitical strategies of the political organization used throughout eastern Guerrero and Mesoamerica.
Chapter 7. Summary and Conclusions.

The growth of states proceeds through the annexation of small territories to amalgamation, while at the same time the attachment of the people to the soil becomes ever closer. Out of the mechanical union of territories of varying size, population, and stages of culture, an organic growth is started by the approachment, mutual intercourse, and intermingling of the inhabitants. Growth which never goes beyond mere annexation creates only loose, easily dismembered conglomerations, which are only temporarily held together…

…These larger states fall to pieces, and this union and disintegration, expansion and contraction, constitute a great part of those historical movements which geographically are represented by a division of the surface into greater or smaller portions… (Ratzel 1999:529).

7.1 Goals and problems.

The goal of this dissertation was to analyze how a middle-size Postclassic polity in Mesoamerica expanded territorially due to intra and inter-polity competition. In order to achieve this goal, it was necessary to infer the costs, benefits, and geopolitical strategies used by the native rulers of the expanding polity. This was done through the spatial analysis of the sequence and direction of expansion and an evaluation of the incremental growth of the polity during each stage of enlargement.

Territorial expansion was defined as the annexation of formerly independent political units into one’s sovereignty by a variety of means ranging from cooptation to coercion. Cooptation is the incorporation of rival leaders into the expansive polity through gift giving, marital alliances, and other sorts of strategic means of affiliation. Coercion denotes the overthrow of rivals by forceful methods, including political assassination, banishment, and conquest.

A variety of causes have been proposed to explain why a polity conquers and annexes other political units. Thucydides (1954) and many other classic writers thought territorial expansion was an outcome of human nature. Ratzel (1999) and the German school of geopolitics used Darwin and Spencer’s ideas about the “survival of
the fittest” to explain it. According to Ratzel’s “laws” of territorial growth, states must expand to thrive and civilizations must expand at the expense of lower or simpler societies. Carneiro (1970) tried to explain this process using an ecological model in which population growth in a constricted landscape was the major stimulus behind the annexation of neighboring territory. More recent approaches have correlated territorial expansion with factional struggles as its major cause (Earle 1991).

In this dissertation territorial expansion was understood as a byproduct of the domestic affairs of the expanding polity to meet two fundamental challenges: 1) the quest for security and 2) the pursuit of wealth and satisfaction. Security was the ability to fend off external challenges to the sovereign authority of the polity and its leader in order to maintain the regional status quo. Wealth or satisfaction was the ability to bestow benefits on followers whose support was necessary to fend off internal challenges to the authority of the political leadership. Security was sought to minimize risks while wealth was pursued to fulfill ambition (Morrow 1991; Bueno de Mesquita 2002).

In this dissertation the altepetl was considered the basic unit of political expansion (García Martínez 1987; Lockhart 1992; Carrasco 1999). The altepetl was the native state of Central and Southern Mexico. It was organized into a modular-like political structure in which a group of kin-related rulers (teuctlatoani) exercised the legitimate right to use force against the inhabitants of a given territory. Pilli (nobles) and macehualli (commoners) were all subordinated to the head of the most prestigious lineage of the polity which was called Hueytlatoani (great leader). Internal and external competition between lineages for the control of land, people, and preciousities promoted the annexation of weaker modules. Prehispanic empires were conglomerations in which some altepetem were dominant and some subordinated. While empires and large ethnic confederations came and went, the smaller constituent states tended to survive in some form through the centuries (Lockhart 1992:14).
Tlapa-Tlachinollan was selected for study because it was a middle size polity located in eastern Guerrero. Information on its indigenous political history was available from a large corpus of local pictorial documents found in the region (Villela 1996). Two pictorial codices of this corpus: the Codex Azoyú 1 and Codex Azoyú 2 narrate the political history of the altepetl of Tlapa-Tlachinollan from A.D. 1300 to A.D. 1565. The important political events mentioned in these two documents describe the conquest of some twenty places located over eastern Guerrero. Both documents depict the place names of the defeated rival polities and the approximate time in which they were conquered or annexed to the political sphere of Tlapa-Tlachinollan.

If these place names can be associated with Postclassic archaeological sites in the geography of eastern Guerrero, then the sequence, direction and extend of territorial expansion would be known. This would provide opportunity to study the geopolitical strategies used by Tlapa-Tlachinollan’s leaders in their expansion and to reconstruct the dynamics of political interaction in eastern Guerrero.

Constaza Vega Sosa (1989) has studied this problem and has identified most of the place names in the codices correlating them with modern and colonial Pueblos of eastern Guerrero. She also wrote the first comprehensive interpretation of Codex Azoyú 1 (Vega 1991). Since then other authors have reinterpreted and/or corrected some of her identifications (Rubí 1998; Vélez 1998; Carrasco 1999; Jiménez 2000). Nevertheless, features such as the exact position, structure, size, and architectural dimensions and design of the archaeological sites were unknown.

The codices Azoyú 1 and 2 were painted in Tlapa around A.D. 1565 and were used in the Spanish courts by the powerful Alvarado-Cortés lineage to claim political and territorial rights under the colonial system. This biases the narration in favor of the deeds of this ruling lineage, leaving some doubt about the historical reliability of the recorded events. As a result it is difficult to use these documents at face value. It is even harder to prove that the events portrayed in the codices really happened or that they happened in the same way or at the same time as they are depicted in the narration.
This problem needed to be solved to use the codices as a hypothetical framework for Tlapa-Tlachinollan’s political expansion. Critical analysis was carried out to evaluate the accuracy of these accounts.

The codices of Azoyú were painted following a tradition closely related to the Nahuatl writing system (Galarza 1979). Given this fact, the Codex Mendoza was used as baseline to interpret and identify the place names of codices of Azoyú. It also provided an independent source to confirm the existence of the places depicted in codices of Azoyú and the date of conquest of Tlapa-Tlachinollan by Ahuitzotl’s armies.

The Lienzo of Chiepetlan 1, is a pictorial document painted in a Pueblo Cabecera not directly attached to the Alvarado-Cortés family. It provided independent information related to conflict between the Nahuatl region and the altepetl of Tlachinollan. It also confirmed that Lord Rain was the ruler of Tlachinollan when an Aztec ambassador visited the area. The Lienzo of Chiepetlan 1 also offered basic clues to the geographical location of several place names around the valley of Tlapa.

The Lienzo Genealógico de Tlapa-Azoyú was also used in this study. Although part of the “official” documents of the Alvarado-Cortés lineage, it provides insights into the mechanisms of succession and marriage alliances. It is the main source for the Nahuatl names of the lords of Tlapa-Tlachinollan.

