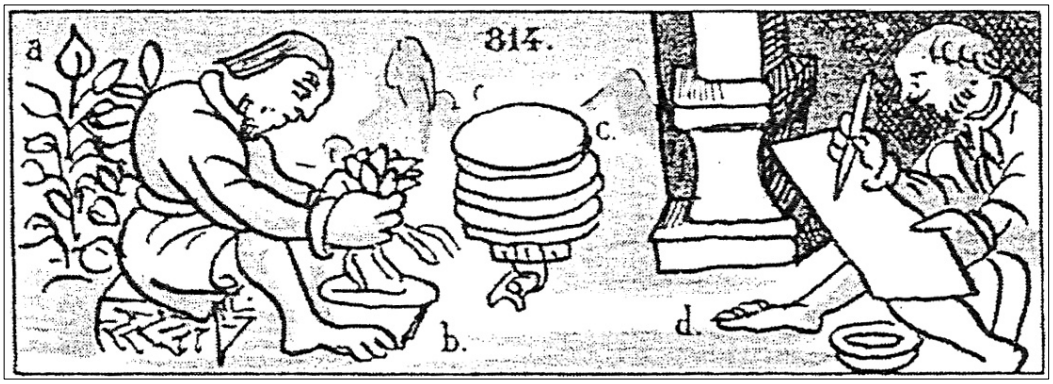
Enter *Xiuhquilitl*:
Indigo in the Spanish Empire, c.1550-1700



A dissertation submitted in fulfilment of the requirements for the Degree of Doctor of Philosophy at the University of Oxford
HT 2015

by
Adrianna Catena
Balliol College

Vol. I

Abstract

Over the course of the sixteenth century, the burgeoning globalising forces of exploration and discovery transformed the indigo trade in Asia and the Americas, the histories of blue, and woad producing regions in Europe. Around 1560, the Spanish Crown found indigo-producing plants grew wild in parts of New Spain, and across the Captaincy General of Guatemala; settlers turned with enthusiasm to the new industry, and by 1600 indigo ranked third on the list of exports from the Spanish colonies – after bullion, and cochineal, contending for its place with cattle hides. Previous studies of colonial Mesoamerican indigo have concentrated on eighteenth century production methods and the problematic of indigenous labour, rarely following the blue dye past the port of Seville, to the dyer's vat or the artist's studio. Processes of reception, accommodation (sometimes rejection), and commodification, the initial development of manufacturing techniques and the diffusion of these new practices, have been left unexamined. This thesis seeks to address some of these, neglected chapters in the history of indigo, constructing a narrative that integrates the experiences of producers and consumers, considering the materiality of indigo (in its raw, and multiple finished forms). Drawing on selected case studies from across the Empire, I examine the production, trade, and consumption of New World indigo over the course of two centuries – between 1550 and 1750 – focusing on the individuals and groups, connections and interactions that determined its path from an unfamiliar, exotic dye, to a commodity circulated globally.

Long Abstract

On 2 February 1561, Étienne Ferrières, a woad merchant in Toulouse, received news of 'some (new) dye from the Indies.'[1] In the months that followed, similar reports came in from London, Anvers, Bordeaux and Lyon – indigo had reached the European markets in force. Portuguese imports from Asia had grown, but a new, native source of indigo had also been found in the New World.[2] These developments would have been especially relevant to Ferrières, who dealt in the profitable trade in woad (*isatis tinctoria L.*), the French *pastel* or *guede*, and the only other source of blue in European textiles. Ferrières requested samples of the new dye, but was unimpressed. It was a hasty conclusion; indigo surpassed woad in quality, resistance, and adaptability, and would eclipse the French woad industry within a century.

Encouraged by the Crown, settlers in New Spain and the Captaincy General of Guatemala turned with enthusiasm to the new trade and by 1600, indigo plantations had transformed the colonial landscape, heading the list of Central American exports. After an initial, explosive boom, the industry stagnated around 1630; plagues, pirates, an insufficient supply of labour, an inadequate transport system, and a mid-century depression precluded a complete recovery before the last decades of the seventeenth century. By then, however, the Dutch had acclimated American indigo in Java, and French Saint Domingue was exporting the dye as far as Smyrna.[3] Yet *Guatimala* indigo retained its status amongst its various competitors, and the rare *flor tizate*, Central America's finest grade, ranked highest in European markets.

---

[1] '*Quelque teinture des Indes'*, in Gilles Caster, 'Types Économiques et Sociaux du XVIe Siècle: Le Pastelier Toulousain', *Annales: Économies, Sociétés, Civilisations*, 9:1 (1954), p. 70.
[2] Ibid, p. 70
[3] David McCreery, 'Indigo Commodity Chains in the Spanish and British Empires,' in *From Silver to Cocaine: Latin American Commodity Chains and the Building of the World Economy, 1500-2000* (London, 2006), p. 54

This dissertation examines the production, commercial circulation, and consumption of New World indigo in the Spanish Empire between the sixteenth and seventeenth centuries. Key to this study, are the individuals and networks, connections and interactions that shaped the processes of reception and integration, as indigo developed into a global commodity.

Despite a number of interesting contributions, the historiography of Spanish American indigo remains unsatisfying. Previous studies have concentrated on the eighteenth century, often within narrow geographical frames – rarely following the blue dye beyond the port, to the dyer's vat or the artist's studio, even less to the homes and wardrobes of the rich or poor. Basic questions regarding the circulation and consumption of Central American indigo, especially within the large colonial markets of Mexico and Peru, have been left unexamined. Who used indigo? How, and why? How were the preferences of consumers, or the expert knowledge of artists and dyers transformed by the dramatic increase in supply over the course of the seventeenth century?

With the exception of an insightful, thoroughly researched chapter in Murdo MacLeod's seminal work on Central American socioeconomic history,[4] scholars have devoted little attention to the initial, sudden expansion of the Iberian indigo trade between 1580 and 1620, even less to the experiments, ventures, failures, and successes that preceded this growth. Processes of reception and integration, acceptance and rejection, the cultural and material dimensions of trade, have found little place in the literature.

On the other hand, in the years since I began my investigation, there has been a proliferation of publications on related topics – colour, textiles, dyestuffs, and pigments in the Early Modern era. While these studies have, by force, acknowledged the trade and consumption of indigo in its various forms (as a dye and pigment), comments have remained

[4] Murdo MacLeod, *Spanish Central America: A Socioeconomic History, 1520-1720* (1973)

brief and general, particularly in relation to Central American *añil*. Such classic works as Macleod have been summarized time and again, but there has been little by way of critical examination or new material.[5] Recent work focusing on Asian indigo has been more forthcoming, but again, with an emphasis on the production sector and later Colonial period.

Focusing on the period leading up to the globalisation of trade, this thesis explores the history of indigo in the Iberian Atlantic from a novel perspective, connecting spaces of production, trade, and consumption, integrating the experiences of producers, merchants, and consumers in the New World and the Old. With this in mind, an imperial framework, approached through selected case studies and informed by a variegated body of sources: archival, visual, and material, seemed most promising, complementing recent work on commodities, trade, and consumption in the Early Modern world.

As I embarked upon this project, then, my objectives were twofold: first, to bring new questions, fresh perceptions to bear upon the 'story of indigo' as it had been told, returning to some familiar episodes – the *estanco* of Pedro de Ledesma, or Yucatan's brief incursion into cultivation and manufacture – unearthing sources, especially from the Mexican archives, that allowed for a more nuanced understanding of how this most central of trades evolved in the Indies.

This study was also guided by recent developments in various related fields, and especially by that wealth of new material concerned with the circulation of people, goods, and ideas, questions related to connectedness, the individual and collective experience of, and responses to Early Modern globalization. The single-commodity study has received its fair share of scholarly criticism, and historians have recently made efforts to describe their

---

[5] Among others: Andrea Feeser, Maureen Daly Goggin and Beth Fowkes Tobin, eds., *The Materiality of Color: The Production, Circulation, and Application of Dyes and Pigments, 1400-1800* (2012); Jo Kirby, Susie Nash, and Joanna Cannon, eds., *Trade in Artist's Materials: Markets and Commerce in Europe to 1700* (2010); Amelia Peck, Ed., *Interwoven Globe: The Worldwide Textile Trade, 1500-1800* (2013); Gabriela Siracusano, *Pigments and Power in the Andes: From the Material to the Symbolic in Andean Cultural Practices, 1500-1800*, (2011); G. Wolf, J. Connors and L.A. Waldman, eds., *Colors between Two Worlds: The Florentine Codex of Bernardino de Sahagún* (2011)

work as something other than.[6] I have often been tempted to do so; and in many ways this is a story about people, their lives and experiences in a changing world, rather than a more strictly oriented, economic study of a commodity. It is an attempt, moreover, to overcome some of the usual pitfalls of the single-commodity study, to find a methodological approach that might tie producers, merchants, and consumers together, illuminating their relationship to the larger world around them.

Following indigo from plantations in the Central Mexican Valley to the dyer's vat in Segovia, while tantalizing, presented a variety of practical and theoretical challenges, demanding incursions into such broad, exhaustively studied subjects as the early modern silk trade, Atlantic merchant networks, and Latin American colonial art. Questions relating to topics as diverse as the activities of Portuguese Conversos in Mexico City, the motivations of *encomenderos* in Yucatán, or even the 'gender' of colour, invariably arose. The difficulties of imposing boundaries, choosing from amongst a vast array of sources, and the impossibility of examining others are reflected throughout this study.

My own approach, selecting case studies that allowed for a detailed examination of specific questions, allowed me to trace wide, diverse paths through the Empire, following such men as Francisco de Bracamonte from the Peninsula of Yucatán – and his home facing Mérida's central plaza – to negotiations over a shipment of *añil* with an agent for Simon Ruiz in Spanish Segovia. It is in this close, at times microhistorical reading of the sources, and the ways in which it could illuminate individual attitudes and responses to the questions presented by discovery, settlement, and an ever more connected world, that I think the strength of this thesis lies. With this study, I have contributed to the existing literature with new archival material and historical insight,

---

[6] Examples are Giorgio Riello's *Cotton: The Fabric that Made the Modern World*, (2013), p.13; and Molly Warsh, 'Adorning Empire: A History of the Early Modern Pearl Trade, 1492-1688,' PhD. diss. (Johns Hopkins University, 2009)

providing a more nuanced narrative, novel approach to the history of New World indigo. It may also suggest some of the paths (more and less fruitful) still open to the scholar brave enough to leap into the ocean of Atlantic commodity studies.



Indigo's versatility and tinting strength have encouraged historians to assume its gradual, but consummate victory over woad was axiomatic. The present study begins by setting this presumption aside. As Spanish Historian Bartolomé Yun Casalilla has noted: not all products that crossed the Atlantic did so successfully – certainly, not all indigenous American dyes shared the same fate as indigo.[7] Nor were these processes of exchange and appropriation always smooth; in the transmission of goods from the New World to the Old, resistance and rejection were less than rare.

The narrative begins with the process of discovery, looking closely at an early stage of experimentation and engagement with native systems of extraction (trials and transfers), the evolution towards large-scale production methods and a product suitable for long distance trade, emphasizing the roles of individuals and authorities in the development and diffusion of this knowledge, or emerging culture of indigo.

