A Three-Stage Interdisciplinary Mapping of Cusco's Toponyms: Colonial Selectivity Across Settlements and Natural Features

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Names are where power settles on the map. By centering Peru's Cusco region, the central zone of Inca governance and Spanish rule, this study investigates where colonial renaming concentrates, and likewise where Indigenous lexicon endured. The study uses a randomized GeoNames corpus, conducting a three-stage design which moves from landscape-level contrasts into the interior of settlements. Toponyms were coded as Indigenous, Colonial, or Hybrid and, within settlements, into nine functional domains. The results illustrated that across natural features, Indigenous names are decisively dominant. Surprisingly, colonial tokens were only modestly more visible in inhabited settlements than in nature. Furthermore, administrative seats were found not to be more Hispanicized than ordinary settlements. In fact, Indigenous persistence was found to only be slightly stronger at the loci of governance than in natural features. The final coding stage revealed that Spanish colonial naming is highly selective in the region. Specifically, it clusters extensively in ecclesiastical, civic-commemorative, and extractive labels. The everyday "city-text", including environmental anchors, village descriptors, and infrastructure names, remains overwhelmingly Quechua. Hybrids, similar to colonial toponyms, are found to be extremely rare. The results show a selective geography of power consisting of symbolic peaks amid an Indigenous plain, a pattern which is further interpreted using Pierre Bourdieu's theory of "linguistic market", James Scott's legibility thesis, and existing scholarships from Rose-Redwood et al.. The results, in addition to revising a narrative of blanket erasure, inform a practical decolonization pathway. Specifically, instead of the simple orthographic normalization and interpretive signage that is being employed today, co-designed renaming in areas where colonial toponyms cluster may better amplify Indigenous continuity initiatives.

Introduction

Since Spanish conquistadors seized the Inca capital Qosqo in 1533, the aftereffects of colonialism have long been a discussed topic. As colonizers toppled an empire, they transformed the Indigenous Andean landscape into their own image: While churches rose atop dismantled temples and encomiendas supplanted ayllu communal lands, Spanish language began overlaying Indigenous ones. By 1534, Qosqo had officially been refounded as the Spanish ciudad Cusco. A pivotal turning point was reached, as Cusco was situated at the heart of an extensive network of colonial *corregimientos* (district-level administrative jurisdiction) and later *intendencias* (administrations). This allowed for the colonial administrative and missionary hub of colonial Peru's Viceroyalty to expand significantly into the southern Andes, functioning as a flagship base from which officials and clergy radiated imperial power deep into other Indigenous territories (see *Figure 1* for Cusco's geographical centrality in the Andean Highlands). The introduction of Spanish language into maps and records of Cusco after 1534 thus marked the beginning of a long colonial struggle over culture and space in Peru.

Figure 1. *Map of the Intendancy of Cusco (1786).* Colonial map dividing Cusco into partidos and departments, highlighting its central role as administrative hub within the Spanish imperial network (Archivo General de Indias, 1786).

Alongside colonial territorial expansion came an extreme, long-lasting linguistic shift. At the time, virtually none of Inca's people spoke Spanish. The Indigenous language, Quechua, was the lingua franca across much of central Andes. Throughout nearly five centuries of colonial and republican rule, however, Quechua experienced drastic declines in status and usage. Even in the early 20th century, colonial effects continue to erode substantial proportions of Indigenous language. The 1961 national census, the first comparative mother-tongue series, found that roughly 46% of Peru's population spoke an Indigenous language (primarily Quechua) as their mother tongue (INEI, 2021). By contrast, Spanish was the mother tongue for under half the population at that time. By 1972, Quechua too had fallen to an estimated 28%; by 1993, to 16% (INEI, 2021). In the most recent 2017 census, 13.9% of Peruvians reported Quechua as their first language. As seen in *Table 1*, Spanish was the native language of an overwhelming 82.6% of the population by this time for individuals aged 5+ (INEI, 2018). However, this transformation did not solely pertain to verbal communication. It extended to toponyms (place names), many of which shifted together with spoken tongues and began adopting Spanish designations.

Toponyms, as scholars put, are more than neutral labels—they are "linguistic symbols" packed with historical and cultural meaning (Nyström, 2016; Basso, 1996). Current literature consists of critical geographers and historians often placing attention on this topic, emphasizing that naming a place is an act of power. Indeed, the very process of naming (or renaming) was a "key aspect of the colonization process," a way for colonizers to assert control over space through language (Yom & Cavallaro, 2020, p.460). In other words, the imposition of Spanish toponyms functioned as a tool of symbolic domination. In colonial Cusco for example, to name a town *Santiago* or *Santa Ana* was to claim it for the Spanish empire and Christian cosmology.