The Palimpsest of Veinte Mazorcas is other document likely painted under the patronage of the Alvarado lineage, but from a branch probably associated either to the Pueblos of Ixcateopan or Atlamajac-Alcozauca. This document portrays four important rulers who lived during the same time span according to the codices of Azoyú. These four rulers are: Lord Rain (Hueytlatoani of Tlachinollan), Lord Chalchihuitl (Jewel Bead, Tlatoani of Yoallan), Lord Fish-Feathers (Tlatoani of Cuitlapan), and Lord Monkey (high status noble associated to Lord Rain’s lineage). In the Palimpsest of Veinte Mazorcas all these high status leaders, along with 17 other altepetl rulers, were depicted in conflict in the region around Yoallan and Atlamajalcingo del Monte.
The Relación de Pueblos de la Provincia de Tlapa en 1571 was written by Friar Delgado (Relación de los Obispados 1904). This document confirms the political and territorial structure of the Kingdom of Tlapa-Tlachinollan given by the codices of Azoyú. It also provides valuable clues about the hierarchy of each place in the 16th century settlement system. It confirms that Tlapa-Tlachinollan and its Parte, Caltitlan, exercised control over 10 Pueblos Cabeceras and 100 villages. The Suma de Visitas (1905) confirms the tributary obligations of some of these pueblos to the Caciques of Tlapa. It might be argued that this was a Postconquest arrangement. Indeed it was, and it is possible that the Spaniards put some of Pueblos under the administration of Tlapa after A.D. 1522.

7.2 Results.

In order to address the issues in this dissertation it was necessary to undertake archival research in the Archivo General de la Nación (AGN) in Mexico City. I examined a variety sixteenth, seventeenth and eighteenth century documents that discuss territorial controversies and land litigations made by the local Señoríos during the creation of Spanish-like Indian municipalities. I was trying to find documents that 1) deny or contradict the information contained in the codices of Azoyú or 2) support the accounts of the codices.

Some 80 documents in the Ramos of Indios, General de Partes and Tierras were consulted for the Pueblos in the jurisdictions of Tlapa and Chilapa. The results of this research were:

1) No document was found that contradicts or denies the narration contained in the codices of Azoyú 1 and 2.

2) Several documents (see introduction) confirm the ascendancy of the Alvarado-Cortés lineage in the region supposedly conquered by the prehispanic lords of Tlapa-Tlachinollan.
3) Document AGN, Ramo Indios, vol. 34, exp. 140 confirms that seven regional Caciques of the main Pueblos of the region recognized Tlachinollan as the main Cabecera of the region and their Caciques as the most important.

I concluded from this that the information contained in the codices of Azoyú can be used with reliability, but always with caution.

Interpretations of pictorial documents are mental reconstructions of the past made by the researchers based on their present experiences (Collingwood 1946). This complicates the direct use of the documents since alternative and contradictory readings and interpretations can be proposed by different scholars. My personal interpretation of the codices of Azoyú supported Tlapa-Tlachinollan’s expansion. I consider the information they contain about the places that were conquered and the sequence of conquest proposed by the document to be valid. I also believe that Tlapa-Tlachinollan leaders were economically rational agents who evaluated all the internal and external costs and benefits related to the expansion of their polity. Nevertheless, these are my personal biases and could not be taken at face value unless they were corroborated using additional, independently collected data.

Archaeology provided an independent way to test both the accuracy of ethnohistorical sources and my individual interpretations through an examination of the material remains from where the events supposedly took place. The basic assumptions and scenarios hypothesized from the ethnohistorical sources that needed to be tested archaeologically were:

1) Field confirmation that the place names in the documents had been interpreted correctly.
2) The existence of an area of high competition in the valley of Tlapa around scarce resources.
3) The existence of a settlement system dominated by Tlapa-Tlachinollan.
4) The existence of a military frontier between Tlapa-Tlachinollan’s territory with the northern Nahuatl villages.

5) Test the sequence and direction of the expansion according to the framework proposed by the codices.

A model was created to interpret the strategies used by the lords of Tlapa-Tlachinollan according to the sequence of expansion and the shape of the territorial extend after each conquest period. The territorial expansion was analyzed as a spatial phenomenon subject to costs of movement and friction. A modification of Von Thünen’s agricultural rings was used to analyze the actual shape of the polity against Von Thünen’s idealized circular form. This provided insights into the costs of expansion in specific directions. In the same way four categories were created to classify the spatial patterns of polity expansion. These four categories were: 1) lateral concentric-axial, 2) sprawl, 3) infilling and 4) coalescence. Each pattern suggested different strategies used by the rulers of Tlapa-Tlachinollan in their expansion and provided insight into the relative power of their rivals.

A key site survey was designed to study the archaeology of eastern Guerrero. I decided to use this methodology because I wanted to find the sites that represented the rivals and/or allies involved in Tlachinollan’s expansion, that is, the sites that were strategically and economically important for Tlapa-Tlachinollan. Key site survey was used because of the logistic problems created by the insecurity of the region, the difficult topographic conditions, and the enormous size of the area I needed to cover (more than 4,000 sq. km.).

Three field seasons were carried out in the area (1999, 2000 and 2001) in which 190 archaeological sites were found. From these 123 were reported to have Postclassic ceramics or other features associated to this period. Once the exact position, size, and architectural features of conquered places was identified, I was able to test the proposed scenarios.
The results of these tests were:

1) The interpretation of the codices’ place names was very accurate. In more than 80% of the time I found a Postclassic site of importance where I had predicted it would be based on the place names recorded in the codices.

2) Codex Humboldt fragment 1 shows an agricultural system along the Tlapaneco River which was controlled and monopolized by high status nobles during the early 16th century. It was hypothesized that the control of this system created intense political competition promoting power centralization in the valleys of the Tlapaneco River.

The aridity of northeastern Guerrero resulted in archaeological sites being concentrated close to the Tlapaneco River, the only permanent source of water throughout the year. Effectively a complex irrigation system called Trompezón was observed along the main valleys of the Tlapaneco River. This system required the construction of complex perimeter walls that protect the fields from the torrential inundations of the Tlapaneco River. Centralized management and organization was required to built them, especially to protect the plots larger than 100 hectares.

Three main clusters of archaeological sites in the region were closely associated with complex systems of Trompezón fields which suggests that they were valuable prizes in the political competition. These three clusters of sites are: Tlachinollan’s regal-ritual cores (Contlaco-Cerro Quemado); Ixcateopan-Alpuyeca; and Huamuxitlan-Coyoahualco. It was in leader’s best interests to promote their construction and preservation. Native leaders probably used the agricultural surplus obtained from this fertile system to promote political allegiance and finance the costs of their political expansion. Nevertheless this scenario needs further corroboration through the exploration of the Trompezón system to date its construction.
3) Expansive Mesoamerican polities forced subject polities to pay tribute. If Tlapa-Tlachinollan really conquered the region they claim to have controlled then one would expect to find a settlement system dominated by Tlapa-Tlachinollan. The results of the log-normal distribution applied to eastern Guerrero settlement system proved that Tlapa-Tlachinollan was in fact the dominant center of a primate settlement system during the Postclassic period. Although, this test was not conclusive and did not prove that Tlapa-Tlachinollan actually expanded, it showed that the archaeological settlement pattern of eastern Guerrero does not contradict the ethnohistoric scenarios of Tlapa-Tlachinollan’s expansion. Tlapa-Tlachinollan one way or another did become the primary settlement over a vast region.