A second part of this thesis turns to the nature and organization of trade, focusing on the agents and networks involved in the commercialization of indigo. The periods 1570-1590, 1590-1620, and 1630-1650 are covered in three successive chapters. A first explores indigo's initial reception across the Atlantic through the unpublished letters of a dye merchant in Segovia, one of the principal textile centres of Habsburg Spain, while a second

[7] Bartolomé Yun-Casalilla, 'Globalization, Iberian Empires and Cross-Cultural Consumption in a World Context, c. 1400-1700,' in Yun Casalilla and Bethany Aram, eds., *Global goods and the Spanish Empire, 1492-1824: Circulation, Resistance and Diversity* (2014)

turns to the indigo merchants of Seville, and the Carmona Tamariz family in particular, seeking to illuminate the interaction between social and commercial ties in the circulation of long-distance products. This section ends on a brief examination of Portuguese participation in the Atlantic indigo trade before, and immediately after revolution dissolved the union of the Crowns.

The third and final part of the project is conceived as a collection of 'episodes', focusing on the consumption of indigo in different forms and contexts, beginning in the last quarter of the sixteenth century, and advancing in loosely chronological order to the close of the seventeenth. A first chapter explores the manufacture and circulation of indigo-dyed cloth in the Andes, highlighting the dye's vital presence in the world of ordinary, woollen textiles produced in all manner of establishments, from the *obrajes* of Quito and Cuzco to the communal dyeing vats of indigenous societies, seeking out those who wore and adapted them, the movement of fashions (and not elite ones), through merchants, itinerant traders, and their clients.

Using specific articles of clothing as a point of departure, chapter seven digs deeper into the social and cultural repercussions of a dramatic increase in the availability of indigo, broadly considering the various manifestations of ordinary, indigo-dyed fabrics in the wardrobes, as in the visual representation of the more humble sectors of society. How were these common blues incorporated into the wardrobes of the poor and middling? And what might these fashions say about the relationship between colour and textile in the sartorial distinction between classes? What was the role of colour, and in this case indigo blue, in the pictorial evocation of poverty? Indigo's transition from an exotic commodity to an ordinary, household item, especially as it occurred in the Spanish Americas, is an underlying theme for these first two episodes. The third and last chapter in this section discusses the presence of indigo in the artist's world, focusing on oil painting, and drawing together isolated historiographies to look at developments in the preparation and handling of indigo (as

availability increased), proposing, finally, that indigo was more widely used by seventeenth century artists than recognized in the historiography.

As a final reflection, years of pouring over indigo related objects, seeking out textiles in all shades of blue and their pictorial representation, getting my own hands stained as I dyed a fabric with *añil*, have often brought to mind just how valuable the bright, fast colours obtained with natural dyes, especially the novel American ones, would have been for the Early Modern merchant, dyer, and consumer. Contemporaries would surely have agreed with John Ovington, an Englishman travelling in Surat towards the end of the seventeenth century, as he described the admirable qualities of Indian textiles, in placing the greatest importance on 'the brightness and life of colour (and) their continuance upon the cloth.'[8] A fabric dyed in natural indigo can retain its colour for centuries: Aztec tapestries weaved with camelid hair, hand-woven linen towels from sixteenth century Perugia, the uniforms, more recently, of Napoleon's Grande Armée[9] still bear the dark blue of indigo, reminders of an importance easily forgotten in a world of synthetic dyestuffs.

[8] Cited in Giorgio Riello, 'Asian Knowledge and the Development of Calico Printing in Europe in the Seventeenth and Eighteenth Centuries,' *Journal of Global History*, 5 (2010), p.1
[9] Examples from Balfour Paul, *Indigo*, p.43; Elena Phipps, *Cochineal Red: The Art History of a Color* (New York: 2010); Michael Taussig, *What Colour is the Sacred?* (London, 2009), p. 144

Acknowledgements

I wish to thank my supervisors, Professors Lyndal Roper and Sir John Elliott – it has been a privilege. I doubt I would be writing these final words, were it not for Lyndal's steadfast reassurance, infectious enthusiasm, and warmth. To John, for the advice and support so generously extended over these past years, I am deeply grateful. I would also like to extend my gratitude to the institutions that supported me financially in this endeavour: my doctoral studies were made possible by a joint scholarship from the Clarendon Fund and Balliol College.

I owe a great deal to my mother, for the countless hours of babysitting that gave me the time to write, and to my father, for listening, every time I needed to think out loud. My greatest debt is to Gustavo and Antonio, who followed me from one to another archive, on both sides of the Atlantic; for their love and generosity (patience and humour), I shall remain forever thankful.

Table of Contents

List of Illustrations **I**

Abbreviations **V**

Introduction **1**

Part I: *A Spanish Blue*

Chapter 1: The Long Road to Discovery **26**

Chapter 2: Cultivation and Manufacture in the Colonial Context: Indigo in Sixteenth-Century Yucatán **60**

Part II: *Networks of Trade: The Indigo Connection*

Chapter 3: Across the Atlantic: Reputation, Resistance, and the Early Commercialisation of Indigo in Spain **128**

Chapter 4: The Carmona Tamariz Merchants: A Case Study in Commercial Specialisation **173**

Chapter 5: Notes on the Portuguese Indigo Merchant **224**

Part III: *Consuming Practices*

Chapter 6: Dyers, Dyeing Sites, and the Circulation of Indigo-Dyed Textiles in the Andes **242**

Chapter 7: Poor Man's Blues? Colour, Cloth, and Sartorial Distinction in New Spain **260**

Chapter 8: Indigo in the Artist's Palette **285**

Conclusion **297**

Epilogue **304**

Bibliography **309**

Maps, Figures, and Tables **323**

List of Illustrations

0.1 Cristobal de Villalpando, *View of the Plaza Mayor*, ca. 1695.

0.2 Anonymous: *A beggar boy with piece of pie*, mid-seventeenth century.

0.3 Anonymous: *Woman begging with two children,* mid-seventeenth century.

0.4 Anonymous: *Woman sewing with two children*, mid-Seventeenth century.

1.1 'Xiuhqilitl', *Historia General de las Cosas de la Nueva España*, Book 11, ch.XI, fol.219R

1.2 'Xiuhqilitl' (detail), *Historia General de las Cosas de la Nueva España*, Book 11, ch.XI, fol.219R

1.3 'Iapalli', *Historia General de las Cosas de la Nueva España*, Book 11, ch.XI, fol.221V

2.1 Map: Indigo Producing Areas of Yucatan, c.1576

2.2 Approximation of an indigo works in Yucatan, c.1577

2.3 Variations on the beating process

2.4 The Royal Obraje, c.1610

4.1 Map: Trade Routes of Central American Indigo, XVI-XVIIc.

4.2 The Carmona Tamariz Family

4.3 Residences of Consignees for Hernando, Bartolomé, and Alonso de Carmona Tamariz, 1595-1613

4.4 Signatures of the Carmona Tamariz merchants

6.1 Baltasar Jaime Martínez Compañón: *Yndios tiñendo ropa*, ca. 1782-85

6.2 Baltasar Jaime Martínez Compañón. *Yndia del Valles hilando en catre*, ca. 1782-85

6.3 Baltasar Jaime Martínez Compañón: *Yndia hilando a torno*, ca. 1782-85

6.4 Buenaventura José Guiol: *De español e india nace mestiza*, ca. 1770-80

6.5 Luis Berrueco: *Cambujo con india, sale albarazado*, ca. 1740

6.6 Anonymous: *Casta painting*, ca. 1770-80

6.7 Anonymous: *Casta painting*, ca. 1750

6.8 Diego Velázquez*, La Infanta margarita vestida de azul*, 1659

6.9 Denijs van Alsloot, *Skating Masquerade, or Carnival on Ice at the Kidporppoort Moats in Antwerp*, ca.1620

6.10 Attributed to Jose de Ibarra: detail from De castizo y española, ca.1725

6.11 Anonymous: *De mulato y albina, grifo*, ca. 1770

6.12 *Noques de Tinte azul*, ca. 1782-85. Codex Trujillo del Perú

6.13 *Yndios tiñendo lana*, ca. 1782-85, Codex Trujillo del Perú

7.1 Anonymous: De chamizo e india, sale cambuja, ca.1780.

7.2 Anonymous: *Immaculate conception,* mural painting, late 18thC

7.3 Anonymous: *Ejemplar disciplina de Hernán Cortés*, late 17thC

7.4 Anonymous: *Bernardino de Sahagún*, early 17thC

7.5 Anonymous: *Retrato de fray Pedro de* Gante. Mexico, Museo Nacional de Historia.

7.6 Ramón Rodríguez Arangoity: *Retrato de Fray Martín de Valencia*, ca. 1874

7.7 Anonymous, *Retratos de los primeros doce*, 18thC

7.8 Ramón Rodríguez Arangoity: *Retrato de fray Pedro de Gante*, 1874

7.9 Anonymous: *Triunfo de La Iglesia Americana,* 18thC. Puebla, Mexico.

7.10 Miguel de Cabrera, *Retrato de fray Juan de Zumárraga*, 18thC

7.11 Anonymous: *Retrato de fray Juan de Torquemada*, 18thC

7.12 Anonymous: detail from *Scenes from the life of Fray Sebastián de Aparicio*, ca.1780 – 1800, Puebla, Mexico.

7.13 Anonymous: *Retratos de fray Gil y fray Paulicio de la Trinidad*, 18thC

7.14 Anonymous: *El Arbol de San Francisco*, 1799

7.15 Anonymous: *Crucifixion,* 18thC

7.16 Anonymous: *Ballot box* (and detail) ca. 1779

7.17 Anonymous: *Hallazgo de la Imagen de Nuestra Señora de Ocotlán,* 18thC

7.18 Anonymous: *Labores femeninas*, 1760

7.19 Anonymous: *Labores masculinos*, 1760

7.20 Anonymous: detail from *Labores masculinos*, 1760

7.21 Anonymous: *Reparo del Templo de Zacatelco*, 1797

7.22 Anonymous: *Dedicación de una capilla para san Sebastián con varios donantes*, ca. 1700.

7.23 Anonymous: *Virgen de Guadalupe de la 'Jura' o del Patronato*, 1737

7.24 Anonymous: detail from *Aparición del arcángel San Miguel del Milagro*, 17thC

7.25 Anonymous: *El arcángel San Miguel moviendo la roca que cubre la fuente milagrosa*, 17thC

7.26 Manuel Caro: *El nacimiento del manantial,* 1781

7.27 Manuel Caro: *Hallazgo de la imagen de la Virgen*, 1781

7.28 Manuel Caro: *Procesión y traslado de la Virgen de Ocotlán*, 1781

7.29 Anonymous: *Diego Lázaro enfermo de cocolixtli*, 17thC

7.30 Ramón Torres: *De albarazado y mulata, sale barcina*, ca. 1770-80.

7.31 Ramón Torres: *De coyote e india, sale chamizo*, ca. 1770-80.

7.32 Anonymous: *De lobo torna atrás e india, sale tente en el aire,* ca. 1780.

7.33 Ramón Torres: *13. De cambujo e india, sale tente en el aire*, ca. 1770-80

7.34 Attributed to Juan Rodríguez Juárez: *De español y de india, produce mestizo*, 1715

7.35 Anonymous: *De español e india, nace mestiza*, ca. 1785-90

7.36 Anonymous: detail from *Casta painting,* ca. 1725

7.37 Anonymous: detail from *Ánimas del purgatorio*, 18thC

7.38 Anonymous: *Procesión del Santo Cristo*, ca. 1760

7.39 Anonymous: detail from *Procesión del Santo Cristo,* ca. 1760

7.40 *(a)* Anonymous: *4. De mestizo e india, sale coyote*, ca. 1780; *(b)* Anonymous: *De español y castiza produce española*, ca. 1780

