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An aerial photograph of a large cable-stayed bridge with multiple towers and numerous stay cables, spanning over a multi-lane highway. The bridge is the central focus of the background image.

Indigenous Identity and Colonial Rule: The Survival of Indigenous Linguistic Distinctiveness in Mexico

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Identity and indigenous discrimination

Indigenous peoples in Latin America are poor and often disenfranchised. Colonization is viewed as the key explanation.

- Indigenous peoples are **poor because they have less human capital and skills and suffer discrimination**
 - Local public good provision, social distance, skin color and language
- Indigenous peoples are **poor because of the legacy of exploitative practices of colonialism**
 - Slavery, *encomienda*, land dispossession, disadvantageous contracting
- Indigenous peoples are **poor because they chose to isolate themselves into poverty traps** failing to reap the advantages of modernity
 - Remoteness and *Regiones de Refugio* as defensive moves

Main questions:

- Under what conditions can indigenous peoples profit **from exchanges with their colonial rulers**?
- Is it possible for **ethnic identities** to survive once engaged in these exchanges?
- What role does the **political empowerment** of indigenous communities play in the survival of linguistic distinctiveness?

Provide answers drawing from unlikely place: indigenous survivors in Mexico City



Figure: Closeup of 1550 Uppsala map with *Tecpan* (indigenous palaces) highlighted

- *Centers of Indigenous Political Power- Tecpan*— account for the survival of indigenous identity today.
- Viceroyal capital city still considers itself a **Spanish** and Mestizo urban center.
- Ethnic distinctiveness (rather than full assimilation) with linguistic investment into Spanish

Theoretical accounts of linguistic change and acculturation

Most of our theories suggest that indigenous identities should not persist in a modern, cosmopolitan urban agglomeration like Mexico City

- Tipping game of linguistic advantage (Laitin)
- Regiones de Refugio (Aguirre Beltran)
- Hispanization and erosion of indian identity (Lockhart)
- Discrimination as handicap (Nopo, Campos)

Indigenous discrimination

Indigenous peoples throughout Latin America have lower wages, higher risks of falling into poverty, less human capital, higher mortality rates, poorer health (social scientists have known this for a long time, but compelling evidence from professional economists Patrinos and Hall, Nopo and World Bank)

- Even matching for similar conditions of skill and other observables, huge residual from discrimination
- Estimate through exact matching wage gaps from the Mexican census sample
- Matching on age, gender, education, hours, location

Wage gap for earners in the 2010 census sample

Mincer equations for census sample with 350 thousand wage earners including 28,600 indigenous (self-adscription). Simulated earnings (quarterly) by covariates