Mother Tongue	Total		Male		Female	
	Absolute Figures	%	Absolute Figures	%	Absolute Figures	%
Total	26,887,582	100.0	13,180,868	100.0	13,706,716	100.0
Spanish	22,209,686	82.6	10,920,849	82.9	11,288,837	82.4
Quechua	3,735,682	13.9	1,786,323	13.6	1,949,359	14.2
Aymara	444,389	1.7	218,615	1.7	225,774	1.6
Other Native Language	210,017	0.8	104,116	0.8	105,901	0.8
Foreign Language	48,910	0.2	25,718	0.2	23,192	0.2
Does not hear/speak	24,624	0.1	13,350	0.1	11,274	0.1
Peruvian Sign Language	10,447	0.0	5,696	0.0	4,751	0.0
No Response	203,829	0.8	106,201	0.8	97,628	0.7

Table 1. 2017 census report of Peru's mother tongue (age 5+) distribution: Spanish 82.6%; Quechua 13.9%; Aymara 1.7%; other native 0.8% (INEI, 2018).

This dynamic has been theorized through various scholarly frameworks. Namely, current literature commonly references Pierre Bourdieu's 1991 theory of symbolic power. In Bourdieu's lens, official naming consolidates the colonizer's position by highlighting who holds power. The right to impose names and categories, specifically, is described as a strong form of domination, showcasing colonizers' views as a worldwide reality (Bourdieu, 1991, pp. 117–126). Similarly, the notion of state "legibility," first proposed by James Scott, examines the power of colonial toponym through standardization. In his *Seeing Like a State* manual, he illustrates that when standardized by modern states, local geographies become more manageable, intelligible, and thus more controllable (Scott, 1998). This process crafts a top-down perspective from oppressors, leading to a disregard of diversity and a more straightforward path to impose dominance. Ultimately, colonial toponyms have shown to be powerful in consolidating imperial powers not only for land, but also people and culture.

Nonetheless, if naming acts as a power tool, it can also serve as a site of resistance. This idea of Indigenous persistence is highlighted by scholars like Tuhiwai Smith, whose work on decolonizing methodologies argues that the process involves valuing and revitalizing Indigenous ways of knowing as well as memories that were suppressed by colonial regimes (Smith, 1999). Specifically, reclaiming toponyms which belonged to the Indigenous, or at least recognizing their continued presence, is a part of the decolonization project. Aside from general colonial literature, Scholarships, however, have lacked a systematic and quantitative overview of toponymic change covering a central region like Cusco. A great deal regarding individual regional cases, the loss of Indigenous culture, and the power of toponyms in preserving cultural memory and status has been covered. Nonetheless, far less information about the spatial distribution and frequency of these changes exist. This leads to basic but unanswered questions that could significantly aid decolonization efforts: for instance, current literature touches on Spanish names being less clustered in natural features like mountains and rivers, but to what extent was this present and did they dominate other categorical regions (Stoll, 2025; Rose-Redwood et al., 2010; De Chiara, 2019)? What might this reveal about the selective reach of colonial power? Where should decolonization initiatives focus first for efficiency? To the best of my knowledge, neither a comprehensive database nor a statistical study exists to directly address such questions for the Cusco (or any Peruvian) region. While the existing scholarships' focus on qualitative case studies are rich in detail, the results lack a big-picture understanding of how thoroughly, and where, colonial renaming penetrated the Andean landscape.

Region-specific studies in the Andes (case-studies and descriptive) inform these dynamics, though they are often repetitive and limited in scope. Kathryn Burns, for instance, explores the power of colonial naming through convents in colonial Cusco being associated with female saints' names as part of a "spiritual economy" (Burns, 1999). Similarly, by examining the power of toponyms and their persistence in modern Peru, Bruce Mannheim notes that "speech varieties are intimately tied to the places in which they are spoken," a "connection between speech and locality [that] is maintained today" such that "the power of local languages is in their ritual use to address the local deities" (Mannheim, 1991, pp. 50–52). In essence, current literature has explored how naming continues to anchor memory and authority despite attempted linguistic reordering.