7.41 Anonymous: detail from *Casta painting,* ca. 1725

7.42 Attributed to Juan Rodríguez Juárez: *Indios Mexicanos*, ca. 1715

7.43 Attributed to José de Ibarra, *De negro e india, loba*, ca. 1725

7.44 Attributed to Juan Rodríguez Juárez, *De español y india, produce mestizo*, ca. 1715

7.45 Anonymous: *De mulato y albina, grifo*, ca. 1770

7.46 José Joaquín Magón, 12. De Indio y cambuja, nace zambaiga, ca. 1770

7.47 Anonymous: *Retrato de Felipe Antonio de Austria y Moctezuma*, ca. 1750

7.48 Anonymous: *Retrato de los donantes*, 18thC

7.49 (a) Luis Berrueco: *Cambujo con india, sale albarazado*, ca. 1740; (b) Luis Berrueco: *Castizo con española, sale español*, ca. 1740

7.50 (a) Ramón Torres, *9. De chamizo e india, sale albarazado*, ca. 1770-80; (b) Ramón Torres, *7. De español y albina, sale torna atrás*, ca. 1770-80

Tables

I. Cargo received and averías paid on the fleet returning from Honduras, 1602 (principal merchants only)

II. Distribution of merchandise received by the Carmona Tamariz merchants on the Honduran fleet, 1602

III. Principal Indigo Importers on the Fleet Returning from Honduras under the Command of Captain Juan de Monasterio Vide, 1616

List of Abbreviations

1. *Archives and Libraries*

AGI	Archivo General de Indias
APS	Archivo de Protocolos de Sevilla
AGN	Archivo General de la Nación de Mexico
AHN	Archivo Histórico de Notarías de la Ciudad de Mexico
AHPV	Archivo Histórico Provincial de Valladolid
AR	Archivo Ruiz
AGCA	Archivo General de Centro América
BN	Biblioteca Nacional de España

2. *Other Abbreviations*

CAPS	Catálogo de los Fondos Americanos del Archivo de Protocolos de Sevilla
DIU	Colección de documentos inéditos relativos al descubrimiento, conquista y organización de las antiguas posesiones Españolas de Ultramar
FDEO	Fondo Documental Enrique Otte

Leg.	Legajo (bundle)
Exp.	Expediente (file)
Fol.	Folio (page)

Introduction

The discovery of the Indies promised spices and metals, but also exotic, superior dyes, inspiring the search for minerals, plants, or animals that might produce a deeper red, a brighter blue, and true black. Within a week of sighting land, Columbus was persuaded these new lands held 'many plants and trees that will be of great value in Spain as dyes;'[1] and he was not mistaken. By the last decades of the sixteenth century, vast supplies of cochineal, indigo, logwood, brazilwood, and *achiote* crossed the Atlantic with the Spanish fleet, or aboard English, Dutch, and French interlopers, to be sold in the textile markets of Europe.

Of these, the most valuable was cochineal, extracted from a small insect that preyed upon the Mexican nopal cactus, crushed and dried to produce an unsurpassed crimson dye, 'a perfect red.'[2] The exceptional black of logwood, or 'campeachy' wood (Haematoxylum campechianum, L.), was ideally suited for an age when the colour reigned supreme, the more in Habsburg Spain.[3] Yet over the course of three centuries – with the 'discovery' of a native source of indigo in New Spain towards 1560, and until the German *Badische Anilin und Soda Fabrik* commercialized the first, synthetic version of the dye in 1897 – no other American dyestuff was exported in greater quantities. Following an initial, explosive boom, the cultivation and manufacture of indigo at the hands of Europeans transformed the landscape from the Isthmus of Tehuantepec to the Gulf of Fonseca. By 1600, *añil* – processed into small, brick-like squares, shiny, metallic, and blue – ranked third and fourth (with hides), among the most valuable of Spain's colonial imports.

---

[1] 'Muchos árboles que valen mucho en España para tinturas,' (19.10.1492), in Martín Fernández de Navarrete, *Colección de los viages y descubrimientos, que hicieron por mar los Españoles*, (1825), 'Primer Viage,' p.34

[2] Amy Butler Greenfield, *A Perfect Red*, p. 11

[3] Obtaining these blacks from logwood was a process mastered (only after much experimentation by European dyers) in the first quarter of the 17th century. See Dominique Cardon, *Natural Dyes: Sources, Tradition, Technology and Science* (2007), p. 264

This dissertation examines the production, commercial circulation, and consumption of New World indigo in the Spanish Empire, from the initial development of trade in the second half of the sixteenth century, to the close of the seventeenth, focusing on the individuals and groups, connections and interactions, that shaped indigo's path from a novel, exotic dye, to a commodity circulated globally. Following this trajectory, I endeavoured to illuminate a complex, gradual, and uneven process of diffusion, one that challenged the assumptions of interpretative models built around binary oppositions: pre-Colonial v. Colonial, Native v. European, analytical dichotomies that still permeate the historiography of Mesoamerican indigo. For all its potential, I argue, developing *añil* into a successful export commodity took time, and involved a fundamental, initial phase of learning, the accumulation of specialised knowledge on either side of the Atlantic. Considering this process of familiarisation at every stage in the life-cycle of indigo, this study weaves together different pieces of a story, segregated or neglected in the literature, to reveal a more nuanced, complex narrative of commodification.

Unlike cochineal or logwood, indigo was a known, but exotic commodity, with a powerful competitor in Europe. Before it could be shipped across the Atlantic, it had to be processed into a lightweight commodity, suitable for long-distance trade. For the Crown to encourage production, indigo had to pass the strict examinations of dyer's guilds in Brihuega and Segovia – manufacturing a dye that could meet these requirements was a complicated task, which, to my knowledge, no European had previously undertaken.[4]

Yet in 1622, when the directors of the VOC in Amsterdam wrote to their officials in Batavia discussing the promotion of indigo cultivation in Java, they would not acknowledge

[4] For traditional and colonial processing methods, see Balfour-Paul, *Indigo*, pp. 100-104

Asian, but Guatemala indigo as 'a standard of quality.' The comment may draw attention to the importance of New World indigo in the larger diffusion of the dye throughout Europe between the late-sixteenth and early-seventeenth century, the place of Central American exports in the Global, commercial trajectory of this commodity. This study, however, is concerned with the experiments, influences, transfers of knowledge, and evolving preferences and practices that, together and over time, inspired these opinions from officials at the Dutch East India Company.

The Indigo Plant and Its Dye

A great number of plants worldwide are capable of yielding blue colourants, some finer than others. None, however, is surpassed by indigo. One of the world's oldest dyes, it can be extracted from the leaves of several hundred species of *indigofera* native to Asia, Africa, and the Americas, although the varieties selected for commercial cultivation are few.[5] The leaves of all these varieties contain the glycoside indican, oxidized to produce the pigment indigotin, blue indigo dye.

Extraction processes have varied regionally and over time, but may essentially be classified into three methods: the first and most rudimentary, is to combine the plant matter with a fermenting agent within a receptacle, and immerse the raw material or finished cloth within. Only light, faded blues will result from this system. In a second, the leaves are harvested and left to compost, dried and formed into balls, as in the case of European woad. The third method, and the one employed in the Colonial processing of indigo, involved the extraction of the pigment through an initial fermentation (soaking the leaves in large vats of water), followed by oxidation (beating the mass), and finally drying the resulting paste, to be

[5] For a detailed description, see Jenny Balfour-Paul, 'Indigo in South and South-East Asia,' *Textile History*, 30:1 (1999), p.102

cut or shaped into its final commercial form. This product was ideal for trade, highly concentrated, quite light and durable – it could be stored for years.

Indigo 'remained marginal, but not unknown'[6] in medieval Europe; limited quantities had reached the markets of Genoa, Bologna, Marseille, and London[7] from the Near and Far East through the labyrinth trade networks of the Silk Road since the later twelfth and early thirteenth centuries, but in Spain, as in the rest of Europe, the long route raised prices and the dye remained scarce, a luxury item employed only exceptionally in textiles. Lacking a native *indigofera* species, Europe relied on Mediterranean woad (*isatis tinctoria*) as its principal source of blue, the source of profits in mythical proportions for merchants and growers in Thuringia and Languedoc.

The pigment found in woad and indigo plants is, in fact, 'chemically identical' (producing a very similar range of blue hues); yet it is more highly concentrated in indigo, 'four pounds of it giving as much dye as 200 pounds of woad.' Both are colourfast, 'substantive' dyes that fix naturally to the cloth without requiring a mordant, a very particular advantage simplifying the dyeing process, and reducing the costs of raw materials. The weaker dye yielded by woad leaves, however, while apt for wool was far less versatile than indigo, used on wool, cotton, and flax, and particularly suitable for silk. The higher tinting strength of indigo, moreover, allowed for its use as an artist's pigment, as I return to in chapter 8. But of course, woad and indigo were above all the great blue dyes of the early modern world, essential raw materials for a textile industry that remained unrivalled in economic, social, and cultural importance.

The distinctive quality of bright, or deep coloured fabrics is often overlooked in a world of synthetic dyestuffs, yet on either side of the Early Modern Atlantic, for those who

[6] Cardon, *Natural Dyes,* p. 364
[7] W.A. Vetterli, 'The History of Indigo', *Ciba Review* (1951), p. 3067; and Cardon, *Natural Dyes*, p. 364

could afford the expense, colour – and perhaps more importantly, hue – mattered. In Europe, the colour of clothing, codified in sumptuary law, might be used to exalt, segregate, or shame, while lustre and intensity of shade remained the prerogative of the powerful, unambiguous marks of prestige. Where the peasantry wore 'graye and russet, never dy'de,'[8] clothes in tones described as 'gooseturd' or 'puke,'[9] a colourful nobility dressed in crimson damasks, 'multicoloured hose', and breeches slashed to reveal a 'kaleidoscope of colours.'[10]

The world of dyestuffs, often imported, shrouded in mystery and secrecy could offer producers, dyers, and merchants tremendous sources of profit. In Florence, the Rucellai family had made their fortune from a monopoly over the 'violet-purple hue derived from (the lichen) *archil*', while woad, commercialized in 'balls' termed *coques* or *cocagnes*, gave rise to the expression 'Land of Cocaigne' describing a 'land of plenty'.[11] A few words, then, on the material use of the dyestuffs that concern us here, blue, and blue fashions in early modern Europe.

The Taste for Blue in Early Modern Europe

A mysterious, magical colour in Asia and the Middle East, blue enjoyed little symbolic or aesthetic value in Classical Antiquity. Neither Greeks nor Romans had any affection for the colour, and it remained unpopular, associated with eccentricity and effeminacy, overshadowed by the presiding triad of black, white, and red.[12] The fortunes of blue in the West began to change (and did so rapidly) in the second half of the twelfth

[8] Geoffrey Whitney, Choice of Emblems (1586), in Amy Butler Greenfield, *A Perfect Red: Empire, Espionage and the Quest for the Colour of Desire* (London, 2006), p. 24
[9] In Robert Finlay, 'Weaving the Rainbow: Visions of Colour in World History', Journal of World History 18:4 (2007), p. 399
[10] Butler Greenfield, *A Perfect Red,* p. 24
[11] Cardon, *Natural Dyes,* p. 369; see also Berthe, 'El cultivo del pastel', p. 341-342
[12] Michel Pastoureau, *Blue: The History of a Colour* (Princeton, 2001), pp. 14-16; 23-27

century, when 'it became the colour of the Virgin' and the Capetian coat of arms, increasingly popular in heraldic insignia, 'at jousts and tournaments, and on ceremonial garb.'[13]

The colour of 'kings, princes, nobles, and patricians' in the fifteenth century, blue was overshadowed by red and black in the sixteenth and seventeenth.[14] Throughout, however, it had the curious quality of being a rather unobtrusive colour. With few exceptions, blue would not be mentioned in sumptuary laws.[15] There was some association with the East: 'moors' could wear blue costumes in ritual festivities, while fourteenth century ordinances would compel Moriscos to wear a blue crescent moon on their turbans (*'tovallola blava en lo cap'*),[16] but the rare references to blue will more often refer to restrictions in the use of particularly lively hues on luxury fabrics. These shinier, more vibrant blues were obtained with indigo, and it was the dye, rather than the colour, which often became the subject of controversy.

