SPANISH COLONIZATION OF THE NEW WORLD:
Cultural Continuity and Change in Mexico

With 1 figure and 2 tables

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Zusammenfassung: Die spanische Kolonisierung der Neuen Welt. Kulturelle Kontinuität und kultureller Wandel in Mexiko

Die spanische Kolonisierung und Besiedlung der Neuen Welt bedarf einer neuen makroanalytischen Untersuchung, nicht im Rahmen des Weltsystemmodells, sondern aus kulturökologischer Perspektive, um Ähnlichkeiten und Unterschiede gegenüber der englischen bzw. französischen Besiedlung Nordamerikas herauszustellen. Bis zum Jahre 1600 brachten die Spanier 175 000 Siedler, überwiegend aus Kastilien, in die Neue Welt. Sie setzten sich innerhalb von 100 Jahren in verschiedenen Kernräumen fest - von Neu Mexiko bis Südchile -, einer Strecke von 9500 km. Alsbald war die spanische Einwohnerzahl auf 275 000 angestiegen, von denen 40 000 in der Stadt Mexiko, weitere 70 000 in anderen größeren Städten und fast 20 000 in den Hauptbergbauzentren lebten. Im Gegensatz zu den Engländern und Franzosen ließen sich die Spanier vorwiegend in von Eingeborenen dichtbevölkerten Gebieten nieder, so daß die einheimischen Arbeitskräfte zur wirtschaftlichen Produktion herangezogen werden konnten.

Die spezifischen Umweltbedingungen der Neuen Welt verlangten oft eine grundsätzliche ökologische Umgestaltung des mediterranen Anbausystems. Da in den feuchten Tropen die heimischen Getreidearten nicht gedeihen konnten, entfaltete sich hier vor allem die Rinderzucht, zu der sich allmählich eine bescheidene Plantagenwirtschaft hinzugesellte. In den Hochländern stieß man auf Sommerstatt Winterregen und besondere Frostverhältnisse, so daß das den Spaniern bekannte Anbausystem umgestaltet werden mußte. Aufgrund des geringen Bedarfs an Arbeitskräften und der großen Marktentfernungen entwickelte sich die Viehzucht besonders stark und blieb in den peripheren Gebieten lange vorherrschend. Dazu kam, daß anfänglich die Landwirtschaft vor allem extensiv betrieben wurde und erst mit dem allgemeinen wirtschaftlichen Aufschwung intensiver wurde. Die Behandlung der Indianer, besonders in den Gebieten alter Hochkulturen, wirkte sich schließlich so aus, daß diese zwar zu einer Unterklasse herabgedrückt, aber nicht ausgerottet oder in Reservate verdrängt wurden. Diese Verhältnisse begünstigten einen regen Kulturaustausch und eine zunehmende gegenseitige Assimilation. Hierzu trug die spanische Regierungs- und Kirchenpolitik bei, nach der die einheimische Bevölkerung, altrömischem Vorbild entsprechend, sich zu vollen Teilhabern der christlich-mediterranen Zivilisation entwickeln sollte.

Die gezwungene Anpassung an neue ökologische Verhältnisse, die Übernahme von Kulturpflanzen und Arbeitsmethoden der Eingeborenen sowie die Eingliederung der Kolonisten in eine ältere Kulturwelt führten bei den Kolonialspaniern zu einem Prozeß kultureller Divergenz gegenüber dem Heimatland. Im Unterschied zu Spanien konnte sich keine Schicht von Kleinbauern bilden, während städtische Autonomie und Bürgerrechte ausgeschaltet wurden. Im Gegensatz zur Egalisierung der nordamerikanischen Gesellschaft entwickelte sich im spanischen Bereich ein ausgeprägtes Klassensystem, verstärkt durch die Rassenunterschiede, das von der Kolonialelite vollkommen beherrscht wurde. Diese Elite stieß zunehmend auf Widerstand bei den neu eingetroffenen Beamten und Offizieren und verschärfte die wirtschaftliche Konkurrenz gegenüber Spanien. Bemerkenswert ist, daß das unabhängige Mexiko - trotz offensichtlicher Widersprüche - auf die Symbole der einheimischen Vergangenheit zurückgriff, um eine neue nationale Identität zu schaffen.

Introduction

Spain's colonization of the Americas represents the first, and in many ways the most ambitious, of European ventures in overseas settlement. Within one century, some 175,000 Castilian settlers had been established over a vast and heterogeneous area stretching some 9500 kilometers and 88 degrees of latitude from New Mexico to the isle of Chiloe. At the time that the Virginia colonies were being founded, the Spanish population of Hispanic America can be estimated at about 275,000 people, and Mexico City had some 40,000 Spanish inhabitants, not counting other peoples. The Spanish urban population in all towns with more than 750 households probably totaled over 110,000 (Table 1). And almost 20,000 Spanish miners and residents lived and worked in the mining centers of Mexico, Colombia, Peru, and Bolivia.

The scale and intensity of the Spanish colonial enterprise is perhaps underappreciated, especially as it contrasts with its French and British counterparts. The Spanish dispersed across one and a half continents by nodal or mosaic migration, establishing several clusters of settlements. With the royal mandate to govern and to populate (*Ordenanzas* 1573, also GÓNGORA 1975: 68–78, MCALISTER 1984: 108–109), the Spaniards sought out, rather than shunned, centers of indigenous population as foci of high poten-

Table 1: Environmental units and estimated "Spanish" population in Spanish America about 1600 (adjusted from various contemporary reports from the 1560s to the 1640s)

Naturräume und geschätzte Zahlen der „spanischen" Bevölkerung in Spanisch-Amerika um 1600

Environment/Region (Variants)	Total "Spanish" Population	Large Cities	Mining Centers
Lowland Tropics (Gulf-Caribbean)	49,000	7,500	800
Subhumid Lowlands (Cuba-Yucatan)	6,500	-	-
Montane Tropics (Northern Andes)	39,700	16,900	800
Montane Subtropics (Highland Mexico)			
Basin of Mexico	45,000	40,000	2,000
Puebla-Tlaxcala	22,500	9,000	-
Oaxaca	2,200	-	-
Michoacan	2,000	-	-
Bajío	3,300	-	1,100
Nueva Galicia	6,800	-	4,200
Semiarid Montane Tropics (Central Andes)	53,200	16,200	10,000
Other Lowland Ecozones (Coastal Peru-Chile-La Plata)			
Coastal Peru-Central Chile	32,200	20,500	-
Temperate Chile[1)]	(3,300)	-	-
Interior La Plata	5,000	-	-
Total	267,400	110,100	18,900