The significance of this paper's outcomes extends beyond historical linguistics and cartography study. Place names are a tangible proxy for colonial influence—through a deeper dive into their distribution we gain insight into both the strategic reach and limitations of colonial institutions, the efficacy of missionary efforts, as well as the daily interactions between colonizer and colonized. Most importantly, the paper's results serve as a critical entry point for contemporary decolonization efforts. In an era of Indigenous revival, movements like Peru's *Tupaq Katari* Project and *Academia Mayor de la Lengua Quechua* (AMLQ) are expanding daily in order to recuperate original toponyms for asserting Indigenous identity in public space. However, they are often plagued with imbalanced impact, with critics even arguing that initiatives like Academia Mayor are ineffective, ironically elitist, and disconnected from Indigenous communities (Marr, 2002). The results of this systematic documentation serve to guide future efforts, informing cultural policy by highlighting where revival should begin for stronger impact and which name categories carry greater weight for reclaiming Indigenous presence in colonial Peru.

Methods

The study focuses on the Peruvian administrative region of Cusco. This region is a central administrative and cultural hub due to it being both the center of Spanish colonization and the Inca empire's historical capital (UNESCO World Heritage Centre, n.d.). As a result, it acts as a landscape where Indigenous toponyms and Spanish colonial interventions overlap substantially. This makes it suitable for a test of two claims that recur in toponymy literature: (i) natural features tend to preserve pre-colonial lexicon, and (ii) populated and administrative settlements are more exposed to and likely to be renamed. This paper's design validates and then

Domain	Operational Coding Rule (Classification Methods)	Typical Lexical Cues / Common Indicators
Religious	Names referencing sacred/spiritual ideas. Includes both Christian markers (San/Santa, Cruz, Rosario, etc.) and Indigenous sacred references such as huaca or apu if they appear. Note that when Indigenous sacred names referred to ancient temples or archaeological shrines, they were placed under Heritage/Archaeological instead (see below).	San/Santa, Cruz, Rosario, Carmelita, e.t.c.
Civic/Commemorative	Honors political events/actors or denotes civic status/seat. Names often reflect moments of independence, patriotic ideals, or community self-identification through historical memory.	Pueblo Libre, Libertadores, Villa, Ciudad, provincial/district seats, etc.
Heritage / Archaeological Site	References known pre-Hispanic ruins/structures or canonical Inca lexicon as site label. These toponyms highlight preserved material culture and ancestral continuity rather than current habitation/active worship traditions.	Sacsayhuamán, Pukara, marca when denoting an ancient town, etc.
Village / Descriptive	Describes the settlement itself (form/quality/size) without invoking nature or institutions. Captures everyday naming based on visible traits including elevation, shape, or relative location.	-bamba/-pampa (plain), -pata (ledge), -marca (town), Alta/Baja, etc.
Environmental Anchor	Settlement named after adjacent natural features (water, relief, flora/fauna). Although less systematic impact, signals strong spatial ties between communities and surrounding ecology.	-cocha (lake), -mayu / yaku (river/water), urqu (mountain), etc.
Built Features / Infrastructure	Centers a non-religious built element in the toponym. Examples include bridges, roads, or marketplaces that serve as spatial reference points within settlements.	Puente, Camino/Carretera, Plaza/Mercado, Estación, Fábrica/Molino, etc.
Economic / Extractive	Refers to production sites, estates, or extraction, and typically denotes agricultural or mining activity which reflects the colonial economic geography of the region.	Mina, Hacienda/Fundo/Estancia, Asiento, etc.
Lineage / Neighborhood	Names a kin unit, barrio/sector, or community designation. These areas often preserve historical social organizations or family-based settlement structures.	Ayllu, Comunidad de…, Barrio/Sector/Anexo, surnames as place names, etc.
Transferred / Exogenous	Direct transfer of non-local metropolitan or foreign toponyms, which often accompanied colonial expansion and commemorated European places/patrons.	Oropesa, Sevilla, Sondorf, other Iberian/European place transfers, etc.

Table 2. Functional domains, coding criteria, and specific indicators for settlement toponym classification in Cusco. Column 1 displays the nine domains. Column 2 highlights the coding mechanisms used to assign each P-class toponym in the Stage 3 corpus to their respective categories. Common indicators for categorization are listed in column 3. Ambiguous cases were resolved as described in § 2.2, and exemplar tokens are provided in Appendix Table S3.

expands those ideas through a three-stage sequence, moving from broad contrasts into a closer examination of selectivity within people-inhabited settlements.

2.1 Data Sources and Corpus Construction

All toponyms in this study were drawn from GeoNames, downloaded as a CSV file. The full dataset was imported into Google Sheets and restricted to admin1 code = 08 (Cusco's administrative code). A column of random numbers was generated with the function RandID(), and entries were locked and sorted by this column to randomize selection and avoid sampling skew.