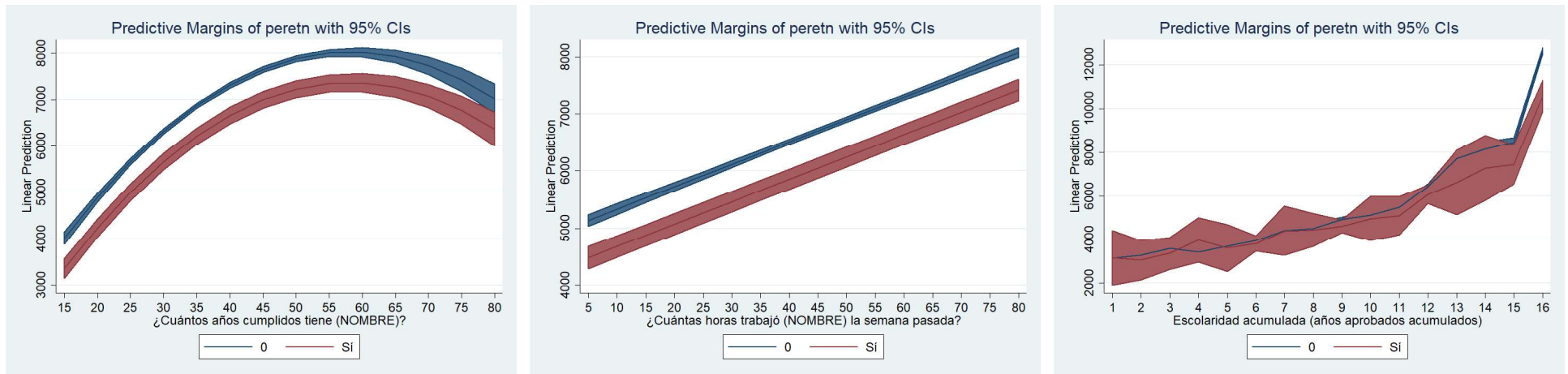


Figure: Ethnicity Wage Gap: vs Age, Hours Worked and Years of Schooling

A European Map Depicting Temixtitan and the Scope of the Conquest

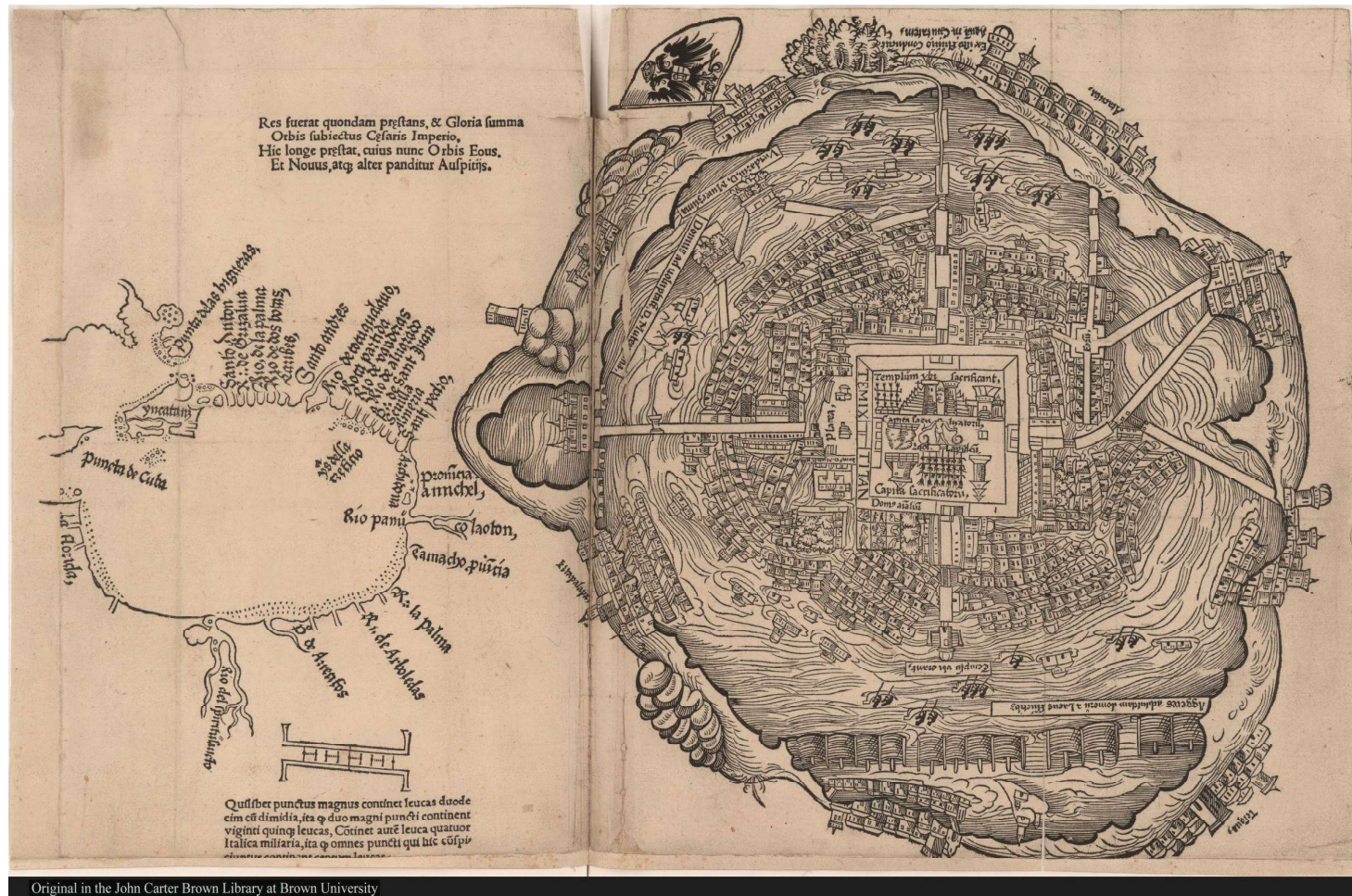


Figure: Map in Second Carta de Relación by Hernan Cortez (Nuremberg Map) John Carter Brown Map Collection B524 C827p / 1-SIZE Cartas. Carta 2a Praelara Ferdinandi. Cortesii de noua maris oceani Hyspania narratio sacratissimo. ac inuictissimo Carolo Romanorum Imperatori semper Augusto, Hyspaniarum, Regi Anno Domini. M.D.XX. transmitta

A European Map Depicting Temixtitlan and the Scope of the Conquest... In Full Color!