[1)] Territory reverted to Araucanian control at the end of the 16th century and temporarily abandoned. The figure of 3300 inhabitants represents an estimate for about 1590 that is not included in the total.

tial productivity and as sources of labor. Where indigenous populations were ephemeral or sparse, Indian and African slaves or wage labor were introduced for work in basic agriculture, small-scale plantations, or mining (see Bowser 1984, Gibson 1984, Lockhart 1984). In economic terms, this ensured a moderately high productivity in many regions of the Spanish colonial empire, constituting a major source of revenue for Spain.

In contemporary, social and ethical terms, this represents colonial exploitation and a moral conundrum, that regularly draws the ire of anglophone writers in particular. But one should also not forget the prominent role of the British, French, and Dutch in the Transatlantic slave trade (Rawley 1981), and in the slave economies of the Caribbean and the American South, which merit similar condemnation. But the purpose of this paper is not to judge the propriety of the European colonial enterprise, or to engage in the growing polemic about the Columbian "encounter". It is to analyze and characterize the Spanish colonization experience at an explicit *macro-scale,* from a culture ecological rather than a world-systems perspective.

Cultural ecology is particularly well suited to a micro approach, whereby the interrelationships between subsistence, labor, demographic, and environmental strategies can be examined in detail (Butzer 1990). But it also lends itself to large scale study in the context of cultural and environmental diversity, or competition for and unequal access to resources. Conquest and colonization involve more than diffusion of information, migration and settlement. They place different sets of adaptive strategies into competition, and lead to varying degrees of elimination, selection, simplification, divergence and, ultimately, culture transformation. This essay seeks to explore some of these themes, as part of a more comprehensive study, that will combine macro and micro approaches, based on detailed research in Mexico.

Patterns of migration

Two studies are available to estimate the flow of Spanish immigrants to the New World. A list of 55,000 migrants 1493–1600 has been tabulated by Boyd-Bowman (1976a), who suspects that this represents only 20% of the real number, because of incomplete lists and many missing years. A different approach was taken by Mörner (1976), who used the data of Chaunu a. Chaunu (1955) to calculate the

total number of westward voyages from Spain, the tonnage per ship, and the estimated numbers of passengers per ship, to arrive at 162,000 overseas migrants for 1506–1600. Taking into account the ships that did not return to Spain, one must still add their crews to this total, i.e., as many as 81,000 short-term sailors who may have remained in the New World (MÖRNER 1976). The estimate of emigrants accordingly lies between 162,000 and 243,000. If we take a median value, and allow for the fact that one out of seven 19th century transatlantic migrants eventually returned to Europe, a net emigration figure of 175,000 can be proposed.

A complementary approach is to examine the Spanish population of the New World at the end of the 16th century. There is a large but scattered body of proto-statistical data for the period. Major sources for late 16th-century Spanish New World population include the great compendium of LOPEZ DE VELASCO (1574), based mainly on materials supplied to Madrid before 1571 and the incomplete, but vast and detailed information embodied in the *relaciones geográficas* compiled by local officials in the Americas 1577–85 (see ACUÑA 1984–88, JIMÉNEZ 1965, LATORRE 1919). The most comprehensive source for the early 17th century is VÁZQUEZ DE ESPINOSA (1629), who travelled through most of Spanish America in 1608–22. The estimates that these different sources give for Spanish *vecinos* (resident householders) cannot simply be accepted at face value, a major shortcoming of the otherwise useful survey by HARDOY a. ARANOVICH (1969). The data must be compared, internally as well as in chronological sequence, and checked against other miscellaneous sources[1]. In order to arrive at a reasonable approximation for about 1600, sources were critically evaluated and then normed to that central date, by weighting estimates from before and after 1600. This laborious procedure helps standardize the data and reduce random errors.

For all but the larger cities and mining towns, *vecinos* have been converted to inhabitants by an arbitrary factor of 4 (Table 1). See discussion in BUTZER (1988) for such conversions in Spain; in the New World, the problem is complicated by the social and racial fluidity of the concept *españoles,* particularly in regard to the legitimate offspring of interracial marriages. The category must therefore be accepted at face value, bearing in mind that second or third generation *españoles* frequently were of partial Indian ancestry.

COOK a. BORAH (1974: 197–198) opt for a conversion factor of 6, but I find no support for this, e.g., in Guadalajara (MOTA 1605: 45–46) the ratio was about 3, in Lima it was 4.16 in 1630 (BROMLEY 1959), or in towns reported on by the *relaciones* of 1608–12 it was always less than 4 (see TORRES 1868). Large cities are here taken as non-mining centers with more than 750 *vecinos* (Fig. 1). To account for the large numbers of *estantes* and transients, not included among *vecinos* with established households, a higher conversion factor of 4.5 has been used for such larger cities, but this assumes that transients did not normally have families in the colonies. Mining towns pose different questions of conversion. Although up to a half of the "Spanish" population of the *reales de minas* probably represented miners without families, substantial commercial and other „service" sectors were also present, so that an arbitrary conversion factor of 3 was applied in Table 1.

A final adjustment is required in evaluating Table 1. One Spanish list of settlers in Mexico during the 1560s offers separate estimates for Spaniards living in rural *estancias* (see LATORRE 1920: 105–111). Excluding the large cities and mining centers, these estimates amount to 3 or 4% of the male population, implying a small but persistent undercount of, in the main part, single mayordomos, foremen, and herders working at outlying estates. This suggests that the figure of 267,000 Spaniards in 1600 given in Table 1 should probably be closer to 275,000 people.