Geonames, maintained by the non-profit organization GeoNames.org, was selected for the investigation as it is the most comprehensive and standardized gazetteer available for the Cusco region. Specifically, Geonames includes (1) domain codes, allowing quick identification of toponyms belonging to the Cusco region; (2) structured feature codes identifying whether a toponym is P, H, or T (settlements, hydro, or terrain, respectively); (3) retains the alternate spellings and historical variants of toponyms, a crucial factor in a zone where orthographies diverge. A modern corpus was deliberately chosen over a historical one as the study aims not to reconstruct colonial naming at its origin, but measure how colonial imprints affect the present linguistic

landscape. With contemporary data, the study can better inform decolonial efforts on where colonial naming holds the most power.

It is important to note that a modern inventory is inevitably influenced by official orthographies and may underrepresent various community-level names that are absent from formal publications. However, this bias is also beneficial as it allows for an understanding of where Indigenous/Colonial lexicon persists in today's institutionally visible city-text where toponyms hold more influence. Where possible, I cross-checked strings against the *INEI* (Instituto Nacional de Estadística e Informática)'s official gazetteer/census corpus to reduce potential transcription errors.

2.2 Classification and Coding

Each toponym was coded into one of three origin classes: Indigenous, Colonial (Spanish), or Hybrid. This process was done through a close examination of linguistic patterns. For Indigenous names, I looked for the presence of common Quechua or Aymara lexemes or morphemes (e.g. -bamba/huamba, -cocha, -pampa, etc.). Toponyms were coded as Colonial if they included unambiguous Spanish lexicons (e.g. Villa, Nueva, Libertador, etc.), Iberian surnames and titles, as well as Spanish civic honorifics. Finally, hybrids were identified when toponyms had explicit fusion of Spanish and Indigenous morphology (e.g. *San* + Quechua stem).

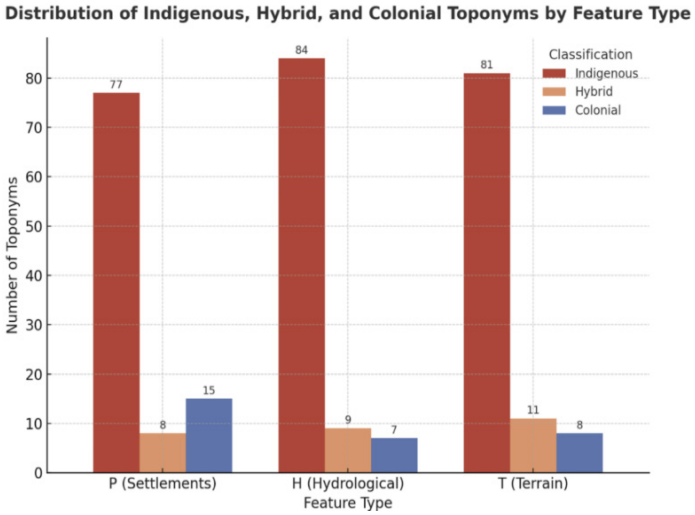

Figure 2. Distribution of Indigenous, Hybrid, and Colonial toponyms across feature classes in the Cusco region (n = 300; 100 settlements, 100 hydrological features, 100 terrain features).

The selection and normalization process followed transparent rules. To be classified as 'Hybrid', toponyms required positive evidence of bilingual fusion. Co-occurrence within a municipality was not deemed sufficient as proximity does not demonstrate linguistic fusion. When ambiguities in toponym classification arose, major Quechua lexical references and colonial gazetteers were consulted for clarity. If ambiguity could not be resolved, a replacement toponym was selected from the same sampling frame to keep stratum sizes consistent. Full tables for each stage of coding (§2.3) are shown in the Appendix section.

2.3 Analytical Design - Three Stage Sequence

The study implements a three-stage analytical approach that begins with toponym distribution comparisons between settlement/nature categories, then progressively narrows to examine within-settlement selectivity.

2.3.1 Natural Features v.s. Settlements (Stage 1)

As seen in the introduction section, scholars like Stoll and Rose-Redwood have emphasized that Indigenous names persist more often throughout natural features. To verify this proposition, independent toponym samples of 100 settlements (P = 100), 100 hydrological features (H = 100), and 100 terrain features (T = 100) within Cusco were drawn. Each of (N=300) were categorized into the three categories Indigenous/Colonial/Hybrid as per §2.2, and organized into a comparative bar chart (see *Figure 2* in Results) to establish a baseline contrast between features.