James I of Aragon issued a first decree regulating the use of indigo in 1252, later to become a royal monopoly, a product that could be employed only after 'applying to the royal boilerhouse.'[17] The addition of indigo to the woad vat, in turn, was banned by the guilds of fifteenth century Barcelona,[18] while state ordinances from the city of Cuenca would similarly condemn the use of 'loaded and raised' colours, prohibiting the use of 'orchil, madder, or indigo, to artificially enhance'[19] the colour of fabrics. *Añil* is altogether absent

[13] Ibid, p. 62
[14] Ibid, pp. 14-16; 23-27
[15] The point is made by Michel Pastoureau, in 'Vers un Histoire de la Couleur Bleue,' *Sublime Indigo* (1987), p.25
[16] María del Carmen Barceló Torres, *Minorías Islámicas en el País Valenciano: Historia y Dialecto* (1984), p. 85
[17] Gabriela Siracusano, *Pigments and Power in the Andes: From the Material to the Symbolic in Andean Cultural Practices, 1500-1800*, (2011), p.57
[18] Cardon, *Natural Dyes,* p. 364
[19] 'Ningun subimiento artificial para subir las dichas colores con orchilla, rubia, ni añil ni de ninguna suerte, que sería falsedad,' cited in Murugarren, *Evolución de la industria,* p. 186

from the inventory of colourants used by Castilian dyers before 1550: madder, scarlet kermes, brazil, Canarian orchil, weld, and above all woad.[20]

If Charles V had favoured red, his son and grandson preferred more sombre palettes, a transition reflected in attire at Court. The most popular colours in late sixteenth and early seventeenth century Madrid were shades of brown, tawny, blue and of course, black;[21] all of which, in the higher quality fabrics, and until Spanish dyers mastered the application of logwood towards 1620, would have been underdyed in blue.[22] The fundamental role of woad is evident in the sector's organization: master dyers were broadly divided into those who dealt in an initial base of blue, the so-called *tintoreros de blao*, and a second category encompassing all others: *tintoreros de bullón*. Any piece of cloth or raw wool destined to be coloured in shades of blue, green, dark red, purple, or black, required one or more immersions (termed *celestes*) in the large woad vat, or *tina*.[23] The importance of blue (and woad) to the broader European dyeing sector cannot be overemphasized.[24]

Some woad was grown in Spain, yet it fell far short of satisfying a sizeable local demand. In the first half of the sixteenth century, merchants in Burgos and Aragon exchanged vast quantities of wool for *pastel* with their counterparts in Toulouse, networks that reached the crowded fairs of Medina del Campo and travelled south to the textile markets of Andalucía. Yet there is, perhaps, no clearer indication of Spanish demand after 1530 than the Sevillian market, flooded with *pastel* from the Portuguese Azores – where the

[20] Murugarren, *Evolución de la industria,* p.189; see also Enrique Otte, *Sevilla y sus Mercaderes a Fines de la Edad Media* (1996), p.152
[21] Murugarren, *Evolución de la industria,* p. 190
[22] The exception are certain silks, that were regulated by weight, and usually required their own recipes for black that would not increase the final weight of the fabric as much as several coats of different dyes.
[23] All of these may be gathered from the legal corpus published during the reign of Philip II: *Nueva Recopilación* (repr. facs. Madrid ed., 1640), vol.2, book 7, t.XIV
[24] A reading of the textile related *Ordenanzas* in the *Nueva Recopilación* highlights this point.

plant had been grown successfully from French stock, albeit producing an inferior quality dye.[25]

The indigo trade experienced a first wave of change with the opening of a maritime route to India; as the age of exploration gained momentum, increasing quantities reached Europe from the coasts of Gujarat through Portuguese, and later French and English traders. A minor participant in these commercial routes, Spain turned to the Indies for a new source of blue. Around 1560, the Crown was finally informed of the discovery of a dye that could compete with woad in the native *xiquilite* plant (*indigofera suffructicosa L.*), a 'herb', in the words of botanist and crown physician, Francisco Hernández de Toledo, that

> …has only one ramified root with many straight stems, six spans high and the thickness of a little finger, ash-coloured, round and smooth, sparse leaves like those of the chickpea, small white flowers tinged with red, and pods that hang in clusters from the stems, resembling fat little worms or maggots, and filled with black seeds.[26]

By 1600, an industry had boomed along the Pacific Coast of Nicaragua, and especially in what is today El Salvador, with exports from Central America and New Spain combined surpassing 300,000 pounds in 1610. Yet the trade would stagnate after 1640, while plagues, pirates, an insufficient supply of labour, a collapsing transport system, and a mid-century depression precluded a complete recovery before the last decades of the seventeenth century. By then, however, the Dutch had acclimated American indigo in Java, and French Saint Domingue was exporting the dye as far as Smyrna.[27] The Central American product had a long-standing, elevated reputation on its side, and fared well against the growing,

---

[25] The papers of the late historian Enrique Otte, the transcribed notarial protocols of the commercial district XV of Seville for the period 1558-1584, the result of fifteen years spent in the archive with several assistants are filled with references to Azorian woad, systematically underlined for easy reference. Fondo Documental Enrique Otte (FDEO), *Fundación Centro de Estudios Andaluces*, Sevilla. I was able to consult these several years ago with the kind assistance of Jaime de la Cueva.

[26] Simon Varey, ed., *The Mexican Treasury: The Writings of Dr. Francisco Hernández* (Stanford, 2000), p. 187

[27] David McCreery, 'Indigo Commodity Chains in the Spanish and British Empires,' in From Silver to Cocaine: Latin American Commodity Chains and the Building of the World Economy, 1500-2000 (London, 2006), p.54

global competition, encouraging a new indigo boom towards the end of the seventeenth century that lasted well into the next – a topic that has received rather more sustained attention from historians.[28]

Because indigo surpassed woad – the only other, commercially available blue dye– in quality, resistance, and adaptability, scholars have often assumed indigo's gradual, but consummate victory over its European rival was axiomatic. The present study begins by setting this presumption aside. As Spanish Historian Bartolomé Yun Casalilla has noted: not all products that crossed the Atlantic did so successfully – certainly, not all indigenous American dyes shared the same fate as indigo.[29] Nor were these processes of exchange and appropriation always smooth; in the transmission of goods from the New World to the Old, resistance and rejection were less than rare.

Historiographical Context and Methodological Considerations

'Studies of commodities are all the rage these days,' wrote Alison Games in 2006, and to judge by recent publications on chocolate, cod, and cotton, to mention only a few, the trend remains unabated.[30] Approaches, methodologies, and priorities, however, have changed; an emphasis on production has shifted broadly towards consumption, but the

[28] The bibliography here is extensive, see especially José Antonio Fernández Molina, 'Colouring the World in Blue: The Indigo Boom and the Central American Market, 1750-1810,' Ph.D. Thesis, University of Texas at Austin (1992), Chapter 1, pp.13-70

[29] Bartolomé Yun-Casalilla, 'Globalization, Iberian Empires and Cross-Cultural Consumption in a World Context, c. 1400-1700,' in Yun Casalilla and Bethany Aram, eds., *Global goods and the Spanish Empire, 1492-1824: Circulation, Resistance and Diversity* (2014)

[30] Alison Games, 'Beyond the Atlantic: English Globetrotters and Transoceanic Connections,' The William and Mary Quarterly, 63:4 (2006), p.677, n.4; Marcy Norton, *Sacred Gifts, Profane Pleasures: A History of Tobacco and Chocolate in the Atlantic World* (2008); Regina Grafe, *Distant Tyranny: Markets, Power, and Backwardness in Spain*, 1650-1800 (2012); Giorgio Riello, *Cotton: The Fabric that Made the Modern World* (2013); Jennifer Anderson, 'Nature's Currency: The Atlantic Mahogany Trade and the Commodification of Nature in the 18th Century,' Early American Studies, 2:1 (Spring 2004); David Hancock, 'Commerce and Conversation in the Eighteenth-Century Atlantic: The Invention of Madeira Wine,' *Journal of Interdisciplinary History*, 29:2 (1998), pp.197–219.

genre has also moved beyond the interests of economic history, to consider elements of connectedness, the impact of specific goods on the individual experience of globalization.

My own work has been influenced by that genre in the study of commodities termed 'commodity biographies' – pioneered by Sidney Mintz in his ground-breaking study of the history of sugar production in the Caribbean, with memorable contributions in Arjun Appadurai's collection of essays: 'The Social Life of Things: Commodities in Cultural Perspective' – an approach that has since racked up about as much criticism as it has praise.[31] But while I followed indigo's passage from raw material, through cycles of distribution and trade, to finished product, this study also turned inward, placing importance on local contexts and variations between regions, and in this way also moving closer to that other tradition in commodity histories that examines the processes through which things are transformed into commodities, the social, cultural, and economic impact of this trajectory.[32]

Despite their enthusiasm for single-commodity studies, and a more recent interest in textiles, pigments, and dyes (even the more elusive topic of colour), Atlantic historians have neglected the history of Spanish involvement with indigo. Earlier studies have focused on the late Colonial period, favouring narrow themes and limited geographic frames, rarely following the blue dye past the port of Seville, to the dyer's vat or the artist's studio. With the exception of an insightful, thoroughly researched chapter in Murdo MacLeod's seminal work on Central American socioeconomic history,[33] scholars have devoted little attention to the initial, sudden expansion of the Iberian indigo trade between 1580 and 1620, even less to

---

[31] S. W. Mintz, *Sweetness and Power: The Place of Sugar in Modern History* (1985). For a summary of the debate concerning the genre, see Bruce Robbins, 'Commodity Histories,' PMLA, 120/2 (2005), 454–463; arguments have remained surprisingly unchanged.

[32] I am thinking here of such studies as the essays included in Stuart Schwartz (ed.), *Tropical Babylons: Sugar and the Making of the Atlantic World, 1450–1680* (2003)

[33] Murdo MacLeod, *Spanish Central America: A Socioeconomic History, 1520-1720* (1973), Chapter 10: 'Indigo, 1580-1720: Possibilities and Frustrations,' pp.176-203

the experiments, ventures, failures, and successes that preceded this growth. Processes of reception and integration, acceptance and rejection, the cultural and material dimensions of trade, have been left unexamined.

This thesis seeks to address some of these, neglected episodes in the history of indigo, constructing a narrative that integrates the experiences of producers and consumers, considering the materiality of indigo (in its raw, and multiple finished forms). With this in mind, an imperial framework, approached through selected case-studies and informed by a variegated body of sources: archival, visual, and material, seemed most promising; complementing recent work on commodities, trade, and consumption in the Early Modern world. My project evolved as a social (rather than an economic) history, guided by an interest in the people who encountered, manipulated, adapted (sometimes rejected) these new goods, their experience of an increasingly connected, globalised world.