Yet even a total of 275,000 colonists in about 1600 implies a remarkably slow growth rate for some 175,000 permanent migrants. This must be attributed to low numbers of legitimate offspring in a context with very few Spanish women: the total of 1326 conquistadors of Mexico during the 1520s had only 733 living (legitimate) descendants in 1604 (PAGDEN 1987: 56). The role of major epidemics, which did not affect Spaniards to the degree that they wrought

[1] For example, VÁZQUEZ gives over 15,000 *vecinos* for Mexico City in the 1620s, but if we accept VELASCO's estimate of 3000 *vecinos* in 1571, the growth trajectory would favor an alternative figure of 7000 in 1610 (see GERHARD 1972: 182). The many contradictory estimates for Mexico City are epitomized by the three lists of the 1560s published by LATORRE (1920: 103–115), which appear to reflect the discrepancy between officially counted *vecinos* (with property) and the large number of unpropertied *estantes,* transients, and vagabonds, amounting to as many as 4000. VÁZQUEZ' data for other parts of Mexico are incomplete, and must be complemented by MOTA Y ESCOBAR (1605) for Nueva Galicia, by the Michoacan episcopal inventory of 1630 (see LÓPEZ LARA [1973]), and by other manuscript data. For Lima, VÁZQUEZ cited 9000–10,000 *vecinos,* although a local census of 1630 gives 6000 *vecinos* and 25,000 persons (BROMLEY 1959).

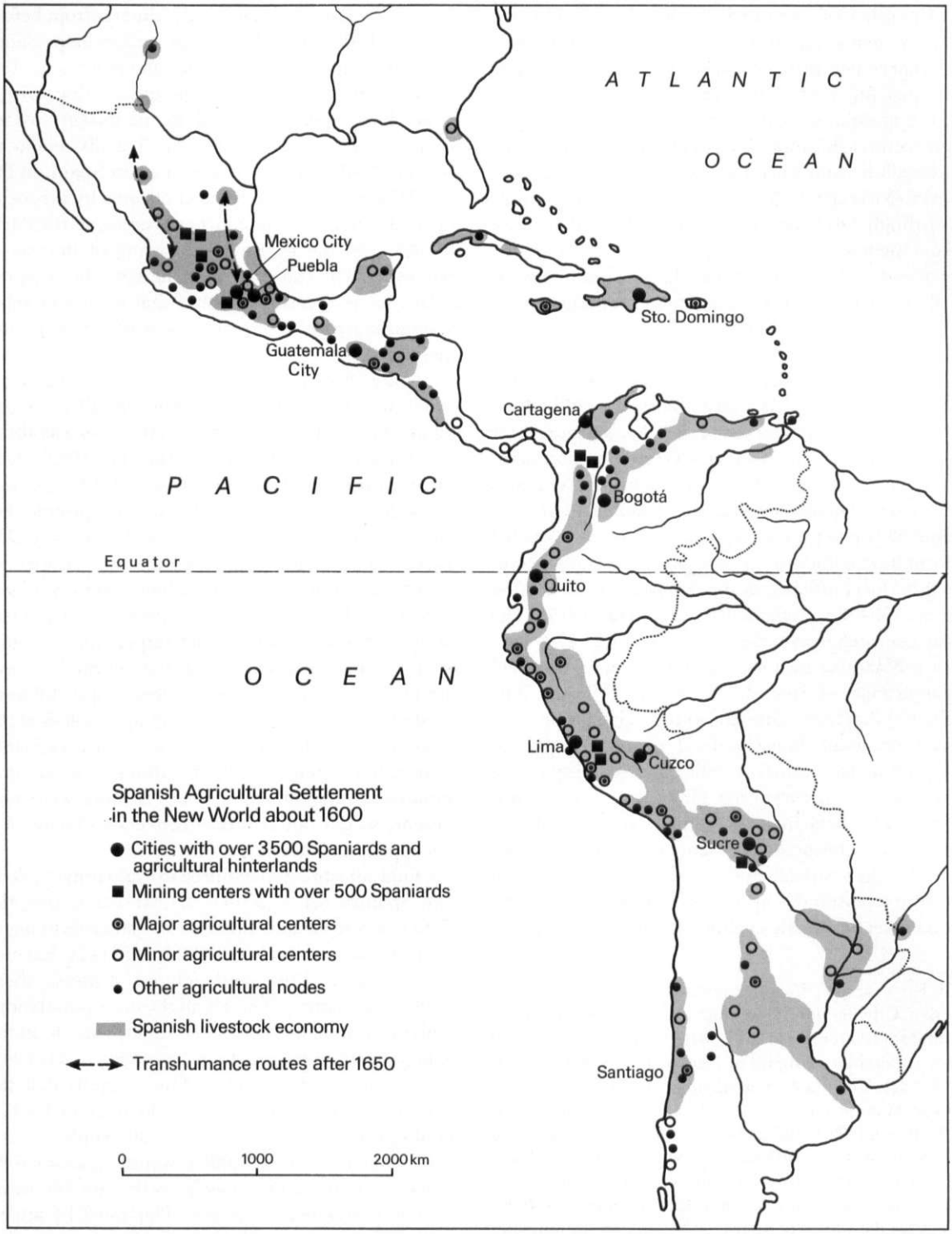

Fig. 1: Spanish agricultural settlement in the New World about 1600
Landwirtschaftliche Siedlungen der Spanier in der Neuen Welt um 1600

havoc among the Indians, must also be reevaluted: similar epidemics in Spain did cause high mortalities (e. g., PÉREZ MOREDA 1980) and epidemics among Spanish children in the New World may not have received attention in government or missionary reports. Many Spaniards of all ages also succumbed to diverse tropical diseases, especially during the early years.

In regard to emigrant selection, good data are available thanks to BOYD-BOWMAN's (1973, 1976a, 1976b) biographical analysis of 17,000 migrants of the 16th century. Over half of the settlers came from the southwestern part of Castile, especially Lower Andalucia and Extremadura, areas of Mediterranean-style farming, where olive oil and wine were integral to the popular cuisine. Another third or so came from north-central Castile, where a more West European agriculture prevailed, and where butter and tallow were the common cooking fats. There also were regional differences between southern and northern Spain in terms of the size and the level of autonomy of communities, the mobility and education of the merchant and professional classes, as well as the diversity and abundance of craftsmen.