4) A system of fortified villages was identified along both margins of the Zizintla River confirming the existence of political tensions and possible conflict between Tlapa-Tlachinollan and the Nahuatl villages in the Quiahuateopan province. This received further support from the observation that the archaeological sites around Chiepetlan and Olinala have insignificant percentages of the ceramic type T1BGB. This ceramic type has been found predominantly in the area under Tlapa-Tlachinollan political control. In the same way ceramic types T2BL, T3BLM and T14MO, associated with the northern Nahuatl villages, were present in insignificant frequencies in Tlachinollan’s territories. These differences in the distribution of ceramic remains indicate the existence of two mutually exclusive economic spheres that may represent independent (and possibly antagonic) political domains.

5) The direction of growth proposed by the ethnohistorical documents suggested territorial expansion in a marked southwest direction. This suggests that Tlapa-Tlachinollan lords focused their efforts on the control of the trade route leading to the Pacific coast. Cacao, cotton, fish, and salt were the prizes they were after. Control of this route also gave them control over villages in different ecological zones
providing access to resources of the temperate and high Montaña as well as gemstones and gold in the high Montaña and the Costa Chica.

It is really difficult to reconstruct a sequence of political expansion using archaeological materials. This notwithstanding I proposed that the most powerful political units in eastern Guerrero were conquered during the latter stages of Tlachinollan’s expansion. This idea was corroborated. Previous to A.D. 1461, Tlachinollan only conquered small polities and it avoided the territories of the strong altepeme of Cuitlapan, Yoallan and Alcozauc. These larger polities were conquered after A.D. 1461 and only after Tlachinollan became a client state of Tenochtitlan.

7.3 Concluding remarks.

Thus it is important to understand that the territorial expansion of Tlapa-Tlachinollan consisted of the modular annexation of other regional competing altepeme into and under its sphere of command. With the exception of some highly productive irrigation lands, the leaders of Tlapa-Tlachinollan were more interested in controlling the labor and specific resources of the region than the whole territory.

Over a period of 221 years Tlapa-Tlachinollan expanded at an annual rate of about 2%, doubling its size every 30 years. Nevertheless, Tlachinollan’s territorial growth followed a logistic curve, with explosive rates of expansion above 5% in its first stages of growth with rates of less than 2% in its final stages. Diminishing returns to scale began to appear as the expansion process continued to unfold.

Internal conflict and disagreement over political succession seem to have sparked the initial impetus of Tlachinollan’s expansion. This supports an important assertion of this dissertation that territorial growth is the spatial manifestation of intra-polity competition.

Gerardo Gutiérrez.

State College, PA, May 2002.
Appendix. Postclassic archaeological sites.

This appendix contains descriptions of the main Postclassic settlements found during research on the project entitled “Arqueología y Etnohistoria en la Montaña de Guerrero: Patrones de Expansión Política-Territorial de un Señorío Postclásico en La Mixteca-Náhuatl-Tlapaneca”. For a more detailed description of other settlements found in the area consult the informe of this project in Consejo Técnico de Arqueología, INAH, México.

Sites in Tlapa Valley

Ahuatepec Ejido

UTM Coordinates, datum NAD 27-US, Zone 14.
X= 543072
Y= 1939875
Z= 1101

This settlement is located 1.3 kilometers to the northeast of the city of Tlapa, within the limits of the Ahuatepec Ejido (figure A-1). It is a simple site consisting of small terraces and a looted low mound (approximately 12 x 4 meters), which is now damaged by erosion. We found large quantities of potsherds on the surface (about 9.5 sherds per square meter). Presumably, two Teotihuacan-like censers were found at this site. These vessels are similar to others we found in the community of Mezcala, in the municipality of Tlapa. Local informants told us that the population of this community used to speak Tlapanec.
Figure A-1. Site plan and location of Ahuatepec Ejido.
Artes y Oficios
X= 545,650
Y= 1,941,750
Z= 1020

The school of arts and crafts of the city of Tlapa was built on this spot. Local informants stated that during the construction, several burials and pieces of pottery were found. This site measures 1.447 hectares. Given the proximity of the site to the architectural core of Cerro Quemado (about 500 meters), we can infer a close relationship between the two settlements, although we have not found archaeological remains to substantiate this (figure A-2).

Aserradero
X= 545739
Y= 1941187
Z= 1080

This site is located 350 meters to the east of the central plaza of Cerro Quemado, across a ravine. Material remains can be observed over a surface of 48.5 hectares. No structures were found, but according to local informants, several archaeological artifacts were found during the construction of the aserradero (sawmill). It is likely that this settlement was part of the habitational zone of Cerro Quemado.

Atlamajac
X= 548290
Y= 1940786
Z= 1075

The archaeological site of Atlamajac is now buried by the modern town of the same name, 4 kilometers to the east from the city of Tlapa (figure A-3). Due to the fact that modern houses have almost totally covered the prehispanic settlement, we
Figure A-2. Location of Artes y Oficios site.
Figure A-3. Location of Atlamajac.
could not determine the characteristics of the internal structure of the site as no prehispanic structures were found. Based on a number of ceramic and lithic artifacts collected during the survey, we infer that the site was approximately 28.3 hectares. The codices mention that this site was a Cabecera with several subject town. Apparently, several mounds were bulldozed in the place were the state jail is now located. This would explain why we did not see any administrative structures of such an important prehispanic town.

**Atlamajalcingo del Río**

X= 537006  
Y= 1937458  
Z= 1300  

We found potsherd concentrations over 2.3 hectares, but there were no associated architectural features. It is located on a hillside 400 meters to the east of the modern town of Atlamajalcingo del Río (figure A-4).

**Atlamajalcingo-Terrazas 1**

X= 539280  
Y= 1938650  
Z= 1300  

This is a very small site (109 m²) with a few scattered potsherd concentrations. It is connected to a huge agricultural terrace system that covers all of the north side of the Atlamajalcingo del Río hill (figure A-5). The system consists of leveled areas up to 100 meters long and 30 meters wide (see description of the Seminario site for further details).
Figure A-4. Location of Atlamajalcingo del Rio.
Figure A-5. Location of Terrazas 1, Terrazas 2 and Seminario.
Atlamajalcingo-Terrazas 2
X= 538840
Y= 1938724
Z= 1250

It is located on the agricultural terraces of the Atlamajalcingo del Río hill that are still used to cultivate crops. Potsherds were recovered from a surface of approximately 108 m² (figure A-5). This settlement, along with Atlamajalcingo-Terrazas 1 and Seminario, appear to represent domestic units scattered above the farming zones.

Axoxuca-Mirador
X= 537629
Y= 1939743
Z= 1400

This settlement is located 1 kilometer to the west of Miguel Axoxuca. The site consists of several concentrations of potsherds scattered along a 2 kilometer ridge of a small mountain chain delimiting the Tlapa valley to the west, on the road to Chilapa. The total settlement covers a surface of 21.6 hectares, although the main terrace group is only 2.59 hectares (figure A-6). The terraces vary in size and are continuous up the hillslope, rising to an artificially leveled hilltop. Manos and metates were observed on surface, as well as obsidian blades. The density of potsherds is low on the main terraces, consisting of 5.1 sherds per square meter. In terraces further away from the site core, sherd counts were even lower with only 3.6 sherds per square meter. According to informants, an “idolo” (effigy) was found at a place known as “El Mirador” (The Lookout), but I did not see the effigy nor obtain any further information about it. As indicated by its name, the site commands a wide view overlooking the west side of the Tlapa valley, and allows for the control of access to both the valley and the Tlapa-Chilapa road.
Figure A-6. Location of Axoxuca Mirador.
Although there is small platform 11 x 7 m, 50 centimeter high, the site does not have any other architectural features that can be seen on the surface. However, it is possible that during our survey we missed a part of the settlement, since Elizabeth Jiménez (INAH Center, Guerrero) describes a ball-court in the vicinity of Axoxuca. It is very likely that there is another nearby site, which was not reported by our local informants and therefore missed by our survey.