Research was conducted in various Spanish and Mexican archives, above all Seville's *Archivo General de Indias* and Mexico City's *Archivo General de la Nación*. Pouring over *legajos* and *expedientes* from every region of the Empire, reading the 'autobiographies' of conquistadores, the legal disputes of Castilian dyers, and the letters of merchants in Puebla, moving from the world of Post-Conquest Yucatán to Castilian Segovia, and Mexico City in the turbulent, middle years of the seventeenth-century, would regularly bring to mind the practical and theoretical issues raised by an Empire-wide, single-commodity study. Drawing boundaries proved especially problematic (resisting the 'microhistorical impulse' to follow the lives of these various individuals well beyond their indigo connection), challenges reflected throughout.

This study contributes to the existing literature with detailed insight into the development of manufacturing methods and early commercialization of indigo – how the

dye was produced, circulated, used and applied throughout the Empire. It is not, however, a comprehensive study of indigo produced in the Spanish colonies; rather, I sought to trace new paths through the Empire (and beyond) using concrete examples, exploring the complex processes that shaped European engagement with, and the formation of markets for, indigo, one of the most important colonial commodities of the Early Modern era.

Chapter Summary

Historians have made a point of observing, that while swift to export cochineal, brazilwood, and other native dyes, Spaniards took rather long to find and commercialize New World indigo. An apparent absence of early sightings or descriptions of the dye led some scholars (well past the mid-twentieth century) to assume the plant had been brought over from Asia.[34] Others attributed this absence to a simple lack of interest or appreciation for blue. I begin with a closer look at this process of 'discovery', incorporating recent scholarship and a variety of visual sources related to the pre– and immediately post-Colonial, native uses of indigo, revisiting a largely out-dated discussion.

Chapter one moves from the earliest records of official interest in a new, Spanish source of blue, through multiple attempts to cultivate woad in New Spain, to the first reports and eventual identification of New World indigo. A second section of this chapter examines the trajectory of Pedro de Ledesma – self-proclaimed 'inventor' of indigo, who acquired and administrated the first (and only) monopoly (*estanco*) over the manufacture of the dye in New Spain, between 1561 and 1571. This discussion brings the context of 'discovery' to the fore: how, and under what circumstances Europeans became acquainted with Mesomaerican

[34] See, for example, Helmut Schweppe, *Artist's Pigments*, p.84

indigo, this chapter shows, are integral to understanding indigo's transformation into a European commodity.

The peninsula of Yucatán witnessed some of the earliest attempts to grow and manufacture indigo for export to Spain, extensively documented in official and private correspondence held at Seville's Archive of the Indies. Through a case study of the region, Chapter two explores the first stages in the development of this industry: a phase of experimentation with the dye – learning from, and interacting with Indigenous systems of extraction – the evolution towards large-scale production techniques, and the elaboration of a product suitable for long distance trade. Central to this discussion are the activities of a few, energetic entrepreneurs, the role of individuals and authorities in the diffusion of technologies and expertise.

Several factors encouraged the selection of Yucatán – a small, somewhat peripheral region – as a case study. Lacking other commercial possibilities, the region's *encomenderos* turned with particular enthusiasm to indigenous dyestuffs for a source of profit: indigo, logwood, and some cochineal, destined above all for export. With the exception of instructive summaries in the works of François Chevalier and Cristina García Bernal, the story of indigo in Yucatán had not been examined closely, even less with the evolution of this particular industry (rather than the region's larger economic development) in mind.[35] Surviving records, in contrast, were especially rich, allowing for a detailed examination of this first, if ultimately failed Spanish experiment in *añil*.

The story of indigo on the Peninsula had one last particularity: the dye was of religious and social significance to the Maya, used extensively in routine and ritual fashion before the arrival of the Spanish. Focusing on this region, therefore, allowed me to isolate

[35] Discussed further in Chapter two.

the individual characteristics and overlapping influences of Indigenous, European, and Asian knowledge, as they came together in the development of colonial processing methods.

As I mentioned briefly at the start of this Introduction, binary oppositions underpinning earlier studies have reproduced an unsatisfying, linear model of development and diffusion. Instead, rather than an evolutionary model with clearly distinguishable stages, where historical change develops as a succession of replacements, the narrative that emerges reveals a far more asymmetrical process of diffusion with various and varied practices and technologies coexisting during this early phase. Seeking out their individual characteristics and evaluating the differences between them, to consider the influences that modelled what would become the standard, 'royal obraje', is the aim of the second section in this chapter.

With a last section I explore the debate over the use of indigenous labour in the cultivation and manufacture of indigo. Involving *encomenderos*, local and Spanish authorities, even a passionate Defender of the Indians, the lasting conflict encouraged innovations in processing methods, even as it contributed to the industry's rapid decline, an example that may also highlight the ways in which authorities responded to and intervened (for better or worse) in the development of these new enterprises, how imperial attitudes and concerns came to bear upon personal initiatives.

A second part of this thesis turns to the nature and organization of trade, tracking down the agents and networks involved in the commercialization of indigo, looking at the process of Spanish familiarization with *añil* from the perspective of merchants and dyers. These chapters, organized chronologically, are broadly concerned with the periods 1570-1590, 1590-1620, and 1630-1650. Chapter three examines an initial period of commercialization in Spain, focusing on the particulars of trade through a voluminous collection of unpublished correspondence (300+ letters), between the merchant Simon Ruiz

and his agents in Seville and Segovia. Key themes are indigo's introduction, diffusion, and integration into the world of merchants and dyers (issues of quality and reputation), the formation of new markets (and the resistance of others) – the practical challenges and wider repercussions of the transition from woad to indigo.

My intention here is to highlight indigo's particular qualities and reputation as a commodity – notions that preceded its introduction in Spain – early impressions and misgivings, the knowledge and expertise needed to commercialize a product that was often unsatisfactory. This sets indigo apart from other commodities: chocolate, tobacco, or cochineal, where quality was relatively even, and in any case easily determined. Commodifying indigo, even in Spain, where official policies, in the absence of competing economic interests (as in woad producing regions), were comparatively favourable towards its introduction, was not the smooth, immediate, and uniform process that emerges from earlier studies. These qualities, as we shall see, would also encourage specialisation.

Drawing on an illustrative, and at times surprisingly representative example of specialisation in the dye trade, the Carmona Tamariz merchant family – perhaps the greatest indigo merchants of their time, Chapter four turns to the social and commercial networks involved in the circulation of Central American *añil*. Coinciding with an initial period of growth for the industry, between 1590 and 1620, the family's activities and investments are traced over the course of three generations – with an emphasis on the agents that enabled distribution and trade, to illuminate the interaction between social and commercial ties in the circulation of long-distance products.

These networks,[36] in the words of one historian: 'were by no means unique to Spanish and Portuguese traders, but seem to have been part of their DNA, encoded into the thinking and practices of Iberians as they ventured out across the Atlantic world.'[37] The Carmonas were no exception. But unlike the greater percentage of the elite among this group, who imported a varied assortment of goods, and silver above all, this family specialised in dyestuffs, and indigo in particular.[38] In taking this route they relied on artisanal links that preceded the family's entry into the merchant profession, ties they maintained through successive generations. These origins would influence their social choices (Diego de Carmona, for example, married the daughter of a cochineal producer), but also entailed a degree of knowledge and expertise that shaped their commercial strategies – 'buying' an official post, for example, or keeping an agent close to the most important centers of production, 'marginal' areas of the Empire that might otherwise be of little interest to the elite wholesaler.

As Louisa Hoberman has observed: 'clearly, there were specialists in the dye trade.'[39] But as her own work would suggest, we still know little about these specialised traders – their social ties and aspirations, patterns of investment, or the corpus of (dye-related) knowledge they handled. This chapter documents one such case of specialisation to look at the

[36] The concept of a 'network,' here, is used to describe: 'the informal association of a group of people based on relationships of trust and a continual, mutual exchange of services or favours within a system of reciprocity,' ('la asociación informal de un grupo de personas basada en relaciones de confianza y en un intercambio continuo de servicios o favores dentro de un sistema de reciprocidad.' From Nikolaus Böttcher, Bernd Hausberger, and Antonio Ibarra, 'Introducción', in Böttcher, Hausberger, and Ibarra, cords., *Redes y Negocios Globales en el Mundo Ibérico, siglos XVI-XVIII* (Mexico, 2011), p.14

[37] Eric Van Young, 'Social Networks: A final Comment,' in *Redes y Negocios Globales*, p.299

[38] Louisa Schell Hoberman described the case of Francisco de Esquivel Castañeda, 'one of the few whose exports of dyes exceeded his exports of silver,' with a trajectory comparable to that of the Carmonas, although the historian discusses only the Mexican side of the family. *Mexico's Merchant Elite, 1590-1660* (1991), p.130 and pp.151-152

[39] Ibid, p.126

strategies, choices, and trajectories of the agents who impelled a first boom in the Atlantic indigo trade.

A final, short chapter in this section moves forward to the 1630s and 40s, highlighting the presence of the Portuguese in the Atlantic indigo trade through an examination of the embargo on Portuguese goods in the wake of Revolution, and the correspondence of Simón Báez Sevilla – Mexican merchant and Portuguese Converso – immediately preceding his arrest by the Inquisition in 1642. This brief discussion may hopefully draw attention to a promising field of study, providing some initial thoughts, bringing to light suggestive sources, and proposing a few tentative conclusions concerning the Lusitanian influence on indigo's entrance into the European markets on a larger scale than ever before, and their continued, significant participation in both the Asian and American trades over the century that followed.

Focusing on indigo – mining the often tedious, repetitive correspondence of merchants, or their never ending legal disputes for evidence of the trade's particularities – underlined the expertise required, the world of subtleties involved in commercialising this product with success. Unlike other new world goods, Mesoamerican indigo entered the European markets as a novel version of a known commodity, and one with a dubious reputation; it had, moreover, to prove itself better than woad, and to do so among dyers unaccustomed to its use. The question, then, is how indigo's reputation in Spain evolved with the introduction of a 'domestic' source of the dye, the role of merchants and dyers in shaping and diffusing its material use in the textile sector. With these three chapters, finally, I entered the vast world of studies concerned with the Iberian merchant, joining a few more dots, one could say, in that ever so remarkably connected, Global web of commercial agents.

The most challenging aspect of this project concerns the path of indigo as it left the merchant's warehouse, passing through the hands of dyers and artists, into the homes and wardrobes of consumers across an Empire. These final chapters, broadly concerned with qualitative changes in consumption, urged a more extended introduction.

Hues of brown, red, and ochre predominate in Villalpando's *Vista de la Plaza Mayor* (fig. 1) – the panoramic view draws our attention first to the brown soil, bright red tiles of the *Parián*, and straw thatched roofs of the market stalls. The tiny, but individualized figures that crowd the plaza are dressed overwhelmingly in black, with a small concentration of green fabrics (in carriages and clothing), on the bottom left corner of the painting. Blue is rare; at first glance we might notice only the carriage on the right, or the group of men in blue coats walking past the Cathedral on the opposite side.

Upon closer examination, however, three Indian peasants wearing blue, and carrying sacks on their backs, exit the scene right of the *Parián*, while a number of Indian women, street vendors in blue skirts, may be seen throughout. Indigo is also inconspicuously present in the blacks and greens, colours achieved over a base of indigo, but we may also point to the blue building immediately facing the Cathedral, perhaps even the object itself; while pigment analysis has not been conducted on this particular painting, Villalpando used indigo (albeit sparingly) in his other works.