But over 90% of the emigrants to the New World were Castilians, who represented a reasonably homogeneous, sociocultural group (LOCKHART 1968: 225–255, 1972). Portuguese, Gallegos, and Catalans were not significant in number during the first century. Only the Basques represented an important minority, important because of their considerable business acumen and additional experience in mining. Compared with the medley of English, Scots-Irish, Swiss-German, and French colonists to North America (see MEINIG 1986), the Spaniards were comparatively undifferentiated in terms of agricultural experience, language, class or ideology (FOSTER 1960).

Although it is popular to characterize the early Spanish settlers, epitomized by the conquistadors, as marginal or aggressive characters, at least one intensive biographical study demonstrates that this was not the case. Of Pizarro's 168 men in the conquest of Peru, only a handful were professional soldiers, but at least 76 were functionally literate and only 41 were demonstrably not (LOCKHART 1972); they represented a wide range of professions, and those who returned to Spain proved to be conservative men who readily fitted back into traditional roles. Furthermore, the letters of Spanish conquistadors sent back home reveal conventional mores and concerns (LOCKHART 1976). The surprising fact is that most of Pizarro's retinue belonged to what today would be the middle and lower-upper echelon of Spanish society, coming from medium-sized towns. These became the experienced "Indian-fighters" as well as the first settlers. As CIEZA DE LEÓN (1553) already pointed out on various occasions, the ethical behavior of some violated the national honor.

During the peak of migration, between the 1560s and 1640s, an average of 2800 Spaniards took the outbound voyage annually (MÖRNER 1976), roughly double the average number of immigrants to British and French North America between 1630 and 1700 (see EARLE 1977, also MITCHELL a. GROVES 1987). Among the Spanish colonists, women accounted for only 6% before 1540, rising to 16% during mid-century, and 28% after 1560 – averages that are all well below those for Anglo and French North America. Occupational shifts are also evident over time. The proportion of merchants trebled during the first half-century, then declined again as the volume of emigration increased, to bring a higher proportion of dependent men *(criados),* in contrast to the predominantly literate colonists of the early decades (BOYD-BOWMAN 1976a, 1976b; LOCKHART 1972).

Applying the procedure already outlined above to MÖRNER's (1976) information, total net emigration to 1650 can be estimated at 315,000. No systematic data exist for 1650–1810, but emigration from Spain was relatively light, after declining sharply 1630–50[2]. Allowing for a minimum net emigration averaging 500 persons per year 1650–1810, another 80,000 must be added. A total of 400,000 up to the War of Independence is conservative, and the true figure may well be closer to half a million.

The basic patterns of Iberian settlement in Spanish America (Fig. 1) had been established by about 1570 (see the regional geography of LÓPEZ DE VELASCO

[2] The reasons for declining emigration after 1630 include: (1) a population decline from 7.1 to 6.0 million in Spain 1590–1650 (PHILLIPS 1987, BUTZER 1990), implying a growing rural labor shortage, except in the northernmost parts of the country; (2) a population loss of up to 7% during the great plague of 1647–52, primarily affecting the larger Spanish cities, such as the emigration entrepot of Sevilla (PÉREZ MOREDA 1980); (3) declining mining production in the New World 1635–70, with severe, interrelated capital shortages (BAKEWELL 1971, 1987), that resulted in a downturn of general economic productivity (see annual revenues in different categories as assembled by TEPASKE 1976); and (4) declining maritime traffic from Spain to the New World, beginning with destruction of the Indies fleet by the Dutch in 1628, followed by restriction of shipping to a single run per year in 1660, and the inability to send out fleets during 6 years between 1677 and 1694 (see PARRY 1966: ch. 13, also TEPASKE 1976 for annual records).

1574), implying that the decisive phase of primary emigration involved only about 30% of the more than 400,000 permanent migrants received before 1810. Furthermore, some 75% of the original land grants *(mercedes)* in the settlement cores of New Spain had already been awarded by about 1600, so that the continuing, secondary immigrant stream was increasingly confronted with limited access to land, and gravitated to the large and medium-sized towns (for Mexico, see BUTZER 1989; BUTZER a. BUTZER, in press). After the 1650s, immigration mainly involved relatively small numbers of Basques and other Biscayans, who selectively targeted the entrepreneurial sector (ISRAEL 1975: 110–131, BRADING 1971: 106–109; PAGDEN 1987).

Readaptation of the Spanish agrosystem

The Spanish settlers in the Americas encountered environments different in degree and kind from those in which they were ecologically grounded. This required adjustments or radical changes in the familiar repertoire of cultigens and animals, some successfully passing an initial period of trial-and-error, coupled with genetic selection, others proving less successful and being gradually abandoned (cf. DIAMOND 1977). Technological adjustments and shifts in seasonal strategies or risk management will have accompanied this reappraisal of resources.

In the lowland tropics, the Spaniards were forced to abandon part or most of their agricultural repertoire, since wheat, barley, and many of the orchard trees did not thrive (see MOTOLÍNIA 1541: sect. 429–430, LÓPEZ DE VELASCO 1574, ACUÑA 1984–88, VÁZQUEZ DE ESPINOSA 1629, also WEST 1982). Cattle, horses, and pigs did very well, however, and multiplied rapidly with extensive management. Commercial crops provided a more important alternative thrust for Spanish colonists in wet tropical environments. But labor and capital were always in short supply, transport costs were high, and maritime traffic was widely spaced during the year and seriously threatened by French or British privateers. African slaves were expensive, since Spain purchased them from middlemen, after the supply of Indian forced labor ran out (BOWSER 1984). A full-scale plantation economy did not develop. Crops such as cacao, sugar, cotton, tobacco, and dyes were sometimes grown directly by the indigenous people in lieu of labor service, or more generally were cultivated by tributary labor on small-scale Spanish estates (MACLEOD 1973, GIBSON 1984).