Figure: Map in Second Carta de Relación by Hernan Cortez (Nuremberg)

An Indigenous Map Depicting the City and the Limits of the Conquest



Figure: Map of Mexico City in 1550 (University of Uppsala Library)

An Indigenous Map Empoverished by the Limits of European Imagination

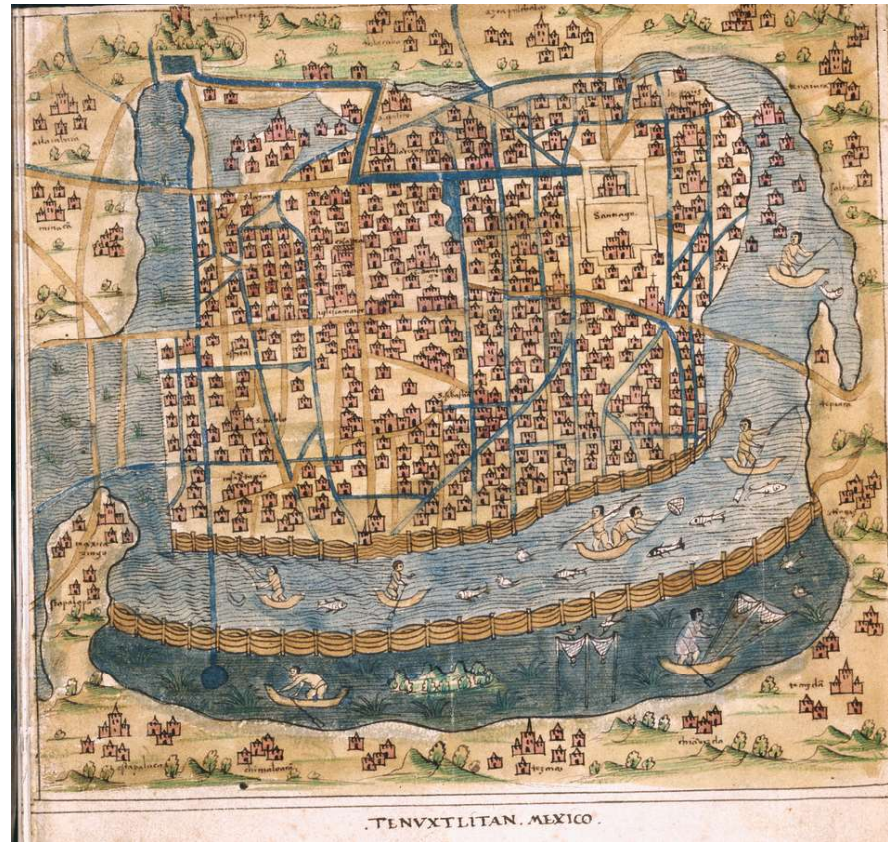


Figure: Tenxtilitan according to Islario of Alonso de Santa Cruz (Biblioteca Nacional España)

Cartographic precision of the map of 1550

The map takes some cartographic conventions from Renaissance European mapmakers, but is fundamentally indigenous

- no “horror vacui”, but rather a fundamental intentionality in all the images (that is why the map took so long to produce)
- precision in street grid for the Spanish constructions
- exact location of *acacias*
- exact depiction of the hydrology of the valley
- place names for well known geographic features, not just human settlements
- precise location of convents and churches, including labels in Spanish

Hypothesis: The map is actually an accurate Census and ethnography

- precise geolocation within three map scales (Tlatelolco Plaza, the cities in the lake, the surrounding valley)
- precise location of all the indian palaces *Tecpan*
- within the central area of Tenochtitlan and Tlatelolco
- in specific towns or places where *Tecpan* remained centers of political power regardless of *encomiendas*

Learned indigenous elite and their prominence in city politics

- Indigenous cartographers had an intimate knowledge of their physical place and the governance of their territory
- Indian nobility produced maps instrumentally to fight Spanish colonizers to retain their land and ancestral rights
- Reacommodation of political power with emergence of new leaders (gobernadores, not *Tlatoani*) that did not come from noble lineages, but *macehuales* from the warrior class
- Self rule (even within the city) of the four indigenous quarters of the city
- Before the catastrophic consequences of the epidemics of the 1570s
- Construction of humanist utopias by the Franciscan missionaries, including Vasco de Quiroga (Hospital Santa Fe)
- Colegio de Santa Cruz de Tlatelolco produced Antonio Valeriano, governor of Azcapotzalco and then Tenochtitlan for 15 years

Cartographic detail in the map

It was possible to reconstruct the following features:

- 70 towns of various sizes
- 20 mountains
- 15 water springs
- 15 lakeside locations
- 15 unidentified place glyphs
- 64 Spanish structures
- 560 Indigenous homes in Tenochtitlan and Tlatelolco
- 50 church buildings
- 47 *Tecpan* both in the islands and surrounding the lake