With this last part of the discussion, I set out to follow indigo into the vat, the palette, and beyond. A quantitative analysis of consumption seemed unsuitable for a product sold in different forms and a variety of qualities, used as a dye, ink, and pigment, applied to anything from ordinary textiles to the exteriors of buildings, even the manes of horses.[40]

[40]For this last, more surprising use, see Giovanventura Rosetti, *The Plictho: Instructions in the Art of the Dyers: Which Teaches the Dyeing of Woolen Cloths, Linens, Cottons, and Silk by the Great Art as Well as by the Common* (c.1548; Cambridge, 1969), p.165

Instead, these chapters draw on a wide array of sources, weaving together isolated historiographies into a broader vision of demand and consumption – reflecting on the materiality of indigo (and the terms of European appropriation), considering questions related to taste, colour, and material culture, with particular emphasis on the large, colonial markets of Mexico and Peru.

Current historiographic trends suggested the time was ripe for such an endeavour: in the past two years alone, seminars, conferences, and a wealth of publications have dealt with indigo related topics: artist's pigments, dyes and dyers, even colour. To this we may add an ever-growing literature on early modern textiles and clothing, particularly in the field of Global History, and a continued interest in Atlantic commodities, more recently concerned with their circulation and consumption.[41] These contributions have highlighted the revelatory potential of approaching colour (its social, political, economic, and cultural roles), and colour-related practices through the historical lens, if also the methodological and theoretical difficulties involved in the endeavour.

While these studies have also acknowledged the trade and consumption of indigo in its various forms – as a dye, ink, or pigment – comments have remained brief and general, particularly in relation to Central American *añil*. Answers to basic questions regarding the

[41] Among others: Andrea Feeser, Maureen Daly Goggin and Beth Fowkes Tobin, eds., *The Materiality of Color: The Production, Circulation, and Application of Dyes and Pigments, 1400-1800* (2012); Jo Kirby, Susie Nash, and Joanna Cannon, eds., *Trade in Artist's Materials: Markets and Commerce in Europe to 1700* (2010); Amelia Peck, Ed., *Interwoven Globe: The Worldwide Textile Trade, 1500-1800* (2013); Gabriela Siracusano, *Pigments and Power in the Andes: From the Material to the Symbolic in Andean Cultural Practices, 1500-1800*, (2011); G. Wolf, J. Connors and L.A. Waldman, eds., *Colors between Two Worlds: The Florentine Codex of Bernardino de Sahagún* (2011). The beautiful blues of indigo have also inspired a number of recent tributes: coffee-table books, museum exhibits and catalogues, even popular non-fiction: Catherine E. Mackinley, *Indigo: In Search of the Colour that Seduced the World* (2011); Catherine Legrand, *Indigo: The Colour that Changed the World* (2013); Jenny Balfour Paul, *Indigo: Egyptian Mummies to Blue Jeans* (2011); et al. The published material, richly illustrated, has highlighted the global presence of the dye, textiles – in countless shades of blue – from the Valley of Chang'an to the Gulf of Guinea. These general reviews – Jenny Balfour Paul's superbly researched *Indigo,* covering production and consumption across the globe from Antiquity to the present, or Catherine Legrand's examination of contemporary production worldwide – while ultimately unsatisfying from a historical perspective, can provide a wonderful sense of indigo's versatility, endless possibilities of colour and form: clothing, furnishings, decorative objects, ordinary and luxury items produced worldwide over the course of three millennia.

material use and circulation of New World indigo, especially within the large domestic markets of Mexico and Peru, remain vague. Who used indigo? Where, and why? How were dyeing techniques and practices, the preferences of consumers, or the expert knowledge of artists transformed by the dramatic increase in supply over the course of the seventeenth century? What aesthetic and semiotic qualities did indigo-dyed garments or textiles possess in the Spanish Atlantic?

Answers, however, led into into variegated fields well beyond the scope of my study – such broad, exhaustively studied subjects as the early modern silk trade, Flemish tapestries, or Latin American colonial art. This discussion will doubtless reflect the difficulty of selecting from among a veritable world of indigo consumers. The search for fabrics, threads, and decorative objects, materials or finished products that might have been coloured with American indigo, while captivating, was further complicated by the difficulty of determining the origin of the indigo employed, or even confirming the presence of the dye without prior chemical analysis.

It was a search, moreover, for a rather elusive commodity – before blue experienced a surge in popularity over the course of the eighteenth century, indigo remained inconspicuous in luxury attire, 'hidden' as a base for blacks, dark reds, purples, and greens.[42] A recent, two volume study of Spanish courtly fashions in the sixteenth and seventeenth centuries, as an example, mentions the reds of cochineal and the blacks of logwood, but altogether neglects to reflect upon the novel presence of *añil*.[43] And this despite the fact that by the early seventeenth century, merchants in Madrid were making a sizeable fortune

[42] In sixteenth-century Florence, 'the most coveted hues were the rich blue *alessandrino* and the blue violet *pavonazzo*'[42]; at a costly 40 soldi the pound, only red chermisi was as valuable as *alessandrino*, obtained from a combination of orchil, madder, and indigo,' in Carole Collier Frick, *Dressing Renaissance Florence: Families, Fortunes, and Fine Clothing* (London, 2002), p.103

[43] José Luis Colomer, 'El Negro y la Imagen Real,' pp.92-95, in Colomer and Amalia Descalzo, eds., *Vestir a la Española en las Cortes Europeas, Siglos XVI y XVII*, 2 vols. (2014).

commercializing New World indigo 'to dye the silk consumed at Court.'[44] If indigo was doubtless employed on a significant scale for various more luxurious articles of clothing, as in decorative textiles (carriages, tapestries, curtains), it was in the eighteenth century – with the light-blue fashions of the French Court, or the blue and white calicoes which so captivated Europeans (and more recently historians) – that the dye gained visibility in elite wardrobes.

Where blue (and indigo) seemed rather more conspicuous, at least before 1700, was in the clothing of the 'poor and middling' (and for these last we may think of Vermeer); it was in representations of the humbler sectors of society that I found the most compelling evidence of indigo's growing protagonism in the dyeing sector. Consider, for example, the ordinary blues rendered in poignant detail on the haunting subjects of the anonymous, seventeenth century Italian artist, the so-called 'master of the blue jeans.'

The torn, oversized jacket on the child in *Beggar boy with a Piece of Pie* (fig. 2), the apron, (also much too large) on the young female beggar (fig. 3), or the similar item in *Woman Sewing with Two Children* (fig. 4), both ripped across the front, offer a rare vision of poverty – clothing mended and patched, worn to a shred, handed down, or bought second hand – their coarse textures and loose seams forced upon the viewer in masterful detail. Yet we may also note that the blues in these three paintings immediately stand out among the browns, greys, and dull, madder reds of other articles of clothing. They seem to point to the influx of new, plentiful, and affordable indigo in the second half of the seventeenth century

[44] José A Nieto Sánchez, *Artesanos y Mercaderes: una historia social y económica de Madrid, 1450-1850* (Madrid, 2006), p.119; A few decades later, Philip IV had incurred a debt with Juan de Villegas amounting to a total of 69.776 *reales* 21 *maravedís*, for 43 crates of indigo; in 'Deuda Real con Juan de Villegas' (16.09.1657), AGI, Indiferente 438, L.19, F.32V-33R. The practice continued into the next century, and 'for many years, 150 pounds' of Guatemala's finest, the rare (*flor*) *tizate*, were 'set aside for shipment to the Royal Cloth Factory of Guadalajara,'[44] in Smith, 'Indigo', p.144, n.15

– exports from Asia, Central America, but by this time also the French and English Caribbean – distributed across Europe, gradually displacing woad entirely.

The textile sectors of the Viceroyalties of New Spain and Peru, on the other hand, would employ neither woad nor 'foreign' indigo, but maintained the European tradition of dyeing the raw wool or finished cloth with a base of blue before the addition of other colours. The literature, however, is surprisingly silent regarding *añil's* fundamental role at the *obrajes* and other production units, especially before 1750, with little to indicate when the dye gained such prominence. And here as well, the available indigo was unquestionably domestic. The Colonial markets, therefore, provided a novel, promising context for the examination of the early consumption of indigo, and a much needed boundary for the present discussion.

Incorporating themes that have received less attention from the more recent turn towards consumption, the first two chapters focus on the ordinary textiles produced in the Spanish colonies, and circulated through their markets. An emphasis on these, rather than luxury textiles, however, also meant an examination of objects and people that left little trace of their existence; paintings, cautiously mined for archaeological evidence, were important, supplemented wherever possible by material and documentary sources. Relevant sources were found scattered across the histories of artists' materials and textile manufacturing on both sides of the Atlantic, and some of the more recent developments in the historiography of indigo are synthesized here. The topic, finally, encouraged a long chronological approach – at times extending beyond the parameters established for this study, carrying the discussion into the last quarter of the seventeenth century, and the opening decades of the next.

Chapter 6 explores the manufacture, commercialization, and circulation of indigo-dyed cloth (processes of production and consumption) in the Viceroyalty of Peru, highlighting the dye's vital presence in the world of ordinary, woollen textiles produced in all

manner of establishments – from the *obrajes* of Quito and Cuzco to the communal dyeing vats of indigenous communities – seeking out those who wore and adapted them, the movement of fashions (and not elite ones), through merchants, itinerant traders, and their clients.

Among the material and pictorial evidence for these indigo-dyed, cheap woollen textiles, one example stands out as a curiosity: instead of a traditional brown or grey, the Franciscan order in New Spain wore (and were depicted in) blue habits of indigo-dyed serge. Taking this peculiar departure from tradition as a starting point, and drawing largely on pictorial sources, with an emphasis on New Spain, Chapter 7 explores the intersections between class, clothing, and colour in representations of indigo-dyed garments on the Indian and mixed-race poor. These chapters bring together evidence of the centrality of indigo at the colonial *obrajes*, in the production of ordinary textiles, to consider the social consequences of indigo's growing, and as I hope to show, conspicuous presence in the wardrobes of plebeian consumers.

A word, finally, about colour: this is a difficult, and fairly recent field for historians, (more often the domain of anthropologists), which remains underexplored by a historiography of clothing that has focused too narrowly on cloth. Shifting the emphasis from textiles to their colour, however, led me into more speculative territory, the complexities involved in considering the social and cultural meanings of indigo and indigo dyed objects, even blue, within specific historical contexts.

Over the course of the seventeenth century, as indigo became increasingly available in Europe and the Spanish Americas, artists on both sides of the Atlantic took notice of a pigment traditionally judged inferior and unreliable, its use discouraged by experts and treatises. Chapter 8 discusses the presence of indigo in the artist's world, with an emphasis

on oil painting, and developments in the preparation and handling of indigo, proposing, finally, that the pigment may have been more widely employed by seventeenth century Iberian artists than has been recognized. Here as well, we find an uneven reception, changing patterns of use, the diffusion of practical knowledge and expertise gathered through informal experimentation.



The word 'indigo' seems to carry with it a feeling of the exotic, blues from a distant land, and rightly so, the term is derived from the Greek *indikon* or the Latin *indicum*, meaning 'from India.' Spain inherited the equivalent *añil* from a culture more familiar with the dye, the Arabic *al-nil*, derived, in turn, from the Sanskrit *nila* – 'dark blue and darkness'[45] – which, in its own way, recalled the Far East. When, in the mid-sixteenth century, settlers in New Spain turned to the manufacture of indigo, they became the first Europeans to do so; it was through Spanish and Portuguese involvement (with the aid and expertise of countless indigenous labourers) – on plantations across Central America, in the markets of Andalucía and Castile, that indigo began the transition from an unfamiliar, exotic product associated with Asia, to a commodity that, by the late eighteenth century, had become an ordinary household item. Tracing this path – the social, economic, and cultural variables involved, brings us closer to an integrated history of the Global indigo trade, contributing to our broader understanding of the Atlantic exchange and colonial interactions.