At cooler elevations or latitudes, with the exception of Chile, the prevalence of summer rains did not allow a simple transfer of the Spanish agrosystem. The basic staple of Castile was rain fed, "hard" wheat *(rubión)* planted in autumn or winter, and harvested in late spring or early summer. Only a small part of the wheat in Spain was irrigated, and such "soft" wheat varieties, whether winter or spring planted, were only important in the lands of Aragón and in Murcia. With the exception of central Chile, winter wheat in the subtropical Americas could only be grown with irrigation, and rust-blight problems made rain fed "summer" wheat risky. Irrigation was therefore indispensable for Spanish-style agriculture in the New World, whereas it was optional in the Old. Irrigation waters became a prerequisite for Spanish farming, and their supply required sustained labor investments and periodic outlays of fresh capital. This switch to irrigated wheat represents a fundamental difference in land-use strategies and management, with additional implications attached to the inevitable shift from "hard" to "soft" wheats. As a result, two- or three-field dry-farming systems, after an initial period of experimentation, were replaced by irrigated wheat or downgraded to maize cultivation (see PREM 1984, MURPHY 1986) (see agricultural centers in Fig. 1).

At face value, the inventory of cultigens verified for the subtropical New World by sixteenth-century authors and the *relaciones geográficas* (see ACUÑA 1984–88, JIMÉNEZ 1965) is much the same as in Castile. But the details, as to implementation, are significantly different. Wheat was almost exclusively grown to support the relatively small Spanish populations, so that cultivated areas were localized and mainly quite small; the vast expanse of dry-farmed wheat characteristic of Castile was absent. Those garden crops raised in the *huertos* around a typical Spanish town were grown throughout the New World colonies and receive due enumeration in the *relaciones*. But these same sources also suggest that, with the exception of broad beans and asparagus, they retained little economic significance. Orchard crops, on the other hand, were evidently cultivated with considerable success, particularly peaches, apples, and figs. Yet cherries, pears, and citrus fruits did not do well in the highlands, primarily due to the rapid alternations of warm weather and frosts in winter.

Olive groves were eventually established around Mexico City and Puebla, but with summer rains or irrigation they produced more foliage than fruit. Even in the cool, arid lowlands of Peru and the winter rainfall zone of Chile there were initial problems of

acclimatization, prior to eventual success. Grapes thrived in the New World, but primarily remained a table fruit. Successful wineries also were limited to the dry, cool lowlands of Peru and Chile. Elsewhere, with warm, wet summers, Andalusian vine stocks yielded excessively sweet vintages, while grafted New World hybrids were too bitter for anything but poor brandy. The average Spaniard seems to have had little hesitation in using much cheaper animal fats and indigenous alcoholic beverages.

The net impact of this selective and readaptive process was that the emergent agrosystem was either modified or fundamentally altered. To this must be added the impact of indigenous, New World plants that, in each key environment, were tested for utility, taste, and cultural compatibility. Such new foods eventually incorporated into Spanish colonial diets included maize, tomatoes, avocados, potatoes, squashes, new species of beans and cherries, several peppers, and even cassava. Contrary to expectation, the reciprocal, indigenous adaptation of Spanish cultigens was more selective and very protracted (Butzer, in press).

The Old World animal species proved more versatile than the plants and, in an American culture world with few domesticated animals, expanded according to ecological suitability, means, and demand. Cured hams and bacon were soon produced in some Andean regions, cheeses in others, while horses or mules were bred in several parts of the New World. Depending on moisture and pasture conditions, cattle or sheep assumed unprecedented importance. Outside the centers of indigenous population, livestock represented the major Spanish rural preoccupation until well into the 1700s, providing meat-on-the hoof, leather, hides, tallow, or wool.

The size and mobility of the herds, and the limited control with which they were managed, differed from those in Spain, where even at the height of the transhumant Mesta most animals belonged to and grazed within municipal lands, and where shepherds and *vaqueros* almost everywhere kept the herds under tight control (Butzer 1988). By contrast, cattle, horses, and pigs initially ran wild in many parts of the New World, including the Caribbean islands, Mexico, Colombia, and the Pampas.

But such semi-feral animals were very destructive to standing crops, and by the 1550s cattle had been largely removed from the basins of Mexico and Puebla-Tlaxcala, as well as Oaxaca, making way for large herds of merino sheep (Butzer a. Butzer, in press). Cattle were displaced to the Gulf lowlands of Mexico, the Bajío, and Jalisco, where they remained the dominant economic mode well into the seventeenth century. Sheep raising also became more regulated, being allowed into cultivated areas only during the months of January and February, to graze on stubble. Long-distance, transhumant treks were the only solution, at first from Querétaro to the lake basins of Jalisco, and from Puebla down to Veracruz, as verified about 1580. By 1590 titles were being granted for winter sheep pastures in the interior parts of the Veracruz lowlands, by 1600 in the semiarid plains east of San Luís Potosí, by 1614 in the lowland basins north of Ciudad Valles, and by 1636 in Nuevo León. Soon a million sheep were moving annually between central Mexico and Nuevo León, a distance of up to 800 km, exceeding that of the Spanish Mesta (Chevalier 1952, Dusenberry 1963, Butzer a. Butzer, in press) (Fig. 1).

It becomes apparent that the New World "livestock frontiers" were restricted to underpopulated areas, with only local nodes of cultivation, and that in regions with dense Indian cultivation, sheep transhumance was tightly controlled, much as it always had been in Peru (Keith 1976). It also bears noting that the well-known eighteenth-century cattle and horsemanship of Jalisco (Serrera 1977) was little more than a symbolic recreation of an earlier era, contemporary with an expansion of controlled herds into cultivated areas designed to meet the demand of the Mexico City butcheries. While uncontrolled cattle raising was initially prominent in large areas of the New World, this was a passing phase, much as in the United States from the 1860s to the 1880s. Thereafter extensive cattle raising remained prominent in outlying areas (Fig. 1), but with much more restricted forms of management.

The initial deemphasis of cultivation and the remarkable prominence of livestock along the periphery of populous Indian settlement identify a process of *disintensification* consequent upon a shortage of labor, the low price of land and agricultural products, and the adaptive difficulties of recreating a familiar agrosystem in new environments. Even where booming mine centers created market demand (Bakewell 1987), disintensification tended to persist in more peripheral areas. Thus, whereas Spanish wheat farming in the Puebla Basin was rapidly expanding by 1570 (Prem 1978, 1984), the western and central Bajío remained dominated by cattle raising until well after the 1630s (Butzer a. Butzer, in press). The key exceptions to this picture of weak commercial components were the centers of irrigated wheat cultivation in central Mexico and the areas of wine and olive oil production in subtropical South America, where

20 million liters of wine were produced annually around 1620, before monopolistic prohibitions strongly reduced that activity (Vázquez de Espinosa 1629, Davies 1984).