**Caltitlan, Aldama #8**

X = 544013  
Y = 1939663  
Z = 1050

In the city of Tlapa, one of the areas surveyed was the Colonia Caltitlan. We inquired about archaeological remains found by local inhabitants on their property during the excavation of house foundations, outhouses, wells, and cisterns. Contrary to our expectations, the barrio of Caltitlan showed little evidence of a major prehispanic settlement beneath the modern town. The only information available about the presence of prehispanic remains in Colonia Caltitlan concerns a burial found 4 meters below the surface during the excavation of a pit on private property on a street named Aldama #8 (see figure A-11). The burial consisted of two skulls with a ceramic jar. Based on observations of the characteristics of the soil in this part of the town, which is black and highly organic, we suggest that this zone was used primarily for agricultural activities. Some scattered domestic units may have also existed, but there was not a large prehispanic settlement. Based on these observations, it is doubtful that this is the core of the political unit of Caltitlan, mentioned in the Codex of Azoyú. The largest presence of archaeological remains was found in Colonia Cerro Santa Anita, 300 meters to the south of Caltitlan. This suggests that the core of Caltitlan may have been located on the Santa Anita hill rather than in the lowest valley.
Campo La Lumbre
X= 551452
Y= 1944182
Z= 1520

Local informants in San Miguel Otate made reference to the existence of a prehispanic altar on the top of the hill of Campo la Lumbre, 2 kilometers to the northeast of the town. We were informed that some “ídolos” (effigies) were found in this place, which later were taken to the community museum in Tlapa. During an informal survey over the hill, we located several looter pits. Only a conical vessel support was observed around the area. The lack of other material suggests that prehispanic settlement on the hill was small and intermittent. Accounts from Otate informants, state that Vicente Guerrero (one of the leaders of the Mexican Independence) and his men were entrenched in this place, and that the royal army burned the hill in order to attack them, and that is why the site was named “Campo la Lumbre” (fire field) (Figure A-7).

Cerro Quemado (Coquera)
X= 545338
Y= 1941359
Z= 1104.5

Cerro Quemado is located 1.7 kilometers to the north of the city of Tlapa, on the northern bank of the Tlapanec River. The prehispanic site was settled on the southern side of the Cerro de la Cruz, using terraces to take advantage of the slopes. The civic-ceremonial area covers 9.3 hectares and contains a central plaza measuring 150 x 43 meters (figure A-8). In the center of the plaza, there is a mound with a diameter of 12 meters and is 70 centimeters high. A second mound is located on the eastern end of the plaza and has a diameter of 20 meters and is 50 centimeters high (figure A-9). Two low rectangular platforms demarcate the southern side of the plaza, while the northern side is delimited by a massive platform that measures 90 by 60
Figure A-7. Location of Campo La Lumbre.
Figure A-8. Regal-ritual core of Cerro Quemado.
Figure A-9. Tecpan, Plaza and Ballcourt of Cerro Quemando.
meters and is 4 meters high. This structure is most likely the palace or Tecpan, since this apparently was the place where the civic activities took place. The Tecpan covers a surface of 0.60 hectares and consists of a main platform and a terrace next to it. There is a looted mound on the top of the Tecpan, which has a diameter of 20 meters and is 80 centimeters high, and there are also a number of low platforms. A huge looter pit on the western talud of the building exposed a complex drainage system. We also observed that the taluds were made of limestone and gypsum and covered with plaster.

The site also includes a ball-court, which is located 50 meters to the south from the main plaza. The court is shaped like an "I" and is 59 meters long and 10 meters wide, with 27 x 7.5 meters ends. The southern end is limited by a 43-meter long, 24 meter wide, and 2 meter high structure. Several levels of habitational terraces with high concentrations of ceramic and lithic materials can be observed both toward the south of the ball-court and to the east of the central plaza. At Cerro Quemado we were able to measure the density of potsherds throughout different areas of the settlement and found that the densities were 10.3 potsherds per square meter on the habitational terraces, 13.1 potsherds per square meter in the main plaza, and 22.8 potsherds per square meter at the top of the Tecpan.

Three more potsherd and lithic concentrations were located toward the west of the main compound of buildings although we could not identify any associated structures with these features. These three areas were named Loma del Potrero 1, Loma del Potrero 2, Loma del Potrero 3. The ceramic materials associated with these concentrations extend about 700 meters to the west from the architectural compound. Across a small Xale (an intermittent sand-bed stream) 90 meters to the west of the terraces of the nuclear settlement, we located another artifact concentration area, which we named Aserradero. This last area is highly disturbed as a result of activities associated with a local sawmill. The site Cerro Quemado, which includes the architectural core and the several artifact scatters, covers a surface of 350,235 square meters (35.02 hectares). This size makes it the second largest site in Tlapa valley,
even though it is 2.4 times smaller than Contlalco, a site located across the river, about 1.8 kilometers away (figure A-10).

**Cerro Santa Anita**

X= 544152  
Y= 1939312  
Z= 1100

Santa Anita is one of the barrios that make up the city of Tlapa, and is located on the western side of a “Xale”, or dry stream bed that runs from the south to the north of the city. Based on the spatial distribution of a number of artifacts found by the current residents and the prehispanic remains we found at the top of Cerro Santa Anita, we have estimated that the prehispanic site covered approximately 4.0 hectares. Stone axes, gray-obsidian flakes, burials containing pots, and high concentrations of potsherds have been found in this zone. I suggest that this settlement was associated the prehispanic site in the Colonial barrio Caltitlan (figure A-11).

**Colonia Constitución**

X= 542282  
Y= 1938786  
Z= 1196

A small potsherd concentration was recorded at this location, covering a surface of 0.145 hectares with a density of potsherds on the surface of 5.5 sherds per square meter. The prehispanic settlement is located near the site of Juana Nájera (350 meters toward the east) and it is likely that both sites consisted of domestic units scattered over the southern bank of the Tlapanec River, under the political of the larger settlements of Contlalco and Cerro Quemado (figure A-12).
Figure A-10. Location of Cerro Quemado, Aserradero, Loma del Potrero 1, Loma del Potro 2, Loma del Potrero 3.
Figure A-11. Location of Caltitlan-Aldama #8 and Cerro Santa Anita.
Figure A-12. Location of Colonia Constitucion and Juana Najera sites.
Colonia Contlalco 1
X= 546037
Y= 1939228
Z= 1120

This site consists of ceramic materials found by the local residents, while excavating a house foundation. The prehispanic occupation appears to have covered roughly 0.44 hectares, and was located 1.3 kilometers to the southwest from Contlalco (figure A-13).