Scenes of everyday life and economic activity

Map also includes European style figures showing the daily activities in the Valley

- *Tamemes* porters carrying goods into the city
- Loggers cutting trees
- Fishermen with nets
- Farmers on prickly pears (perhaps cochineal?)
- *Pulque* collection
- Spanish men on horses
- Family carrying their goods (migrants)
- Man attacking another with sword (robbery)
- Missionaries converting indians
- Spanish man beating indigenous porter
- men fixing roads (perhaps through *tequio*)

Accurate depiction of the City probably at around the 1540s



Details of Map of Mexico Tenochtitlan of 1550 Tecpan surrounding the town of Coyoacan, Neighborhood of San Pablo

Geocoding the map of 1550

Geocoding is not as straightforward as using a gazetteer such as INEGI's Archivo Historico de Localidades.

- Place names are usually glyphs
- Mistakes and spelling variation in Spanish annotations.
- Some locations to the West (top of map) have not survived
- *Reducciones* of surviving indigenous populations towards 1600
- Orography and topography provides, however, important geographic markers
- Location of towns (*alteme*) on the hills vs valleys

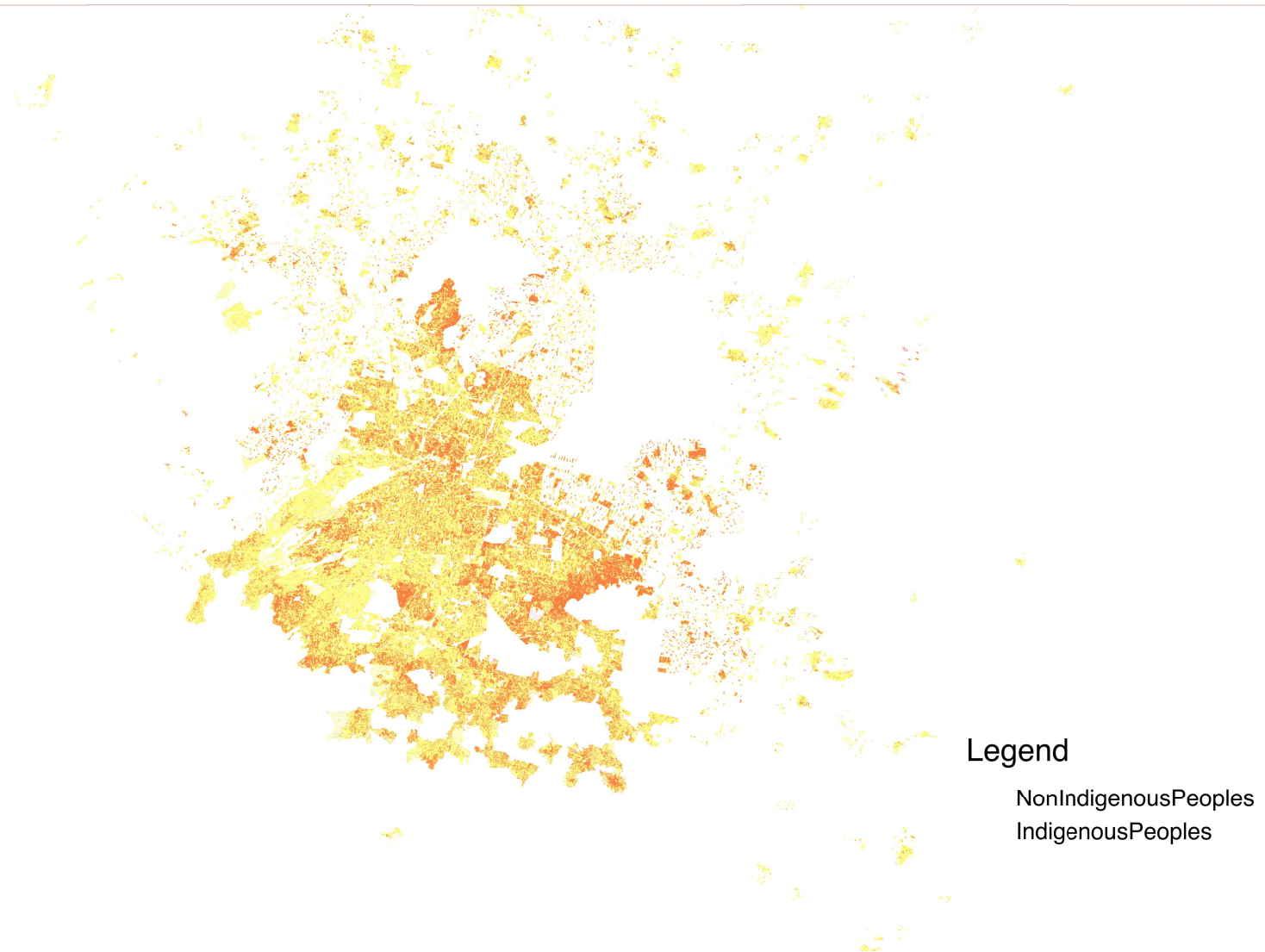
Encomienda as a biased source vs indigenous cartography