Re-intensification was incremental, and ultimately dependent on the rapid population growth experienced by Spaniards, Indians, and mixed race groups alike during the 1700s (Morin 1974). By that time, the Spanish and indigenous rural economies were completely interdigitated (Wolf 1957), and the cultural integration of new foods and technologies was well underway, if not complete. The rural and urban economies were now also tightly coupled (Brading 1978, Van Young 1981, Swann 1982). New capital growth was based heavily on mining und textile production, leading to new mine investments which, facilitated by the Bourbon policy of economic liberalization, supported the emergence of a powerful urban commercial class (Brading 1971, Twinam 1982, Butzer 1989). The expanding cities demanded agricultural products (Tutino 1979), leading to an unprecedented expansion of irrigation farming during the eighteenth century, as a result of which stockraising was removed to marginal environments (Trautmann 1986).

By the end of the Colonial era, there were signs that demographic and agricultural expansion in the heartland of Mexico had reached a critical threshold, given the constraints of the available technology and infrastructure. Share-croppers and tenant farmers were being squeezed by excessive work demands, and periodic harvest crises created social and demographic havoc (Brading 1971, Tutino 1979, 1986). This untenable situation played itself out in the wars of independence with the result that demographic growth almost came to a standstill in the key agricultural areas of the Bajío and the Puebla Basin during the early and mid-nineteenth century, with concurrent expansion most evident in the once peripheral north and the tropical low country.

This cycle of disintensification on the colonial "frontier", followed by re-intensification and then a productive, rural-urban integration, has only recently begun to be identified as a critical component of the New World colonization process (e. g., Mitchell 1977). Confronting new biophysical environments and alternative indigenous "information", immigrants were likely to modify their traditional repertoire of activities and to readjust their economic and social priorities, first to a weak market economy, and subsequently to accelerating demand.

The British and French experiences (see Cronon 1983, Meinig 1986, Mitchell a. Groves 1987) were to some degree similar, with long, cold winters precluding winter wheat in Québec and New England. Maize as well as native tobacco and indigo were incorporated. Primitive but effective methods of forest clearance were adopted in eastern North America, and in many areas hoe farming temporarily replaced plow agriculture. Three-field systems persisted in only a few places, and more general use of fertilizers was delayed until the 19th century. Although the Anglo-French Caribbean sugar plantations were thriving by the late 1600s, conversion of England's southern colonies in North America into a highly productive slave economy for tobacco, dyes, and cotton was delayed, by almost a century. A dynamic, rural-urban economic integration had been realized in New England and the mid-Atlantic colonies by that time, but in other areas of the eastern seaboard it was delayed until the mid-1800s or later.

Cultural "inclusion" of the indigenous peoples

The plight of a conquered people is always lamentable, and that of New World indigenous populations was no exception. For one, Old World diseases had a catastrophic impact (see Denevan 1976). But the Spaniards also preempted labor, land, and women, especially in the early years before government and missionary policy was clearly formulated and implemented.

The Indians were forced into labor gangs, initially working for much longer periods than the allowed two or three weeks per year. But during the 1540s this practice, later known as the *encomienda* system (Góngora 1951: 100–116, Simpson 1966, Sherman 1978), was regularized and gradually curtailed. Later in the 16th century, wage labor was commonplace (see Zavala 1980), and wages in the mining centers and growing sugar industry soon became competitive (Bakewell 1971, Martin 1985).

The tribute lists (*Suma de Visitas* 1547–51) leave no doubt that the annual collections of textiles, food products, or labor services in New Spain were firmly rooted in Aztec and other traditional systems of periodic revenue extraction. New World historians tend to stereotype the Iberian experience of the Reconquista, attributing most Spanish policies in the Americas to precedents established during the reconquest of Islamic Iberia. Medieval custom did indeed entitle a lord to certain taxes or tithes, as well as occasional *corvée* (unpaid work conscription) on public maintenance or construction projects. But such obligations predate the feudal era and represent the

equivalent of land and personal taxes in archaic state societies, with built-in social inequalities. The convergences in principle between Aztec practices (see GIBSON 1964, PRICE 1978, BERDAN a. DURAND-FOREST 1980) and Spanish counterparts in the New World (see SIMPSON 1934–40, GÓNGORA 1975) deserve greater emphasis.

Spanish law, based on Mediterranean custom, recognized cultivated lands as community or personal property, but unworked land was in the public domain (see BUTZER 1988, SCHELL 1985). In Mexico after 1535, these *tierras baldías* were increasingly awarded as land grants to Spaniards (BUTZER a. BUTZER, in press), and by the end of the century much of the traditional, Indian agricultural land had been usurped or unjustly purchased at low prices (PREM 1978, 1984, LICATE 1981: ch. 6, WOBESER 1983). But even at the end of the Colonial era, Indian smallholders still clung to their lands in at least some areas (TAYLOR 1972, BRADING 1978).

The other major abuse was the misguided policy of settlement amalgamation *(congregación),* whereby shrinking Indian towns and scattered hamlets or villages were relocated at new, planned sites, to facilitate religious instruction and acculturation (GERHARD 1977, FARRISS 1978, VILLAMARÍN a. VILLAMARÍN 1979, BORAH a. COOK 1979, LICATE 1981: ch. 5, LOVELL 1985: ch. 6). Apart from the trauma of uprooting from ancestral places, aggregation increased exposure to the repeated ravages of epidemic disease, although the institutions of autonomous government in many cases did serve to protect indigenous rights.