Contlalco
X=546926
Y=1940244
Z=1040

The site of Contlalco is located 2.5 kilometers to the east of Tlapa, on the southern bank of the Tlapanec River. This is the largest settlement in the area, covering a surface area of 85.32 hectares. The civic-ceremonial zone of the site covers 16 hectares and is located on the northern slope of an 80 meter high hill, which has been completely modified by a system of terraces that has created an enormous pyramid. A small ravine at the base of the hill divides the settlement into two sectors: a western and an eastern sector (figure A-14). The western sector is characterized by the presence of plaza covering a surface of 1.5 hectares (185 meters long east to west, by 81 meters wide north to south). The largest structures in the settlement are located on this plaza (figure A-15). There is a ball-court 74 x 16 m flanked by two structures (numbers 1 and 2). The two structures are 60 meters long, 22 meters wide, and 4 meters high. Both buildings have been heavily looted, which has affected their structural stability. Four more mounds were found on the same plaza (numbers 3, 4, 5, and 6), consisting of highly eroded rectangular substructures with variable heights: structures 3 and 4 are less than one meter high, while structures 5 and 6 are roughly 2 meters high.
Figure A-13. Location of the sites of Colonia Conttalco 1, Conttalco Cerro Boludo, Jerusalen 1, Jerusalen 2, Pedro Gonzalez and Tlapa-Tepeyac sites.
Figure A-14. Sectors of Contlaco.
Figure A-15. Location of the main structures in the western sector of Contlaeco.
The north side of the plaza is limited by a large structure that I have identified as the Tecpan, inferring that this building functioned as the palace or residence of the ruler (figure A-16). The structure is 15 meters high, with a substructure measuring 112 by 103 meters. Four patios at different elevations are located on the top of the platform, covering a total surface of 4,578 square meters (0.457 hectares). Patio 1 is the largest of the four consisting of a low platform, which is 50 centimeters high, 18 meters long, and 9 meters wide. One of the most significant features of this Tecpan is the presence of sunken patios. Patio 4 is completely surrounded by taluds, while Patio 2 is limited only on its southern and eastern sides, which make it look more like a terrace than a sunken patio. A looter’s pit in Patio 1 exposed a layer of ash between two construction stages, which suggests that these patios have had hay or palm leaves roofs, particularly patios 1, 2, and 3. The architectural characteristics of Patio 4 indicate that it was not roofed, and that it may have functioned as a light source. The taluds of the Tecpan are walls with angles larger than 40° made of sandstone and limestone cemented together with plaster, which gives them great stability and has allowed them to resist the detrimental effects of looting. An important feature of the Tecpan is that access is restricted. During the survey, we found no access to the palace from the main plaza or from the neighboring terraces. This may indicate that the four patios were private, which is characteristic of the exclusive spaces used by rulers.

The Eastern sector of the site consists of a 70-meter long and 40 meter wide irregular terrace and a 60 x 40 meter platform (figure A-17). Two small structures of similar sizes (about 22 meters long, 7 wide, and 50 centimeters high) are located on this platform. The northern wall of the platform delimits a second ball-court, which is 51-meters long and 13 meters wide. The other side of the ball-court is flanked by a 43-meter long, 12 meter wide, 2 meter high structure. Another terrace is located next to the court, measuring 170 x 40 meters. Large concentrations of grinding stone fragments, lithics, and potsherds were found on the surface of this terrace.
Figure A-16. Tecpan of Contlaico.
Figure A-17. Eastern Sector of Contlalco.
Another sector of the site, which was named Plaza-Cumbre, consists of a terrace system covering the northern side of the hill from base to top (figure A-18). A 0.7 hectare surface was leveled off on the top of the hill in order to create a plaza on which a 1-meter high L-shaped platform was constructed. Smaller terraces are scattered over the rest of the hilltop.

Potsherd scatterings continue to appear outside the main compound, over the surface of neighboring hills. Three hundred and forty meters to the east of the Eastern sector, another complex of small terraces, which has been named Contlalco loma 3, was found (figure A-19). The potsherd scattering ends approximately 600 meters to the east this sector, by an area named Barranca Atlamajac (figure A-20). Toward the west, two adjacent potsherds concentrations and architectural remains were located. Another artifact concentration was found across a ravine, about 160 meters to the west from the Western Sector, which was identified as Colonia Contlalco 2. Prehispanic substructures were visible under modern houses and archaeological remains are often found in contemporary construction projects. Farther west, about 420 meters from the Western Sector, another artifact concentration was recorded and named “Maria Ponce.”

**Contlalco, Cerro Boludo**

X= 547124  
Y= 1939474  
Z= 1160

This is a small settlement located 830 meters to the south of the main plaza of Contlalco. Based on the presence of potsherd and projectile points on the surface the site covers an area of 0.6 hectares. This settlement was possibly part of the domestic units associated with the site of Contlalco (figure A-13).
Figure A-18. Sector Plaza Cumbre of Contialco.
Figure A-19. Sector Contalco Loma 3.
Figure A-20. Different sectors of the site of Contlalco.
Don Cirilo
X= 545994
Y= 1941048
Z= 1123
At this site, located between Cerro Quema do y Contlalco (750 meters to the east of the former and 1 kilometer from the latter), the presence of archaeological remains was recorded over a surface of 2.915 hectares. Green obsidian prismatic blades and lithic production debitage are abundant on surface.

Don Placido (Paraíso Perdido)
X= 538753
Y= 1939899
Z= 1100
This site consists of several terraces covering an area 1.3 hectare surface, on which potsherd concentrations were located. Local informants describe one sherd found at the site, with a stamped impression of an owl. This site is 1.1 kilometers to the east of Axoxuca-Mirador, across a ravine that comes from Petlacala.

Irina Alvarez
X= 546830
Y= 1941473
Z= 1075
This site is 1.1 kilometers to the north of the northern bank of the Tlapanec River. There were very few low-density potsherd concentrations over a surface of 300 m².
Jerusalén 1
X= 546442
Y= 1939057
Z= 1190

This site is located 1.3 kilometers to the south from Contlalco, on the southern side of the foothill restricting the valley of Tlapa (figure A-13). Potsherd concentrations were recorded over a surface of 0.52 hectares, with an average density of 12.5 sherds per square meter. This is a small habitation site apparently related Contlalco.

Jerusalén 2
X= 546630
Y= 1939503
Z= 1140

This site is defined by a ceramic concentration with a surface of 0.44 hectares (figure A-13). It is located on the same hilltop as Jerusalén 1, 850 to the south from the central plaza at Contlalco. The density of potsherds was 10 sherds per square meter.

Juana Nájera
X= 542637
Y= 1938714
Z= 1237

This site of 132 m² is located to the south of Tlapa, on the Tlapa-Marquelia road. Local informants describe two anthropomorphic sculptures, a male and a female, found during the construction of a house. The owner of the property later found a third sculpture of a frog that measures 20 x 30 centimeters.
La Providencia
X= 541671
Y= 1939976
Z= 1075

This site is located on a small slope above the road connecting the towns of La Soledad and La Providencia. Potsherd and obsidian concentrations were recorded over 2.53 hectares surface.