Virtually all population counts from 16th and even 17th century come from tribute assessment imperative. The 1550 Map includes key for hierarchy of town population

- Whole communities may appear and disappear from lists (all are incomplete)
- Privileges extended to communities and broad member classes
- migratory processes largely unknown
- *reducciones* not only about consolidation of surviving populations into planned towns, but reshaping dispersed *calpulli* settlement patterns
- Escaping legibility from the state (Scott's Art of Being Not Governed)
- Reading the indigenous pictorial sources was lost (at least since 1554)

An indigenous city even today

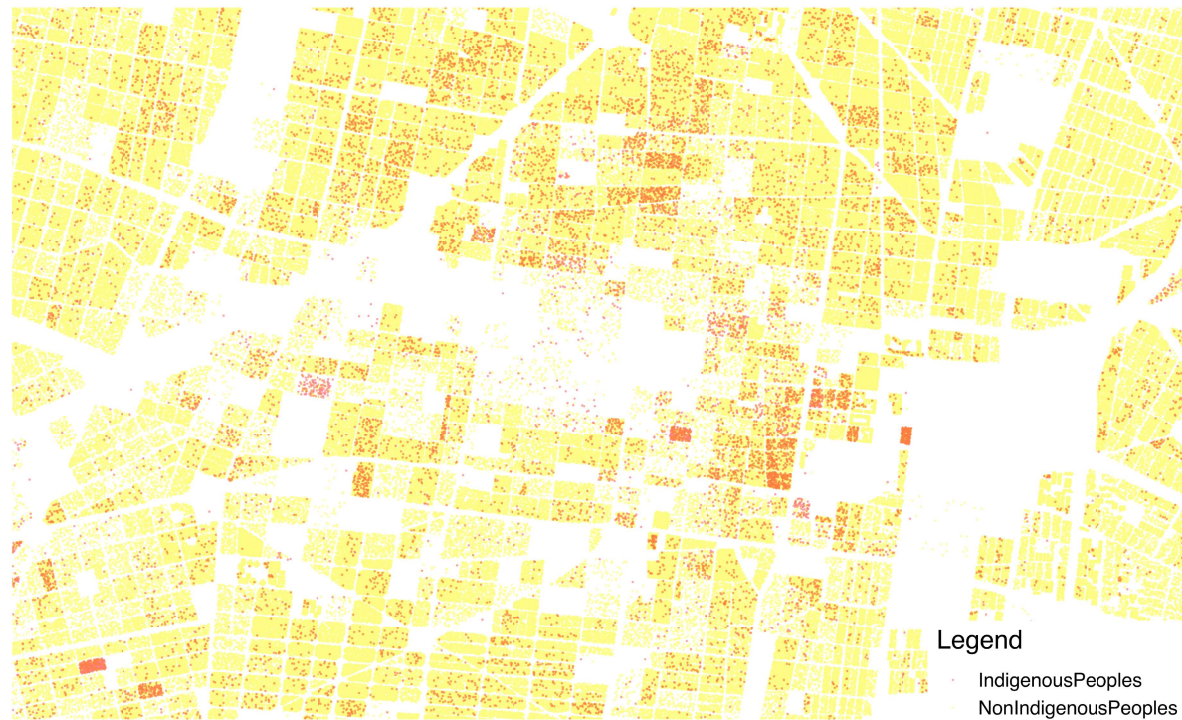
Dot Density Map of Indigenous Population in the Metropolitan Area of the Valley of Mexico 2010



Source: INEGI 2010 Population Census. Information at Block Level (Manzana). Created in QGIS.

An Indigenous Downtown

Dot Density Map of Indigenous and NonIndigenous Population in Downtown Mexico City in 2010