However bad the empirical record, despite continuing intervention by the paternalistic, secular and religious authorities on the Indians' behalf, substantial components of the indigenous population in Spanish America did survive on their traditional lands, in both biological and social terms. Examples can be cited from Michoacan, Hidalgo, Tlaxcala, Oaxaca, the Yucatan, Guatemala, and the Andean countries at the end of the Colonial era, with only partial linguistic or cultural loss. Except for the once-Spanish American Southwest, there are no comparable examples of continuity in Anglo North America.

The Spanish and Anglo-American colonial experiences differed significantly, reflecting fundamentally different philosophies. Confronting densely settled and advanced indigenous peoples in many areas, the Spanish state and church followed a policy of "inclusion", that led to acculturation, socioeconomic domination, and assimilation. This contrasts with the policy of "exclusion" that, in Anglo-America, led to the displacement, elimination, and cultural substitution of indigenous peoples (CRONON 1983, AXTELL 1985). The French experience more closely approximated that of the Spanish.

These differences can in part be attributed to different balances of power. The Spanish conquest involved politico-military and economic domination, with the conquerors totally outnumbered and, even in the 18th century, remaining a minority in most areas. Under such circumstances, Spanish control focused on political and socioeconomic restructuring, leading to partial economic displacement, two-way assimilation, and significant, indigenous ethnic survival.

By way of contrast, the slow and deliberate British advance, by contagious relocation, and supported by a continuous flow of immigrants, allowed British demographic as well as political and economic dominance in the future Thirteen Colonies (MEINIG 1986). Indigenous groups faced competitive exclusion, and as the tide of European migration moved westward, the survivors were restricted to segregated enclaves with marginal resources, and marked by inferior socioeconomic status.

Another difference was that the more successful indigenous peoples of Spanish America, like the Spaniards themselves, were characterized by a relatively intensive agriculture and dense, sedentary populations, with economic specialization, social differentiation, and complex political and religious institutions (SERVICE 1955). This greatly facilitated mutual accommodation and institutional substitution. Wherever the Spaniards encountered semi-sedentary peoples, with simpler forms of farming and less complex social organization, the Iberian colonists also were less successful in regard to indigenous demographic or cultural survival (RIBEIRO 1970).

Nonetheless there were significant, underlying differences in attitudes and policy. Like other Mediterranean nations, the Spaniards had long experience with other peoples and other cultures, a familiarity that the North Europeans did not share. More importantly yet, Catholicism is a universalist religion that was "inclusive" and imbued with strong missionary zeal (MORSE 1964). As a national church it not only served to integrate widely dispersed communities throughout Spanish America, but also brought together the conquerors and the conquered to worship under one roof (RICARD 1966, MCANDREW 1966). The Jesuit experience in French Canada bears this out (AXTELL 1985: ch. 6), in contrast to the segmentary churches that dominated in much of

Anglo-America and whose function it was to serve the immediate community, normally to the exclusion of outsiders (ZUCKERMAN 1987). These different religious ambiances served to shape very different social relationships. In Spanish America, both state and church sought to embrace the indigenous peoples as potential Christians and as partakers of an idealized Romano-Mediterranean *civitas*. This may not meet our twentieth-century expectations of how the world should be, but in the time and place this qualifies as enlightened policy.

Cultural divergence of the Spanish settlers

In Spanish America, cultural divergence was set in train by: (1) the cumulative impact of new agroecological solutions that differed from those of Peninsular Spain, such as the livestock and mining frontiers, modification and selection of the crop repertoire in different ecological contexts, and experimentation with tropical commercial agriculture; (2) the environmental constraints to traditional rural economies that favored testing of alternative options provided by indigenous plants and management; and (3) the immersion of Spanish farms, settlements, and cities within an established and populous indigenous landscape, and the inevitable dependence on a non-European workforce. The British and French settlers shared the first and second of these experiences, but only in reduced measure, e.g. the fur trading frontier, Southern plantation agriculture, and certain New World crops.

The ecological readaptation of the Spanish colonists in a great range of new environments should have favored a partial loss of cultural traits and their associated values. With the emergence of novel, adaptive solutions, credibility would have been given to change, favoring the relaxation of traditional cultural feedbacks, particularly during the course of disintensification. With the repeated incorporation of new or alternative information, including indigenous foods and technologies, the revision of maximization and minimization strategies may well have increased pressures for fundamental, sociocultural readjustment. As a result, the 16th century proved to be a period of experimentation, reevaluation, and innovation, as well as a fertile arena for more formal debate among or between natural historians, the missionary clergy, and royal policy-makers (see CHIAPELLI 1976).

The impact of Spanish dispersal as a minority in most rural areas should not be overlooked. Spanish farm compounds in the early years, or the more elaborate estates of the late Colonial era, were conspicuous by virtue of their buildings, their trim fruit groves or ornamentals, and their relative location. But, in fact, even in the Hispanic heartland of New Spain, their impact was discontinuous (EWALD 1977), while elsewhere Spanish-style agriculture was decidedly cellular (Fig. 1). Far too thinly spread and diluted by indigenous or Mestizo populations, Spanish rural settlers never succeeded in creating more than oasis-like facsimilies of their Old World models. In this, the Anglo-American experience was fundamentally different.

Then, too, the decisive aspects of daily colonial life were acted out in the larger urban centers. In 1600 some 49 percent of the *españoles* in the new World lived in large cities or mining centers, many of which rivalled the smaller cities of Castile in size. It was in these administrative centers that several, flexible constellations vied for power: the Castilian officials and *letrados,* the Sevillan petty bureaucrats and merchants, and a landed gentry derived from many parts of Castile. Below this upper crust were the heterogeneous, middle echelons of *criados* or personal assistants, craftsmen, vendors, and skilled workers, still privileged to live in the "Spanish" city. Beyond that there were various urban and exurban *barrios* for a much larger population of Indians and the growing, mixed ranks of *castas*. Despite the obvious contradictions, these multiracial cities, in a perverse sort of way, came to symbolize Spanish culture and, somewhat ironically, served to fossilize the external mores of sixteenth century, Peninsular society from which the colonists had derived their roots. It requires no emphasis that multiracial cities had no counterpart in French or British North America.