La Soledad
X= 540700
Y= 1939600
Z= 1100

The town La Soledad is located 3.4 to the west of Tlapa, on the northern bank of the Tlapanec River. Local residents commonly find ceramic artifacts and walls of prehispanic domestic structures. Artifact scatters extend across a dry stream, 100 meters to the west of the town. At the western edge of the site, there are 4 terraces that level off a hilltop creating a surface 150 x 30 meters (figure A-21). The density of potsherds is low (3.5 sherds per square meter), although this may be the result of erosion. In addition, black obsidian blade fragments were also recovered from the surface. The settlement covered an area of approximately 7.4 hectares, part of which is covered by the modern town. According to local informants, the elders of this town spoke Mixtec.

Loma UPN
X= 546246
Y= 1941294
Z= 1080

A number of ceramic and lithic scatters were found in an area surrounding the Universidad Pedagógica Nacional y el Instituto Tecnológico de la Montaña (UPN),
Figure A-21. Location of La Soledad.
over a surface of 15.5 hectares. During the construction of the UPN, in May 2000, a burial was excavated, looted and destroyed by construction workers. Several potsherds found in association with this burial were shown to us. Most of these sherds were Postclassic guinda-sobre-blanco. There was also a complete vessel 30 centimeters high. These potsherds are the only guinda-sobre-blanco examples recorded in the Tlapa region.

**Seminario**
X= 539674  
Y= 1938724  
Z= 1164  

Several terraces running east-west are located near the west side of the Seminario de la Diócesis of Tlapa (figure A-5). Some of the terraces are 100 meters long and 20-30 meters wide. There is little indication of human occupation, which suggests that these were agricultural terraces. The site named the Seminario, however, was one of the rare areas were there were potsherds on the surface that indicated a small habitation site of 111 m².

**Tlapa-San Antonio**
X= 544694  
Y= 1939450  
Z= 1100  

Several archaeological remains were found around a small hill in Colonia San Antonio. These include a black vessel and wall alignments of presumably prehispanic structures. Because the site is buried beneath the modern town, it is difficult to determine the boundaries of the archaeological settlement. Nonetheless, based on information about artifact scatters, we estimate that the settlement covered a surface of at least 0.96 hectares.
Sites in the Huamuxtitlan Valley

Alpoyeca-Las Minas

X= 552977
Y= 1953873
Z= 1090

This site is located 1.3 kilometers to the west of the modern town of Alpoyeca, on a foothill to the east of the Tlapanec River. A large archaeological site was recorded in this area, which covers a surface of 26.84 hectares. The architectural core of the site is roughly 3.5 hectares and consists of three levels of terraces, 2 ball-courts, and several platforms and mounds (figure A-22). All of these features are organized around a massive platform, measuring 83 x 50 meters, which functions as the central plaza. A 23-meter long, 14 meter wide, and 2 meter high structure is located on the northern end of the plaza. Another rectangular structure of similar dimensions is situated on the southern end, and a 5 meter high 52 meter long talud delimits the western side of the central plaza. Above the talud is a flat open area of 50 x 70 meters. The eastern side of the plaza is flanked by a ball-court, which is 78 meters long and 12 meters wide, with 25 x 8 meter ends. A 45 x 21 meter rectangular structure borders the eastern side of ball-court.

A 48-meter long, 40 meter wide, 3 meter high platform is located 104 meters to the west of the central plaza. The features of this platform correspond to those recognized palaces. Three hundred twenty meters to the southeast of the central plaza another building complex is arranged around a second ball-court. Two parallel buildings flank the sides of the ball court. The ball-court is “I” shaped and measures 50 x 9 meters, with 16 x 5.7 meter ends.
Figure A-22. Main structures of Alpuyeca-Las Minas.
Alpoyeca-El Mirador

X= 552310
Y= 1952365
Z= 1020

Alpoyeca-El Mirador is located 1.7 kilometers southwest of Alpoyeca-Las Minas. From the similarity of artifacts it appears that these two sites had some type of interaction. Alpoyeca-El Mirador is constructed on a hilltop 70 meters above the alluvial plain of the Tlapanec River perhaps for defensive reasons. Platforms and terraces that existed on the hilltop were unfortunately bulldozed some years ago by the municipality of Alpoyeca. Many chert and quartz flakes, chert projectile points, obsidian prismatic blades, and green obsidian flakes were found during the survey. The artifact scatters were found over an area of 4.92 hectares, extending to the base of the hill.

Coyahualco-Cuatetelzin

X= 544094
Y= 1962091
Z= 950

This site is approximately 2 kilometers to the northwest from the town of Coyahualco and it is strategically located between the largest sites of the Ollinala-Cualac area with those of Cañada de Huamuxtitlán through Cuatlaco Grande barranca. The settlement is situated between the foothills and the alluvial plain and covers an area of 16.39 hectares. In terms of architecture, Coyahualco-Cuatetelzin along with Huamuxtitlan-Tecoapa, Huamuxtitlan-Los Cuartos, and Alpoyeca-Las Minas is one of the most important sites of the Huamuxtitlan valley. The architectural zone covers an area of 2 hectares and consists of a sunken patio, a mound, a platform, and a ballcourt (figure A-23). The buildings are arranged around the sunken patio, which is 43 by 38 meters. The patio is delimited to the northeast by a 13 meter-high pyramidal structure with a 70 by 50 meter base, which makes it the largest mound
Figure A-23. Main structures of Coyahualco-Cuateteltzin.
recorded in the study area. Unfortunately, this mound has been heavily looted by locals from Coyahualco and is on the verge of collapse. On the southeastern side of the patio, there is a platform that measures 63 by 43 meters and is 5 meters high. In 1979 the archaeologist Guadalupe Martínez Donjuan reported the presence of a ballcourt 90 meters to the north from this compound. The ballcourt no longer exists, since it was destroyed when a reservoir was built to irrigate the valley.

**Huamuxtitlan-Los Cuartos**

X = 547490
Y = 1963679
Z = 973

This site is located 4.5 kilometers to the south of Huamuxtitlan, on the eastern bank of the Tlapanec River. Huamuxtitlan-Los Cuartos is a defensive site with the most elaborate defensive features found in survey area (figure A-24). This is a fortress given the presence of an enormous artificial ramp, pits and defensive walls. The site was constructed on the top of cerro Los Costeños. This hill has two crests 220 meters apart, with an altitude difference of 50 meters. The lowest top, which has been named Los Cuartos Bajos, is located 20 meters above the alluvial plain and is the only way to access the site. A 105 meter long-25 meter wide ramp connects Los Cuartos Bajos with the higher hilltop, Los Cuartos Altos, which is 60 meters higher. The ramp has an inclination that varies between 15° and 30°. The sector of Los Cuartos-Altos is 80 meters above the alluvial plain of the Tlapanec River and is surrounded by deep cliffs.
Figure A-24. Main structures of Huamuxtitlan-Los Cuartos.
Huamuxtitlan-Tecoapa

X= 546531  
Y= 1966611  
Z= 960

This site is located 1.3 kilometers to the south of the modern town of Huamuxtitlan, on the eastern bank of the Tlapanec River. The site covers 30.04 hectares and is made up of three different sectors: Tecoapa (also known as Organera), El Boqueron, and Plaza Vieja.