Although the full *GeoNames* corpus for Cusco was available in the gazetteer, equal-sized random samples were deliberately used for each of the analytical strata. *Geonames* entries are heavily uneven across the different feature types. If used in whole,the entire corpus would be densely packed with class P features, which obscures contrasts with H and T. The stratified random draws of n=100 for all three features codes, as well as independent drawing for PPLA and PPL in Stage 2 (see §2.3.2), therefore ensured the proportional comparability across classes. This in turn keeps inferences focused on composition and not raw volume. The locked random IDs allow for the procedure to be reproducible, furthermore mitigating potential bias in the dataset that is in alphabetical order.

2.3.2 Administrative v.s. Non-administrative within Settlements (Stage 2)

With Stage 1 illustrating the highest colonial share in settlements, we examined the (P) category closer for potential colonial selectivity. Within Geonames' P-class there were two dominant categories: administrative seats (PPLA) and ordinary settlements (PPL). Using independent randomized draws of 100 each (N = 200 new settlements), entries were sampled without replacement as per §2.3. Stage 2 tests whether colonial toponyms concentrated in areas with more governmental weight (PPLA) as opposed to the typical villages and districts where citizens settle. The sampling counts correspond to *Figure 3* in Results.

2.3.3 Functional Selectivity Within Settlements (Stage 3)

The final analytical stage looked deeper into settlement interiors. Specifically, I tested whether the colonial tokens within (P) were selectively concentrated in particular functional domains of naming, or simply dispersed across settlements. A *P* corpus of N = 300 settlements was assembled, consisting of the original 100 from Stage 1 along with an additional 200 toponyms to reduce sampling skew. Each toponym was coded into one of nine domains defined a priori, as listed in *Table 2*. By examining whether colonial renaming clustered in these categories, the study identifies areas where colonial power was targeted, and opens the question of why those domains were privileged over others.

2.4 Statistical Analysis

All analyses were conducted from the counts and shares of Colonial/Indigenous/Hybrid names. For Stage 1, binomial 95% Confidence Intervals (CI) for the colonial share in each feature class was computed. As well, I carried out a Pearson χ^2 test of independence across P/H/T in order to assess whether toponym distribution differed significantly with feature class. Since this

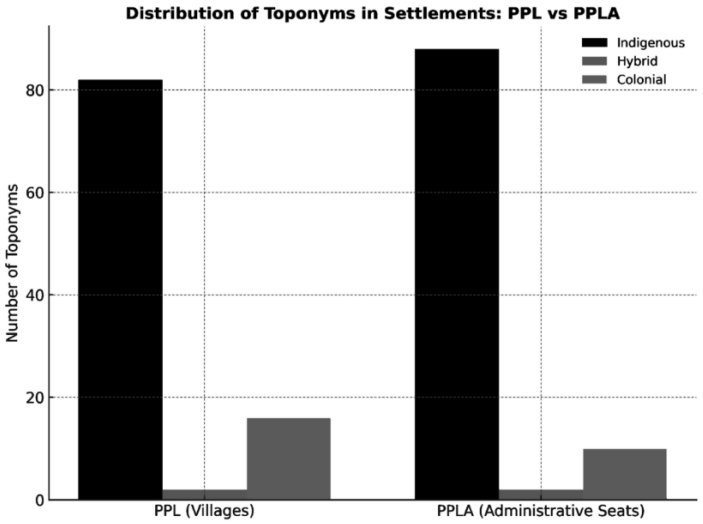

Figure 3. Composition of settlement names by administrative status (n = 100 administrative seats, n = 100 non-seats), comparing Indigenous, Hybrid, and Colonial origins.

section of the analysis aimed to contrast toponym distribution in settlements versus nature, I also ran a two-proportion z-test pooling H and T as "natural features" against P (two-sided, $\alpha = 0.05$). These are the procedures reflected by the reported confidence intervals and tests in the Results. The same approach was used throughout Stage 2. For Stage 3, we summarized the within-domain composition across the nine functional domains and visualized both numbered counts and 100% stacked shares (see *Figures 4-5*). Further research can expand on this by randomizing 100 toponyms from each domain and testing the percent composition of each.

2.4.1 Statistical Softwares

The Pearson χ^2 and binomial confidence intervals were conducted through Google Sheets (2024 version) using its built-in statistical functions. The two-proportion z-tests were conducted through GraphPad Prism (v. 10).