These ecological and intellectual forces of New World divergence, subsumed under the concepts of cultural "selection" and acculturation, were matched by institutional processes. Specifically, both state and church responded to new circumstances, through the persons of their key spokesmen, in an ongoing dialectic that is remarkably well documented (see RICARD 1966). The resulting Spanish policy of a dual - Spanish *and* Indian - society favored residential segregation and separate but interdigitated economies, as it sought to preserve at least a part of the indigenous heritage and patrimony (GÓNGORA 1975: 98–117, MCALISTER 1984; ch. 8). While indigenous socioeconomic configurations were marginalized, a long process of economic, social, and cultural fusion was begun that, in the long term, led to mutual assimilation and the creation of a new, hybrid society (LOCKHART 1984).

Table 2: Divergence of population pyramids and marital patterns in Spain (1787) and Guanajuato Province, Mexico (1793)
Source: Censo 1787 and Archivo General de la Nación (Mexico): Historia 523, fol. 76
Unterschiede im Bevölkerungsaufbau und im Heiratsmuster zwischen Spanien (1787) und der Provinz Guanajuato, Mexico (1793)

Age Group (Years)	0–6	7–15	16–24	25–39	40–49	50 +
Percent Males:						
Spain	9.3	9.1	7.8	10.7	5.9	7.0
Guanajuato	11.3	12.5	7.1	9.3	5.6	4.3
Percent Married Males in Age Group:						
Spain	-	0.3	18.9	74.2	80.5	68.6
Guanajuato	-	17.5	42.8	68.2	56.7	60.3
Percent Females:						
Spain	8.9	8.6	8.1	11.0	6.1	7.6
Guanajuato	11.4	12.8	7.2	9.2	5.4	3.9
Percent Married Females in Age Group:						
Spain	-	0.5	26.5	75.9	73.0	52.3
Guanajuato	-	17.6	47.6	65.4	56.3	55.1

Institutional selection also shaped a new social climate. The land-grant policy favored the rich and powerful (Chevalier 1952, Butzer a. Butzer, in press) while, in contrast to Spain, corporate institutions were standardized, simplified, and weakened, to the extent that they became instruments of the oligarchy and the colonial administration (Morse 1964), with little evidence of the lively community participation characteristic of Old World prototypes (see Phillips 1979, Vassberg 1984). The absentee estate, whether engaged in stockraising or wheat farming, became a hallmark of the new colonial life style, dependent on cheap or involuntary indigenous labor (Florescano 1987).

Those pockets of small, Spanish freehold farmers that did emerge in some of the large tracts of irrigated agriculture by the early 1600s (Prem 1978, 1984, Murphy 1986, Butzer a. Butzer, in press) were gradually absorbed, and their owners were either reduced to tenancy or obliged to move into the towns. Unlike in northern Castile (or eastern Spain), where farmers preserved a high degree of autonomy, even as tenants (Vassberg 1984), there was little room for the development of a relatively egalitarian, "pioneer" society, based on the freehold principle. Instead, a new social arrangement slowly became the norm, whereby a Spanish-derived elite dominated Spaniards, mixed races, and Indians alike, both in the city and the countryside (Altman a. Lockhart 1976). Hispanic tradition now became reified in mythologized form, a trend reinforced by the stultifying imposition of the Inquisition in both the Old and New Worlds. The innovative 1500s passed into the conservative 17th and 18th centuries, dominated in the New World by a Creole, Colonial establishment (Israel 1975). An unstable, stratified, and multi-ethnic society emerged that was, and remains to this day, in a state of both fusion and active confrontation.

In sum, both ecological and institutional "selective" pressures favored (a) a divergence between Spanish and Spanish-American lifeways (b) the creation of a stratified society in which the Spanish-American commoner had less of a voice than in the home country, and (c) the conjoining of Spaniard and Indian in a socioeconomic matrix that, given the chronic deficit of Spanish women, resulted in long-term assimilation. The degree to which acculturation permeated Spanish society can, for example, be gauged from the dramatic shift of age of first marriage for both sexes in late 18th century Guanajuato Province, Mexico, a region with 29% *españoles* in 1793 (Table 2). According to Brading a. Wu (1977), Spaniards married only a year later than Indians in the area, suggesting that the typical marriage age for Spanish girls in Guanajuato was 16 or 17 years, compared with 22 to 26 years in Spain. Not surprisingly, the population pyramid for Guanajuato, unlike that for Spain, compares with that of modern, underdeveloped nations.

These processes of cultural divergence from the Spanish mainstream are better documented and were perhaps more fundamental than those of simplifica-

tion, i. e. the elimination of Old World variety based on regional differences (FOSTER 1960). Both of the key institutions contributed towards simplification - the state in streamlining municipal organization, the church in eliminating Spanish regional variability from Christian ritual. Equally important is that Spanish settlers formed a small minority in the New World, and that the preservation of traditional cultural basics among minority groups inevitably requires internal compromises that "simplify" and reify the outcome. By the mid-17th century the American-born Colonial society was also obliged to ignore its internal differences in order to contend with the prejudice of Peninsular Spaniards against Creoles, while Spanish officials, officers, and higher missionary clergy continued to be sent to the Americas as a managing elite (BRADING 1971, ISRAEL 1975). Faced with a perpetually uneasy *convivencia* with the non-Spanish majority at ground level and Peninsular domination at the top, Creole society could not afford to reflect on its own diverse, regional roots.

Widely separated in space, and marked by diverging socioeconomic trajectories in response to different environments and varying intensities of indigenous contact, a suite of new regional societies emerged in Spanish America. Different plants had been grafted onto common roots, and what bound them together was a tenaciously elaborated myth of Hispanic culture, grounded in the legends of the Conquest (MORSE 1964, GÓNGORA 1975: ch. 5).

Ultimately, new regional outlooks, economic concerns, and social values were articulated on the basis of intense, shared experience, widening the rift between the several, regionalized Creole societies and Peninsular Spain. As sociocultural ideologies were redefined to meet local needs and realities (PAGDEN 1987), socioeconomic alienation with respect to Spain grew into open competition and ultimately revolution. Seizing upon indigenous symbols and a mythologized indigenous heritage, New Spain became "Mexico" and led the independence movement in Spanish America: it was the first of the new nations to acknowledge its complex, Euro-American roots, while striving for a new ethnic identity.

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