Tecoapa is the largest and most important of the three and includes an architectural core arranged around a 62 by 56 meter sunken patio on the north-south axis, with a deviation of –10º from the north (170º-350º azimuth axis). The northern, western, and southern areas above the floor of the sunken patio are 10 meters wide and lead to other areas of the site (figure A-25). To the west there are two terraces, the higher of the two measures 118 meters long and 25 meters wide, and the lower terrace has 130 by 60 meter flat area which connects this part of the site with El Boqueron sector. A mound 9 meters high and 43 meter diameter encloses the eastern side of the sunken patio. An “I”-shaped ballcourt was located about 50 meters to the north from the main mound. The ballcourt is 49 meters long and 8 meters wide.

Ixcatéopan

X= 550922  
Y= 1948118  
Z= 1100

The site of Ixcatéopan is located 600 meters to the west of the modern town of Ixcatéopan, on western bank of the Tlapanec River at the base of cerro Cuexcomatzin. The site covers an area of 27.38 hectares, although the architectural core is only 2.9 hectares. This core consists of 7 ascending terraces covering a 200 meter long and 40 meter high surface (Figure A-26). Four 1 meter high, heavily looted mounds are located on the main terrace.
Figure A-25. Main structures of Huamuxtitlan-Tecoapa
Figure A-26. Main structures of Ixcateopan.
Although this is considered an important site, there was no ballcourt found and the core only consists of several small structures.

**Xocotla-Buenavista**

X = 549888  
Y = 1953120  
Z = 1000  

This site is located on the northern bank of the Zizintla River, at the confluence of the Tlapanec River. The settlement consists of eight terraces roughly 30 meters long and 20 wide (figure A-27). Except for a small looted mound, no other architectural structures were seen. Potsherd concentrations were recorded over an area of 9.66 hectares, some having very high densities (18.5 potsherds per square meter). The inhabitants of Buena Vista know this site as Xocotla, and they reported that archaeological artifacts are frequently found there, particularly at a point known as “La Mesa”. Both the Matrícula de Tributos and the Codex Mendoza refer to a Cabecera named Xocotla in the province of Tlapa, which has not been associated with any modern town. Archaeological remains found at this site and at that of Alpuyeca-Las Minas, suggests that these settlements may correspond to the site of Xocotla in the Matrícula de Tributos.

**Sites in Igualita Valley**  

**Huipila**  

X = 550495  
Y = 1936642  
Z = 1250  

The archaeological site of Huipila is located 2.6 kilometers to the southeast of the town of Mezcala, on the top of cerro Joya Alonsa. The site covers an area of 13.35 hectares. It consists of several terraces on the hill-slope (figure A-28). The location
Figure A-27. Location of Xocotla-Buena Vista.
Figure A-28. Location of Huipila.
of the settlement is defensive with only one protected access. No ballcourt remains or large architecture were observed on surface.

**Igualita-Yoallan**

X= 551399  
Y= 1929088  
Z= 1175  

This settlement was located 1.5 kilometers to the south of the modern town of Igualita. The architectural core of the site was constructed on top of hill with terraces on the hill-slopes. The main structures include a sunken patio 30 meters long and 11 meters wide, a 30 by 40 meter plaza, 7 meter high mound, an “I”-shaped ballcourt, and other large platforms (figure A-29). The total area of the settlement covered roughly 30.48 hectares.

**Mezcala**

X= 549456.5  
Y= 1938524  
Z= 1032  

This site is located 2.4 kilometers to the southeast from Contlalco. Mezcala is located on a gently rising slope on the eastern bank of the Igualita River. The site covers an area of 7.2 hectares (figure A-30). Except for a few eroded terraces no structures were observed. A tomb that contained Teotihuacan style vessels was found at this site. One of the vessels was a 40 centimeters tall censer (figure A-30). The preliminary PIXE and XRD results indicate that the censer was made of local clay. Thermoluminiscence analysis dates the vessel to 600 B.C. +/- 150. Similar censers have been recorded at the site of Ahuatepec Ejido, and are currently on exhibit at the community museum in Tlapa, Guerrero.
Figure A-29. Plan view of Igualita-Yoallan.
Figure A-30. Location of Mezcala and Teotihuacan style censer found at the site.
**Tlayahualco-El Mirador**

X= 549699  
Y= 1933612  
Z= 1350

This site is located 3.5 kilometers to the northwest of the modern town of Igualita, and 800 meters from the town of Tlayahualco. This is a hilltop site that covers an area of 4.236 hectares. Potsherds and obsidian flakes were abundant on surface. The settlement is built on a 200 meter long and 30 meter wide terrace. A 2 meter high-30 meter long retention wall supported the terrace. Like many other sites in the area, this site has an effective defensive position.

**Sites outside the Valleys**

**Alcozauca**

X= 565044  
Y= 1930643  
Z= 1400

This site is located within the modern town of Alcozauca, Guerrero, 22.5 kilometers to the southeast from Tlapa. Although the site is partly covered by the modern town, we estimate that the site covers an area 21.5 hectares. The architectural core is arranged around 110 by 78 meter plaza. Ravines flank the northern and southern sides of the plaza, while the western end is delimited by a 1.7 high, 110 meter long, 50 meter wide platform. Bordering the eastern side of the plaza there is a large building, which has been recorded as a Tecpan. It has a base that measures 1.3 hectares and is 9 meters high, making it the largest building recorded in the entire survey area (figure A-31).
Figure A-31. Site plan of Alcozaucan.
**Aquilpa-Teteltipa**

X= 527733  
Y= 1939170  
Z= 1680

The site is located 17 kilometers to the west of Tlapa. This site covers an area of 15.84 hectares on the top of cerro Teteltipa ("place of stones"). The site is approximately 100 meters above the level of the river and consists of 4 terraces, which are 120 meters long and 20 meters wide (figure A-32). On top of the hill there is a large oval plaza with a central pyramidal structure measuring 39 x 25 meters with a height of 6 meters. Unfortunately, the structure was severely damaged by heavy looting, which left its core virtually empty.

**Atlixtac**

X= 506644  
Y= 1941264  
Z= 1700

The archaeological site of Atlixtac is located 700 meters to the southwest of the modern town of Atlixtac (figure A-33). Given its proximity to the modern town, the site has been exposed to destructive looting, which makes it difficult to determine its spatial organization. There is a small pyramid with a base of 25 by 20 meters and a height of 5 meters that makes up the central area of the site. Habitational terraces are scattered around the pyramid. The site may have had an important role within the settlement system, since it appears to have controlled the Tlapa-Chilapa road.
Figure A-32. Site plan of Aquilpa-Teteltipa
Figure A-33. Location of the site of Atlixtac.
**Chiepetepec-Tlancualtepec**

X= 528737  
Y= 1945685  
Z= 1960

This site is located 3.5 km to the north of Chiepetepec, on the rocky hilltop of cerro Coatepec, also known as Tlancualtepec (hill of cliffs). The settlement covers an area of 17.62 hectares and consists of an “I”-shaped ballcourt, which is 54 meters long and 8.9 meters wide, a central patio flanked by mounds, which are roughly 4 meters high, with bases 20 x 20 meters, and five levels of terraces that are 50 to 100 meters long and 16 to 20 meters wide. This site is most likely constructed on the hilltop for defensive purposes (A-34).