Results

3.1 P/H/T Comparison (Stage 1)

Across feature classes, Indigenous toponyms are shown to dominate Cusco's landscape. In the randomized samples, Indigenous names account for 77% of settlements (P), 84% of hydrological features (H), and 81% of terrain features (T); Colonial names constitute 15%, 7%, and 8% respectively, with Hybrid names making up the remainder (8%, 9%, 11%). From this distribution of toponyms, one can see that contrary to what is expected, colonial naming is visible but thin in both settlements and nature naming. As expected however, these names lean toward the human geography of towns and settlements, which hold more colonial and religious significance relative to features like rivers or mountains.

The Confidence Interval (CI) of each feature's Colonial Share was examined to quantify this contrast and support the validity of the results. The share in settlements was 15% (95% CI: 9.3–23.3), whereas it was 7% in hydrological (95% CI: 3.4–13.7) and 8% in terrain features (95% CI: 4.1–15.0). It is shown that colonial names were more common in settlements, although the overlap in ranges suggest that this difference is not extensive. The three-way χ^2 test of Colonial vs non-Colonial across P/H/T supports this, as it did not reach the conventional significance of $\alpha = 0.05$ ($p = 0.12$). However, although this gap is small, the pre-specified secondary contrast pooling H+T as "natural features" (n=200) against settlements (n=100) shows that the Colonial share in natural features (avg. 7.5%) is still roughly doubled to in settlements (15%) (two-proportion test, $p = 0.04$). Stage 1 thus indicates that colonial renaming is sparse overall but relatively more visible where people live relative to natural geography which remains overwhelmingly Indigenous. This descriptive contrast motivates a deeper examination into the different toponyms within settlements.

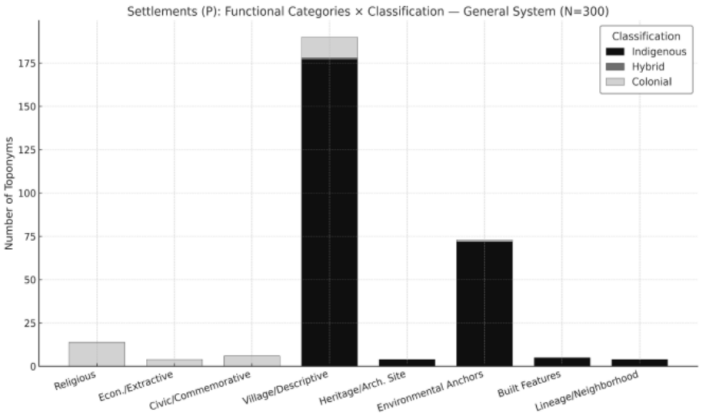

Figure 4. Functional categorization of settlement toponyms in Cusco (n = 300), showing counts of Colonial, Hybrid, and Indigenous names across domains (listed in Methods section). See Appendix Table S1 for the coding key and full list of domain categorizations.

3.2 Within Settlements— PPLA Administrative Seats vs PPL Non-seats (Stage 2)

With a higher share of Colonized toponyms in settlement areas, I looked into this feature and compared administrative seats (PPLA) to ordinary towns/villages (PPL) using independent randomized draws (100 each) to further identify colonial patterns. Surprisingly, Indigenous names were still highly dominant, especially in PPLAs as shown in *Figure 2*. 88% of names were Indigenous in seats, whereas 82% were in non-seats. Colonial names are 10% and 16%, respectively, and Hybrid names are 2% in both.

The CIs highlight the thinness of colonial intrusion in both groups. Specifically, colonial had 95% CI: 5.5–17.4, and non-seats 95% CI: 10.1–24.4. The 6-point gap is not statistically significant in the samples (two-proportion test, $p \approx 0.21$). Substantively, this shows how colonial names do not concentrate in either administrative nodes. On the contrary, the independent results and the modest difference runs in the opposite direction of a naive power-center hypothesis, as Indigenous persistence extends even more in the seats of governance. The few Colonial insertions that do appear in settlements tend however to be symbolic tokens (saints, haciendas, mines, aspirational lexemes, etc.). Overall though, it is shown that there was little to no wholesale erasure of toponyms.

3.3 Categorizing Toponyms Within Settlements To Examine Selectivity (Stage 3)

As shown in Stage 1 and 2, Indigenous toponyms make up the majority across features and even in administrative seats. The remaining question is, within a Indigenous toponym-dominant

region, whether the rarer colonial tokens are selective (i.e. concentrated in particular functional domains of settlement naming to gain more power). Our results from coding P-class settlements (N = 300) into the nine domains defined previously reveals some insightful patterns. Prior to examining selectivity, I note that across the full settlement corpus, the overall composition is Indigenous 247/300 (82.3%), Colonial 41/300 (13.7%), and Hybrid 12/300 (4.0%), confirming the apparent pattern that Indigenous naming is more prevalent while Spanish and hybrid forms are present but thin.