'As we readily follow an agreeable object that flies from us, so we love to contemplate blue, not because it advances to us, but because it draws us after it.' [46] In the spirit of Goethe's words, this

[45] Michael T. Taussig, *What Colour is the Sacred?* (London, 2009), p. 142
[46] Johann W. von Goethe, *Farbenlehre;* in Herb Aach trans. & ed., *Goethe's Colour Theory* (London, 1971), p. 150

narrative gives in to the chase, pursuing the small bricks of blue from the drying tables of Central American indigo works, through the crowded roads of the interior, to the busy ports of the Atlantic, into warehouses, workshops, and households across an Empire.

Chapter 1
The Long Road to Discovery

The earliest European observers were struck at once by the brightness and intensity of colour in indigenous textiles, observations that can afford a welcome contrast to accounts fixating on the nakedness of the natives. In the Aztec market of Tlatelolco, Hernán Cortés noticed 'cotton yarn in small skeins of every colour,' that brought to mind the *alcaicería* (silk market) of Granada; there were pigments for painters, 'as many as could be found in Spain,' even deer skins, 'dyed… in diverse colours.'[47] Recalling the same visit to the commercial heart of Tenochtitlán, Bernal Díaz del Castillo was reminded of the great fairs at his native Medina del Campo, with sections for each craft and category of produce. He had little to say about the colours of the 'mantles and embroidered goods... pieces of cloth and cotton, and articles of thread' he saw that day, but cochineal caught his eye, sold in large volumes under the great arches that enclosed the main plaza.[48]

Gonzalo Fernández de Oviedo described his own impressions in the extraordinary *Sumario de la Natural Historia de las Indias* (1526):

> And as I am at the end of this account of what I remember about this topic, I would like to say something else that occurs to me… what the Indians do with certain rinds and peels and leaves of trees they have and are familiar with, to dye and colour the cotton cloths they dye in black and tawny (*leonado*) and green and blue and yellow and red or crimson, each so alive and bright that they could not be more

[47] '…hilados de algodón, de todos colores, en sus madejicas... venden colores para pintores, cuantos se pueden hallar en España…venden cueros de venado… teñidos… de diversas colores,' Hernán Cortés, 'Segunda Relación,' dated 30.10.1520, printed 15.10.1522, in Hernán Cortés, *Cartas de Relación*, ed. Angel Delgado gómez (1993); earlier in this letter Cortés describes the coloured garments and tapestries of the Aztecs with admiration. On his fourth voyage, Columbus saw 'great sheets of cotton worked in subtle colours,' some woven, some painted (*y en aquella provincia vide grandes sábanas de algodón... otras pintadas muy sutilmente a colores*), in Diego de Porras, 'Relación del Cuarto Viaje realizado por Cristóbal Colón,' San Lúcar, 7.11.1504, in Fernandez de Navarrete, *Colección de los viages y descubrimientos que hicieron por mar los Españoles*, vol. 1 (1825), p.455

[48] Bernal Díaz del Castillo, *Historia verdadera de la conquista de la Nueva España* (1984), t.1, p.331

perfect.[49]

But while several native colourants, and cochineal in particular, would capture the imagination of the earliest chroniclers, indigo did not; it is absent from the works of Oviedo, Pedro Mártir and Toribio de Benavente – all of whom discussed various other dyes, even the acclimation of European woad.[50] References to *añil* from the first half of the century are surprisingly rare, limited to a few, scattered and uncertain sightings: Columbus may have been referring to its use when he described the Indians of the Nicaraguan Mosquito Coast as bearing 'their bodies and faces painted like Berbers,'[51] while the English merchant Robert Tomson provided one of the earliest, if grossly inaccurate descriptions of indigo production in the Americas, witnessed sometime between 1555 and 1557, when he was arrested by the Inquisition in Mexico city. In the lands of the Mixteca, Tomson wrote, there was:

> A certaine hearbe that groweth in the wild fieldes, and is gathered at one time of the yeere, and burnt, and of the ashes thereof, with other confections put thereunto, the said Indico is made...[52]

The dye *was* produced in the Mixtec region – the southern areas of Puebla extending towards western Oaxaca – and indigo may have been combined with ashes or other mediums in the dyeing vat,[53] but burning the plant would not have yielded any dye. Tomson was even more confused as regards cochineal: 'the Cochinelle' he assured his readers, 'is not

---

[49] 'Y pues ya estoy al fin en esta relacion de lo que se me acuerda de esta materia, quiero decir otra cosa que me ocurre… lo que los indios hacen de ciertas cascaras y cortezas y hojas de arboles que ya ellos conoscen y tienen para teñir y dar colores a las mantas de algodon, que ellos pintan de negro y leonado y verde y azul y Amarillo y colorado o rojo, tan vivas y subidas cada una, que no puede ser mas en perficion.' Gonzalo Fernández de Oviedo, *Sumario de la Historia natural de las Indias* (1526; Madrid, 1986), cap.LXXX, p.179

[50] As an example: 'hay también alumbres y pastel, la simiente de lo cual se trajo de Europa, y entre estos montes se hace en estremo... hay también mucho Brasil y muy bueno.' Fray Toribio de Benavente, *Historia de los Indios de la Nueva España*, (repr. 2014), vol.3, cap.8, p.202; the point has been made by several historians.

[51] 'Traen los cuerpos e las caras todos pintados como berberiscos...' Diego de Porras, Relación del Cuarto Viaje realizado por Cristóbal Colón,' in Fernandez de Navarrete, *Colección de los viages*, p.432

[52] R. A. Skelton and David B. Quinn, eds., *The Principall Navigations, Voiages, and Discoveries of the English Nation*, 2 vols. (1589; facs. ed. Cambridge, 1965), vol. 2, p.587

[53] Balfour Paul, *Indigo*, pp. 46-47

a worme, or a flye, as some say it is, but a berrie that groweth upon certaine bushes in the wilde fieldes.'[54] Yet these, like other misconceptions, were commonplace in the field of exotic dyestuffs: in 1705, several hundred years after Asian imports first reached the markets of Europe, the 'Government of the principality of Halberstadt issued a decree permitting the mining of indigo.'[55]

Uncertainties and inaccuracies would also afflict the early historiography of New World *añil*; scholars initially interpreted a lack of contemporary references as evidence that Europeans had introduced the plant.[56] But while the Asian *indigofera tinctoria* – a higher yielding species– does appear to have been grown successfully in the Indies before the mid – seventeenth century, native varieties have pre-Colonial names in indigenous languages throughout Central and South America, '*angasci*, *llangua*, *mutui* and *mutuy-cube* in the Andean area, *ch'oh* amongst the Mayans,' who combined indigo with palygorskite and copal to produce their characteristic, brilliant shade of blue, and *xiuhquilitl* in the Aztec Nahuatl.[57]

Yet the lack of interest on the part of Europeans (their evident failure to notice its presence or potential for export) has permeated the historiography, furthering a narrative focused on absence. More recent scholarship in the fields of textiles, dyes, and pigments, has illuminated a colourful native world, bringing to light indigo's presence in pre, and post-conquest Mesoamerica. Technical art historians have taken large strides in the identification of pigments on textiles, art, and ornament, just as re-evaluations of the Mendoza and Florentine Codices have boldly tackled the difficult terrain of colour and meaning. An

---

[54] Skelton, *Principall Navigations,* vol. 2, p.587

[55] By no means the only time the solid blocks of blue dye were confused for a mineral; cited in Vetterli, 'History of Indigo', p.3068

[56] Guillaume-Thomas Raynal, *Historia filosófica y política de los establecimientos y el comercio de los Europeos de las Indias* (1770), cited in Francesco Saverio Clavigero, *Historia Antigua de México,* (1780; México, 1959), p.368

[57] Dean Arnold, 'The Evidence for Precolumbian Indigo in the New World, *Antropología y Técnica*, 2 (México, 1987), p. 69; Stephen Houston et al., *Veiled Brightness: A History of Ancient Maya Color* (2009), p.103; Fray Antonio de Ciudad Real (attr.), *Diccionario de Motul, Maya-Español*, Juan Martínez Hernández, ed. (Yucatán, 1929)

excerpt from Macleod's brief description of pre-Conquest indigo (in an otherwise masterfully researched work), might suggest the extent to which our understanding and perceptions have been transformed over the past decades:

> Little of its early history is known... the plant seems to have had little religious or symbolic significance. Human sacrifice may have been one exception. Blue was the traditional colour for sacrifice in the Mayan culture, and probably indigo was used to make this sinister paint.[58]

The presence of indigo in the composition of Maya blue has since been established, and its significance (religious and symbolic), revealed through countless examples.

This chapter begins with a search for evidence of indigo in that 'Indochristian cultural context'[59] that flowered briefly before the collapse of the native world towards the end of the sixteenth century – that fleeting period when Christian and Amerindian collided and coexisted, and for which we have the most compelling evidence in the field of artistic production.[60] Incorporating these various native uses and applications (even meanings) of indigo to the discussion, finally, may allow for a more nuanced understanding of the terms of European appropriation. From here, the discussion turns to the Spanish search for blue, through multiple attempts to acclimate woad, to a final account of discovery. A last section looks closely at the life and activities of Pedro de Ledesma, granted the first and only monopoly over *añil,* between 1563 and 1573, incorporating new evidence to reveal the diverse, often ingenious commercial schemes Ledesma would devise in the administration of his royal privilege, and the extent of his participation in the development and diffusion of production methods for his various, indigo-making ventures.

---

[58] Macleod, p.176

[59] Clara Bargellini, 'The Colors of the Virgin of Guadalupe,' in Gerhard Wolf and Joseph Connors, eds., *Colors Between Two Worlds: The Florentine Codex of Bernardino de Sahagún*, (2011), p.3

[60] See, for example, Serge Gruzinsky, *Painting the Conquest: The Mexican Indians and the European Renaissance* (1992).

I. *'There is a herb called Xiuhquilitl...'*

The most striking of indigo's uses in pre-Columbian Mesoamerica may still be its association with sacrifice; in Yucatán, a horrified Diego de Landa saw 'those who were to have their heart torn out... smeared in blue,' and carried, surrounded by crowds, to the raised, sacrificial stone, painted blue by the priests before the victim was finally stretched over it.[61] Yet the infamous Franciscan would also describe the use of Maya blue in other ritual ceremonies: hunters painted the points of their arrows with the pigment as they invoked their gods, and at the feast day for Ixchel, the goddess of medicine and childbirth, the priests were covered in blue by *chaces* (lay assistants), 'as in the books of the priests.'[62] Books that, by the time he was writing his *Relación*, had largely been destroyed at the Bishop's (impassioned) insistence.[63]

The Aztec *tlacuiloque*, scribes and painters from the nobility, were also familiar with Maya blue and green; palygorskite reached the capital from Yucatán, the only known source of the clay, where it would be combined with indigo (and various yellow pigments) for the brilliant blue-greens used to 'symbolize everything that was precious.'[64] The most revealing, surviving source for the native use of dyes and pigments, the artists and dyers who mixed and applied them, the merchants and traders who sold them, is Bernardino de Sahagún's encyclopaedic *Historia general de las cosas de Nueva España.* A digitalized version of the original manuscript, twelve books bound in three volumes, held at the *Medicea Laurenziana* Library in Florence, has recently been made available online, to the wonder and excitement of

---

[61] 'Si le habían de sacar el corazón, le traían… embadurnado de azul.' Diego de Landa, *Relación de las Cosas de Yucatán,* (1566; México, 1985), p.51

[62] '(Embadurnábanlos con otro betún azul) como el de los libros de los sacerdotes,' Ibid, pp.76-78

[63] He would describe the tragic event himself: 'Hallámosles gran número de libros de estas sus letras, y porque no tenían cosa en que no hubiese superstición y falsedades del demonio, se los quemamos todos, lo cual sentían a maravilla y les deba pena,' Ibid, p.80

[64] Diana Magaloni Kerpel, *The Colors of the New World: Artists, Materials, and the Florentine Codex* (2014), p.43

countless scholars. A view of the original, finally, proved rather more insightful than expected.