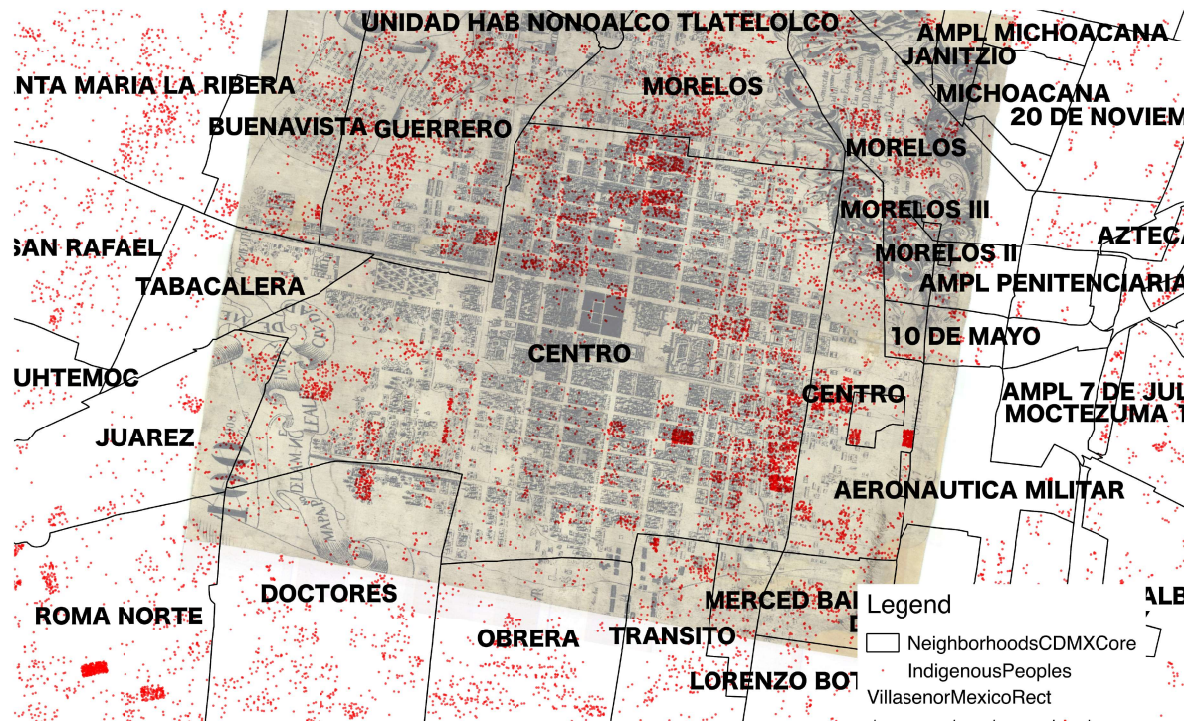


Source: INEGI 2010 Census. Information at the Block level (Manzana). Each pixel (dot) represents an individual either from an indigenous household or a non-indigenous one. Created in QGIS.

Dot map of indigenous dwellers in the Downtown area of what used to be Tenochtitlan and Tlatelolco

The extent of the City at the End of the Colonial Period (1753)

Indigenous Population in Downtown Mexico City in 2010
Superimposed on Villasenor 1753 Plano



Source: INEGI 2010 Census. Information at the Block level (Manzana). Mapa Plano de la Muy Noble, Leal e Imperial Ciudad de México, de don José Antonio de Villasenor y Sánchez, 1753, Mapoteca Orozco y Berra. 908-OYB-725-A. Created in QGIS.

Dot map of indigenous dwellers superimposed on Villasenor 1753 map of the Very Loyal and Imperial Mexico City

Epidemiological model of indigenous presence at the city block level in Mexico City

- Dependent variables:
 - Members of indigenous households
 - Speakers of indigenous language > 5 years old
 - Speakers of indigenous language > 3 years old
- Independent variables:
 - Population (to estimate rates)
 - Fertility (average children born alive)
 - Schooling (average years of schooling)
 - Longitude
 - Latitude
- Variable of Interest: Distance to *Tecpan*