The results show that selectivity is stark in the civic, religious, and economic spheres. Notably, every Religious/Ecclesiastical token we coded was Spanish or hybrid (≈100%). This included saints' names, Marian devotions, or Catholic topoi, consistent with missionary and parish footprints (e.g., San Sebastián, Santo Tomás, San José; see Appendix). Economic/Extractive/Estate names (Mina, Hacienda, Estancia) were likewise fully Spanish/hybrid (≈100%), and Civic/Ideological/Commemorative (e.g., Los Libertadores, Progreso/Nuevo Mundo, patriotic dates and honorifics) skewed overwhelmingly Spanish/hybrid (>90%). On the other hand, Indigenous toponyms dominate historic landscape and settlement-related domains. Natural-Environment Anchors (e.g., toponyms with stems in -pampa, -bamba/-huamba, -cocha, etc.), as well as Built Feature/Infrastructure labels (roads/bridges/market-adjacent micro-toponyms) are ≥95% Indigenous. Local Neighbourhood names, such as those of Cusco villages, were found to be entirely grounded in Quechua lexicon.

Hybrids on the other hand are rare overall (4%), appearing almost exclusively when a Catholic honorific is fused to an Indigenous base (e.g., San + Quechua stem). Together, Spanish naming is found to target religious, commemorative, administrative, and extractive/economic domains, while Indigenous lexical frames remain mostly hegemonic in everyday and environmental settlement naming.

Discussion

Through a systematic investigation of where Spanish renaming took hold and where Indigenous naming endured in the Cusco region, this study investigated undifferentiated claims of "pervasive" erasure with patterned evidence, simultaneously opening insights for more effective decolonization effort. The three-stage design—(1) settlements vs. natural features; (2) administrative seats vs. ordinary settlements; and (3) functional domains within settlements—shows through randomized toponyms that Indigenous naming is objectively the baseline across the area. As anticipated, settlements carry more Spanish names than rivers and mountains, though the contrast is modest. On the contrary, however, administrative seats (PPLA) are not more Hispanicized than ordinary settlements (PPL). The strongest concentrations of Spanish labels appear instead in the specific domains identified in Stage 3. Chroniclers and even contemporary scholars have portrayed Spanish renaming in the Andes as pervasive. Cobo's prominent seventeenth-century catalogue describes Spanish names for towns and natural features as "innumerable" and also "an infinite task" to enumerate (Cobo, 1653). Our data indicates that this extensive breadth has been overstated, as Indigenous names remain dominant in all feature classes. Various scholars' critical toponymy studies clarify this observed mechanism. Authorities have been found to inscribe power into space through labels and the "city-text" of everyday life. This specifies concentrating attention and repetition where ritual and governance are staged (Rose-Redwood, Alderman & Azaryahu).

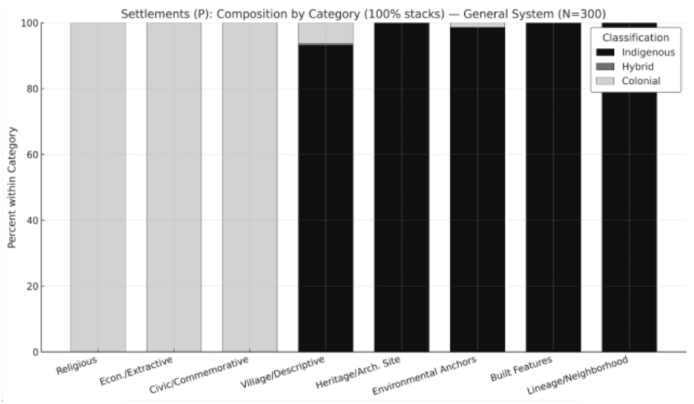

Figure 5. Within-domain percentage composition of settlement toponyms (where N = 300). This illustrates the proportional shares of Colonial, Hybrid, and Indigenous names in each functional category, highlighting potential colonial selectivity.

Considering Bourdieu's theory of "linguistic market" is also meaningful when examining this selectivity. In Bourdieu's lens, the state's monopoly over legitimate naming and standard language is strategic in yielding an outsized symbolic economy for a small number of publicly authorized tokens. In Cusco specifically, those tokens cluster highest in places like churches, plazas, and estates, where visibility and iteration are towering. In turn, each Spanish name does more political work than simple descriptors on the surrounding terrain. As well, Scott's theoretical "legibility" thesis adds the administrative mechanism, highlighting that modern states standardize what they most need to "see" and manage. The data shows that legibility alone is insufficient nonetheless, since administrative seats are not more Hispanicized (and actually more Indigenous-centered) than ordinary settlements. With all considered, the findings sharpen rather than refute colonial frameworks. Bourdieu explains the selective peaks, whereas Scott frames the background logic of standardization but cannot, by itself, predict the observed distribution.