**Chiepetlan-Cuauhtepetl**

X= 538551  
Y= 1953928  
Z= 1674

This site is located 2.3 kilometers to the north of Chiepetlan. The architectural core of the site is located on top of cerro Cuautetl, which is flanked to the south and southeast by the deep ravine of Xalatlaco. The settlement covers an area of 14.66 hectares. The site consists of several platforms, plazas, and habitational terraces, as well as a ballcourt (figure A-35). This is an important place because it is part of a system of defensive sites located along the Zizintla River that separates the provinces of Tlapa and Quiauhteopan.
Figure A-34. Site plan of Chiepetepec-Tlancualtepec.
Figure A-35. Site plan of Chiepetlan-Cuauhtepetl.
Chiepetlan-Quiquimimiteopan
X= 541174
Y= 1950338
Z= 1400

This site is located 3.8 kilometers to the south of Chiepetlan. According to local informants, Quiquimimiteopan is Nahuatl for “Here is my temple”. The site covers a surface of 16.78 hectares and composed of habitational terraces, plazas, platforms, and a ballcourt (figure A-36).

Huitzapula
X=521333
Y= 1926078
Z=1920

The archaeological site of Huitzapula is located 1 kilometer to the east of the modern town of San Pedro Huitzapula. The settlement covers an area of 23.76 hectares and has a defensive position (figure A-37). Architectural remains are present in two different sectors of the site. The site consists of several terraces surrounding a central patio that is 47 by 30 meters. The eastern side of the central plaza is flanked by an “I”-shaped ballcourt that measures 53 by 7.6 meters.
Figure A-36. Site plan of Chiepetlan-Quiquimimiteopan.
Figure A-37. Site plan of Huitzapula.
Mexquitlan-Organal (Ahuacatitlan)

X= 558190
Y= 1943241
Z= 1154

This site is located 600 meters to the east of the modern town of Mexquititlan, on the southern bank of the Tlalixtaquilla River. This hilltop site covers an area of 13 hectares that is surrounded by the river on three of its sides. The architectural features of the site were organized around a 44 by 42 meter plaza. The southeastern side of the plaza is flanked by a 2 meter high, 36 meter long, 24 meter wide platform, while the northwestern side is enclosed by a low terrace that supports a ballcourt, that measures 46 by 7.2 meters (figure A-38).

Ocuapan

X= 532889
Y= 1922557
Z= 2680

This site is located on the northern side of “Cerro del Pinto”, 1.5 kilometers to the northwest of the modern town of Ocuapa. The site covers an area of 8.834 hectares primarily composed of habitational terraces. There are no large structures or ballcourt at this site (figure A-39).
Figure A-38. Site plan of Ahuacatitlan.
Figure A-39. Site plan of Ocuapan.
Olinala
X= 528063
Y= 1964280
Z= 1360

This site is located 1.4 kilometers to the southeast of the modern town of Olinala, on the northern bank of Barranca Tecuamatlaco. The site covers an area of at least 19.25 hectares, however, its architecture has been almost totally destroyed by looting (figure A-40). The only architecture that exists consists of several habitation terraces.

Oztocingo-Coatepec
X= 533,024
Y= 1,935,235
Z= 1420

The site of Oztocingo-Coatepec is located 2 kilometers to the northwest of the modern town of Oztocingo, on the southern hillslope of cerro Tetepec. The site covers an area of 4.6 hectares. It consists of mainly habitation terraces with no public architecture.

Tenango Tepexi.
X= 539067
Y= 1946168
Z= 1695

The archaeological site of Tenango Tepexi is currently covered by the modern town of the same name. The place is located on the narrow top of cerro Coaxcatepetl and is surrounded by ravines on all sides (figure A-41). The site covers an area of 9.82 hectares. Large habitational terraces are located on the hilltop and have been continuously used from prehispanic times to the present.
Figure A-40. Location of Olinala.
Figure A-41. Location of Tenango Tepexi.
Texmelincan
X= 519059
Y= 1931944
Z= 2280

Texmelincan is one of the few sites in the region that has been published. In 1933, Eduardo Noguera announced the recovery of several artifacts from Texmelincan, Guerrero (Noguera 1933). These findings, although product of looting, were impressive, and included several necklaces, polished carved jade figures, sheets and disks of gold; transparent obsidian earplugs, bells, beads, copper sheets and rings, shell collars, effigy vessels made of clay or carved on alabaster, carved bones, an earplug and several amber spindle whorls, a carved turquoise head and stone effigies. Later, José García Payón reported that the site included more than twenty mounds and three ballcourts located throughout seven “barrios” (figure A-42). Unfortunately, the site had been heavily looted, and seven tombs, as well as five slab-covered structures had been destroyed. Based on the presence of mineral debris, as well as hundreds of grinders found along the rivers near the settlement, García Payón concluded that one of the main economic activities was gold mining and mineral extraction. On our survey, we substantiated many of García Payón’s finding and also established that the site covers an area of approximately 57 hectares.

Tlaxco
X= 546126
Y= 1916857
Z= 1620

The prehispanic site of Tlaxco was located 500 meters to the south of the modern town of Tlaxco. The site covered a surface of at least 17.34 hectares. The only remaining architecture consists of several agricultural terraces and a ballcourt, which was 40 x 9 meters. All other architectural features have been destroyed by looting and agriculture (figure A-43).
Figure A-42. Site Plan of Texmelincan.
Figure A-43. Location of Tlaxco.
**Totomixtlahuaca**

X= 521103  
Y= 1896743  
Z= 845

Even though the site is partially covered by the modern town of Totomixtlahuaca, I found several potsherd scatters that contained both Potclassic and Colonial materials. This site is located on the northern bank of the Grande River of los Yopes on and covers an area of 13.94 hectares. It is probable that the prehispanic buildings of this site were destroyed during the construction of the large Augustinian church that was in the center of the town (figure A-44).

**Tototepec-Cerro Machete (Yu Cuchú)**

X= 546166  
Y= 1929608  
Z= 1640

The site is located 3.4 kilometers to the northeast of the town of Tototepec. The site is located on top of Cerro Machete, flanked by the Iztac Atl and Amatitla ravines. The site covers an area of 20.82 hectares. The hilltop was modified with habitational terraces, which can measure up 100 x 20 meters. The architectural core of the site consists of a small patio (32 by 25 meters) bordered to the east by a 3 meter high platform, with a 49 by 33 meter base. An “I”-shaped ballcourt, 37 by 10 meters, is located next to the westside of the platform. To the east of the patio there is a mound with a diameter of 32 meters and a height of 5 meters (figure A-45).
Figure A-44. Ruins of the 16th century church in Totomixtlahuaca.
Figure A-45. Plan site of Tototepec-Cerro Machete (Yu Cuchu).
**Tototepec-Pueblo Viejo (Yoso None: Llano de Maíz)**

X = 545138  
Y = 1926706  
Z = 1700

This site is located 1.3 kilometers to the east from the modern town of Tototepec and covers an area of 19.15 hectares. This site has been heavily looted and destroyed. Nevertheless several residential terraces and a 4 meter high platform with a 60 by 50 meter base (figure A-46). No ballcourt was found, and given the destruction of the site, it is difficult to determine whether there was one or not.
Figure A-46. Plan site of Yoso None, Tototepec-Pueblo Viejo.
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