Distance to Tecpan in Downtown Mexico City

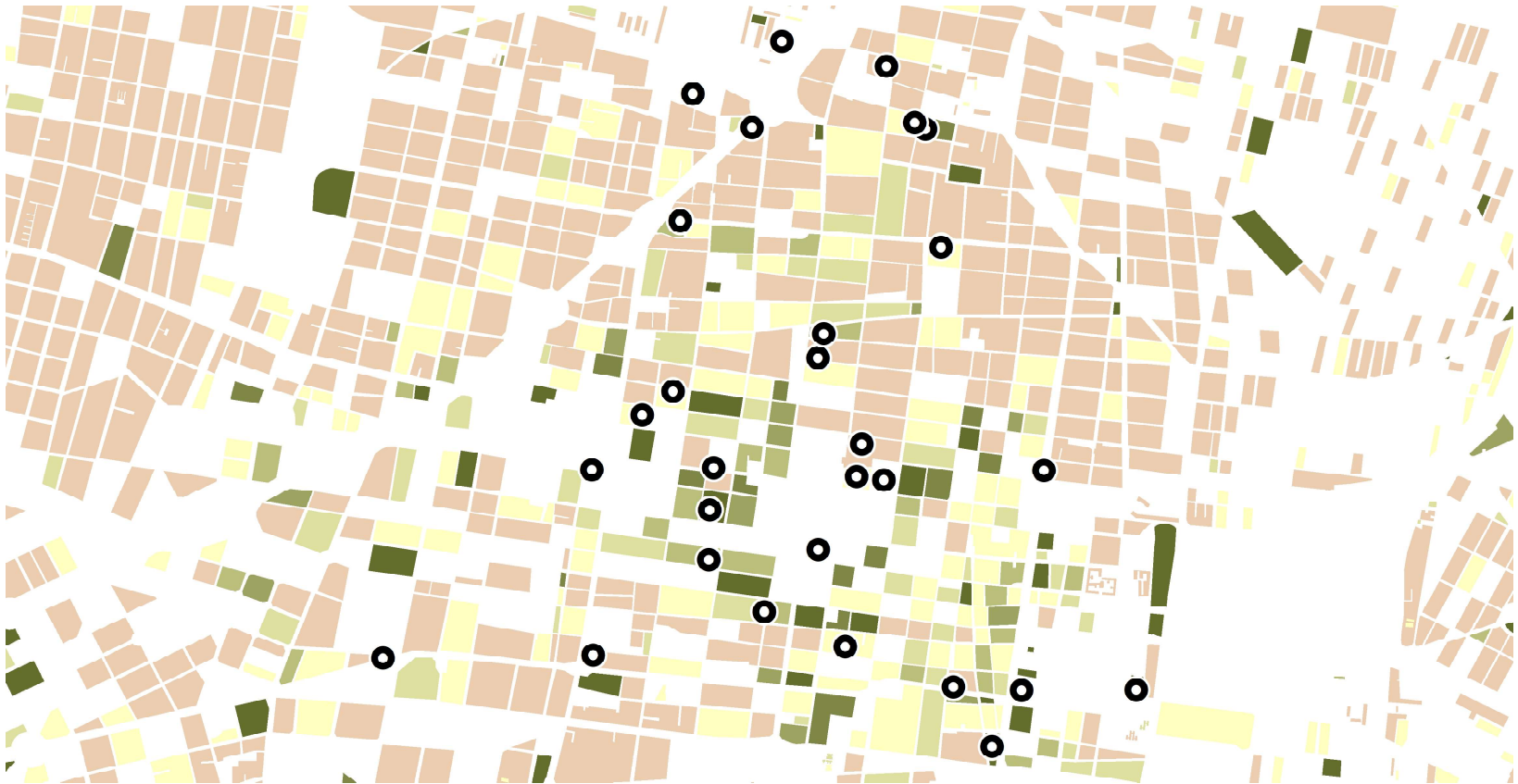


Figure: Geolocation of Tecpan and indigenous population in 2010 at block level

Likelihood of indigenous in city blocks in downtown area

VARIABLES	(1) Poisson Household	(2) 5yr+	(3) 3yr+	(4) Negative Binomial Household	(5) 5yr+	(6) 3yr+
Population	0.00168*** (1.47e-05)			0.00353*** (0.000226)		
Fertility	1.114*** (0.0179)	1.037*** (0.0248)	1.038*** (0.0247)	1.431*** (0.0799)	1.149*** (0.0635)	1.148*** (0.0636)
Schooling	0.0421*** (0.00351)	0.0383*** (0.00472)	0.0374*** (0.00469)	0.0572*** (0.0127)	0.0289*** (0.0102)	0.0294*** (0.0102)
Longitude	-0.460 (0.735)	-7.347*** (1.007)	-7.517*** (1.003)	-8.110*** (3.021)	-15.23*** (2.434)	-15.30*** (2.434)
Latitude	-9.983*** (0.509)	-11.23*** (0.720)	-11.40*** (0.718)	-13.12*** (1.902)	-14.84*** (1.626)	-14.96*** (1.626)
Distance	-26.20*** (1.495)	-29.30*** (2.071)	-29.35*** (2.064)	-33.15*** (5.637)	-37.93*** (4.759)	-37.91*** (4.759)
5yr+ Pop		0.00176*** (2.21e-05)			0.00354*** (0.000149)	
3yr+ Pop			0.00172*** (2.14e-05)			0.00344*** (0.000145)
Constant	147.7** (74.10)	-511.4*** (101.9)	-524.9*** (101.5)	-550.9* (301.3)	-1,223*** (244.0)	-1,228*** (244.0)
Observations	2,704	2,704	2,704	2,704	2,704	2,704

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Distance to Tecpan in Surrounding Valley of Mexico City