In addition to theories, existing global literature aids in explaining this apparent selectivity. Studies have found that early modern hagiotoponyms (San/Santa) were ubiquitous, especially for parishes and towns. Although this paper is, to our knowledge, the first Peru-specified systematic toponym study which explores renaming across different features, works like Beaulieu's descriptive analysis indicate that saints' names are the single largest Spanish category in South America as a whole (Beaulieu, 2014). Stolz and Warnke similarly illustrate how saints, nobility, as well as imperial heroes populate colonial toponymies as part of a broader European place-making praxis (Stolz and Warnke, 2019). In the Andes today, naming remains a frequent political topic. For instance, municipal interventions in Cusco's Plaza de Armas leveraged heritage symbolism to stage Inca identity, while Cerrón-Palomino's history of Cuzco/Cusco/Qosqo demonstrates how orthography itself can function as a lever of both power and belonging (Silverman, 2020; Cerrón-Palomino, 2013). This study aimed to reinforce such discussions by highlighting regions of colonial interest that are especially politically salient.

These patterns together result in a coherent and interpretive economy. Paired with literature, the results show that religious, civic, and economic triad offers the highest symbolic return for colonizers. On the other hand, the village/environmental lexicon

does not. "Pervasiveness" (colonial dominance at peaks of ritual and governance) and "persistence" (Indigenous endurance in everyday descriptive terrain) are therefore not contradictory, and both terms are instead mapped out onto different parts of the naming system.

The study's findings can inform ongoing decolonization efforts by highlighting specific leverage points within the renaming system. The analysis does not aim to prescribe or legitimize decolonial action through statistical validation. However, it provides an evidentiary starting map for decision-making and planning. Through the quantification of which features colonial and Indigenous toponyms cluster in, communities and policymakers can prioritize which sites, whether parish districts, haciendas, or commemoratives, carry the greatest potential impact for renaming or reinterpretation. With colonial toponyms in Cusco being selective, decolonization should be targeted rather than through the blanket reform that current initiatives are adopting. For instance, efforts can consider focusing on the major symbolic peaks our data identify, specifying on parish names, estate labels, and others. This pathway is already institutionally feasible, with Peru's Política Nacional de Lenguas Originarias having the ability to authorize visibility/normalization measures. As well, bodies like the Academia Mayor de la Lengua Quechua provide capacity for co-governance. At the same time, critical toponymy warns that top-down programs can still reinscribe domination under new signs (Azaryahu; Rose-Redwood et al.). Processes should therefore center community knowledge and linguistic expertise in addition to selective renaming. A workable sequence is: (a) co-designed replacements for the smaller, higher-impact colonial set; (b) orthographic standardization and signage for the overwhelmingly Indigenous descriptive/environmental base; and (c) interpretive materials that link names back to Indigenous histories and meaning so changes educate communities rather than solely replace. Here, the study's findings provide further extended value as it validates the domination of Indigenous toponyms in natural features. Through the process of renaming colonial sites, initiatives may thus take advantage of the already widespread Indigenous continuity for mass reform. This can be done through reinforcing community understanding of the persisting descriptive and ecological lexicon that anchors the Cusco community's everyday life.

Conclusion

This study identifies the patterns of strategic colonial renaming and Indigenous persistence within the Cusco region. It is worth noting that this landscape is marked by a strong Quechua continuity, so the study refines, rather than overturns, the general claim of pervasive erasure. Specifically, the investigation has revealed that colonial tokens in Cusco are not only scarce overall, but modestly more visible in settlements than in natural features. Furthermore, although governmental power is presumed to be more present in administrative seats, colonial toponyms are surprisingly not amplified in this class feature relative to ordinary settlements. Instead, they are selectively concentrated in religious, civic, and extractive domains, while Indigenous names dominate natural sites. With Cusco's concentration of Quechua speakers and its historical prominence, however, these findings should be understood as regionally specific and not representative of the Andes as a whole. Ultimately, the findings offer an evidentiary basis for effective decolonization practice, indicating potential sites where selective renaming can shift the city-text most quickly and credibly, as well as sites where Indigenous memory persists most strongly.

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