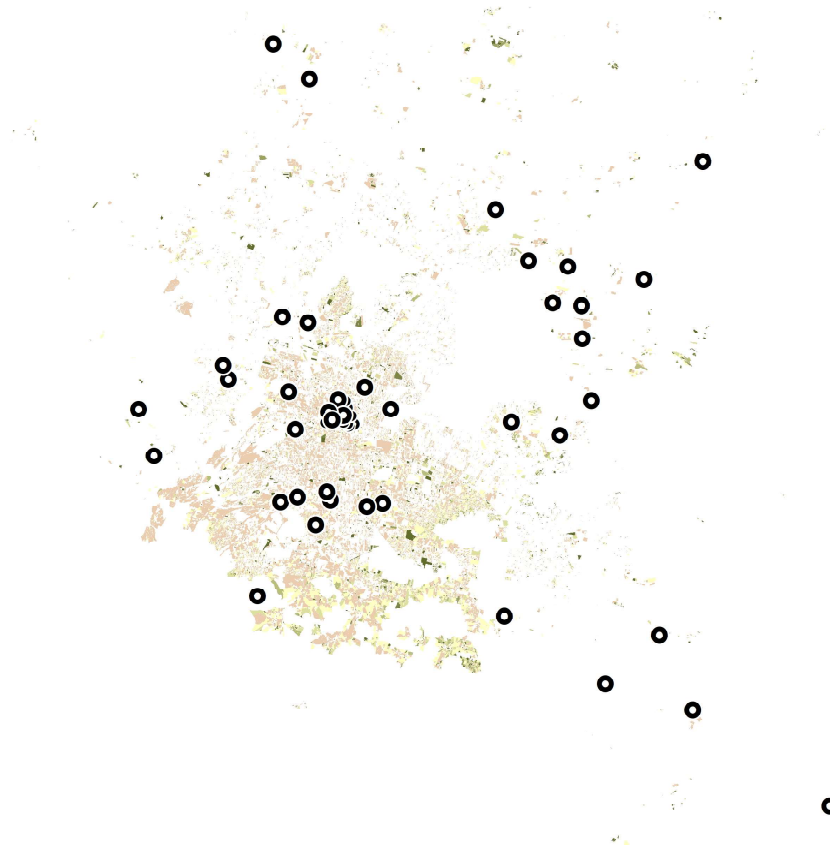


Figure: Geolocation of Tecpan and indigenous population in 2010 at block level in ZMVM

Likelihood of indigenous concentration surrounding the city

VARIABLES	(1) Household	(2) 5yr+	(3) 3yr+	(4) Household	(5) 5yr+	(6) 3yr+
xpobtot	0.000670*** (1.23e-06)			0.00415*** (6.04e-05)		
xpromhmv	1.065*** (0.00182)	1.030*** (0.00285)	1.032*** (0.00284)	2.074*** (0.0118)	1.490*** (0.00995)	1.487*** (0.00995)
escol	-0.0179*** (0.000671)	0.0162*** (0.00106)	0.0170*** (0.00106)	0.00685** (0.00296)	0.0141*** (0.00248)	0.0154*** (0.00247)
coord_x	-0.533*** (0.0170)	-1.021*** (0.0259)	-1.013*** (0.0258)	-0.241*** (0.0688)	-0.713*** (0.0612)	-0.725*** (0.0612)
coord_y	-2.168*** (0.0143)	-2.170*** (0.0220)	-2.160*** (0.0219)	-1.402*** (0.0516)	-1.496*** (0.0475)	-1.496*** (0.0475)
near_dist	-0.757*** (0.0567)	-2.182*** (0.0878)	-2.174*** (0.0875)	-0.665*** (0.204)	-1.403*** (0.187)	-1.459*** (0.187)
xp5ymas		0.000694*** (1.87e-06)			0.00573*** (5.45e-05)	
xp3ymas			0.000697*** (1.85e-06)			0.00554*** (5.27e-05)
Constant	-11.39*** (1.641)	-60.69*** (2.507)	-60.16*** (2.501)	0.289 (6.705)	-44.96*** (5.968)	-46.15*** (5.967)
Observations	159,671	159,671	159,671	159,671	159,671	159,671

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

An indigenous city not a Spanish one

Indigenous Presence in the Uppsala Map of Mexico in 1550: Tecpan and Indian Dwellings.



Source: Own geocoding and rectification based on the Digital Facsimile from Systems of Representation, Lily Diaz et al. <http://sysrep.aalto.fi/demo2015/mexico.html>

Geocoded Tenochtitlan and Tlatelolco Areas of the Map of Mexico City in 1550

Tecpan and indigenous dwellings

Discussion

- Are these indigenous peoples new migrants or service workers?
- Some areas have been resettled over the centuries, mechanism of persistence?
- Identifying assumption: *Tecpans* are not longer visible since 19 century, cannot account for persistent identity, except through the proposed channel of empowerment