There are two relevant chapters: from Book 10, Chapter XXI: 'On those who sell colours,' including a section on 'dyers,' and from the following volume, Chapter XI: 'Of the colours, of all manner of colours' (*de los colores, de todas maneras de colores*), where we may find the most extensive reference to indigo:

> There is an herb in the hot lands that is called *xiuhquilitl*, they pound this herb and press its juice and pour it in some vessels; there it dries or curdles. With this colour a dark and radiant blue is dyed: it is a highly valued colour.[65]

The Spanish text has its particularities: although corrections are exceptional throughout the voluminous Book 11, this particular paragraph is filled with them (see fig. 1.1). The original '*tlaceuilli*' (used in the Nahuatl text) was removed and replaced with *xiuhquilitl*, and in the same way, 'blue' was written above a crossed out 'green.' Almost as an afterthought, the word 'añil' was fitted in between the Spanish and Nahuatl texts, marked to be read after: 'with this colour, *añil*...' The confusion seems to have originated from the distinction between *xiuhquilitl*, the plant, and *tlacehuilli*, the pigment extracted from it. As for the more striking change of colour, the differentiation between blue and green in pre-Hispanic Mesoamerica was not as rigorous as our own, but the Nahuatl text also used the ambiguous: *mouitic xoxotlani*, 'greenish blue.'[66] An overall sense of hesitation, however, remains, and one that cannot be attributed to chance – there seems to be something behind the muddle in this paragraph, even if we cannot say what.

---

[65] 'Ay una yerva en las tierras calientes que se llama xiuhquilitl, majan esta yerva, y esprimela el çumo, y echanlo en unos vasos. alli se seca o se quaja: con este color se tiñe lo açul oscuro y resplandeciente: es color preciada,' *Historia General de las Cosas de Nueva España*, Book 11, ch.XI, fol.219R (*World Digital Library*)

[66] On blue/greens in Náhuatl, see: Salvador Reyes Equiguas, 'Plants and Colors in the Florentine Codex,' in *Colors between Two Worlds*, pp.143-144 and Clara Bargellini, 'The Colors of the Virgin of Guadalupe,' pp.24-25; and especially: Georges Roque, coord., *El Color en el Arte Mexicano* (2003), pp.24-25

The accompanying illustration for *tlacehuilli* (fig. 1.2) depicts the process: to the left, a man squeezes the indigo leaves (from what clearly resembles an *indigofera* plant drawn in the background), letting the juice flow into a bowl (a symbolic rendition of a more complex process). At right, a scribe uses the pigment, and in the centre we find a drawing of what I concluded where large, circular loaves atop a small basket.[67] An extensive search did not reveal any other images of the native manufacture of indigo, but this single visual source aligns with Francisco Hernández de Toledo's near contemporary description (which I will return to): indigo, the Court physician wrote, was 'formed into small wheels, hardened by being placed on plates over coals,' that could be 'kept for use throughout the year.'[68]

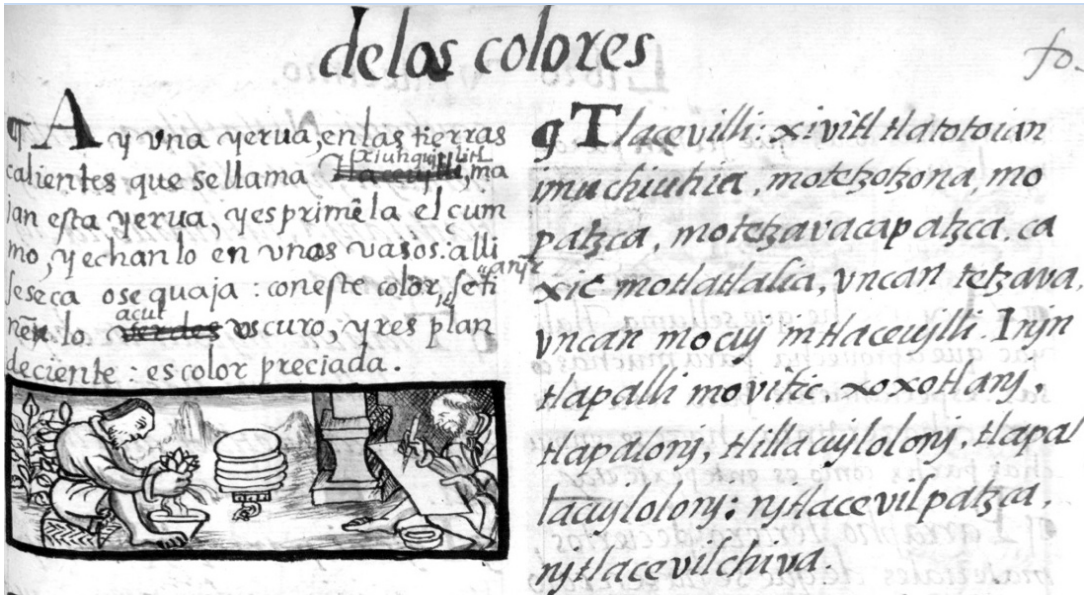


Fig. 1.1: 'Xiuhqilitl', *Historia General de las Cosas de la Nueva España*, Book 11, ch.XI, fol.219R

[67] Sellers of dyes are described as holding their wares in small baskets, and the two images that follow depict pigments in the same baskets, albeit comparatively much larger ones, suggesting the artist might have intended to show indigo as a large object. 'El que vende las colores que pone encima de un cesto grande es desta propiedad, que cada genero de color ponelo en un cestillo encima del grande,' *Historia General*, Book 10, ch.XXI

[68] Simon Varey, ed., *The Mexican Treasury: The Writings of Dr. Francisco Hernández* (Stanford, 2000), p. 187; the text is also transcribed in Sarabia Viejo, *La Grana y el Añil*, pp.30-31

There is still some confusion regarding the blue and green pigments described in the Florentine Codex, with relevant consequences for *xiuhquilitl*. References to palygorskite (or atapulguite) clay, for example, are altogether absent, making it impossible to identify Maya blue and green with any certainty from among the listed pigments. Another valuable blue/green, *matlalli,* was extracted from the 'blue flowers' of an unidentified herb. While some scholars proposed indigo as the raw material (somewhat counter-intuitively, given the impracticality of using the flowers, rather than the leaves of *indigofera*), historians have more recently put forward *Commelina caelestis*, the dayflower, as a more likely origin for *matlalli*.[69] And it was with these same flowers, according to the Spanish text (although the detail is absent from the corresponding Nahuatl), that the light blue pigment *texotli* (the most problematic of all) was made, combined with different yellows to achieve the fine greens *iappalli* and *quiltic*. Hernández, instead (and to confuse things further) included *texotli* among a list of minerals, a kind of earth or clay shaped into 'blue tablets' and used by artists; encouraging some scholars to suggest *texotli* was a 'blue clay from Michoacán.'

A third alternative has been proposed by Diana Magaloni Kerpel, one of the more visible scholars specializing in pre-Hispanic pigments, who concluded *texotli* was produced with indigo (allowing her to propose, further, that this may have been Maya blue).[70] Describing the illustration for the pigment *quiltic* (fig. 1.3), obtained with a mixture of *texotli* and the yellow pigment *cacatlaxcalli*, Kerpel identifies the plant at left as *indigofera* – surprisingly so when it hardly resembles the earlier rendering (fig. 1.2), and looks a lot like a

[69] Piero Baglino, Rodorico Giorgi, Marcia Carolina Arroyo, David Chelazzi, Francesca Ridi and Diana Magaloni Kerpel, 'On the Nature of the Pigments of the General History of the Things of New Spain,' in Gerhard Wolf and Joseph Connors, eds., *Colors Between Two Worlds: The Florentine Codex of Bernardino de Sahagún*, (2011), p.94; identified as *Commelina pallida* in Arthur J.O. Anderson, 'Materiales Colorantes Prehispánicos,' *Estudios de Cultura Nahuátl,* no.4 (1963), pp.73-83

[70] Diana Magaloni Kerpel, 'Painters of the New World: The Process of Making the Florentine Codex,' in *Colors Between Two Worlds,* p.71; and Kerpel, *The Colors of the New World*, pp.43-45

dayflower.[71] In fact, the illustration seems to supply what the Nahuatl text does not, identifying the *matlatlli* flowers as the source of *texotli*. That the matter remains unresolved is evident from the most recent publications on the topic, where we find conflicting definitions of *texotli* even within a single, collaborative volume.[72]

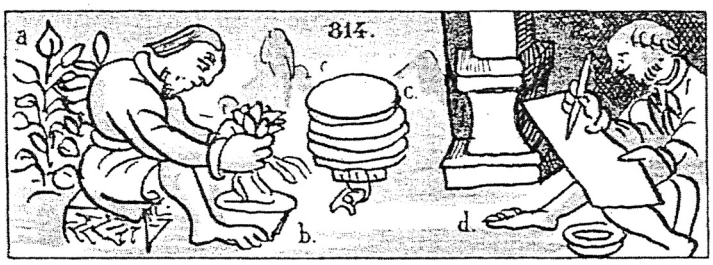


Fig. 1.2: 'Xiuhqilitl' (detail), *Historia General de las Cosas de la Nueva España*, Book 11, ch.XI, fol.219R

Most significant to the present discussion, *texotli* was also the dye used 'for the clothes they (the Mexica) wear, such as the mantas of the men and *huipiles* of the women.'[73] Of the eight colours obtained by dyers, as listed in Book 10, four were in the range of blue/green: *iniapalli, intexotli, inquiltic,* and *inmouitli*, emphasizing the colour's presence in textiles. The last of these may be identified as indigo, following Hernández de Toledo, who referred to *mohuitli* and *tlacehuilli* as alternate terms for the same pigment obtained from *xiuhquilitl*. Still others have identified *mohuitli* as a distinct dye obtained from *Jacobinia Spicigera*. If this last assumption were correct, then indigo/*tlacehuilli* would in fact be missing from the list of dyes applied on textiles altogether – all of which leaves us with few answers and many questions.

---

[71] The illustration, as both Paso y Troncoso and the original suggest, corresponds to the pigment *iapalli*. The error is irrelevant to the present discussion because *iapalli* was also made with *texotli* combined with *cacatlaxcalli,* but surprising nonetheless.

[72] See *Colors Between Two Worlds,* p.94 and pp.71-72 for differing interpretations of *texotli*.

[73] '…es color muy usada, en las ropas que se visten, como son las mantas de los hombres y uipilles delas mugeres,' *Historia General*, Book 11, ch.XI, fol.219R



Fig. 1.3: 'Iapalli', *Historia General de las Cosas de la Nueva España*, Book 11, ch.XI, fol.221V

Were Maya blue and green purposefully excluded from the Codex, 'secrets' the *tlacuiloque* would rather keep to themselves? Were Sahagun (and his collaborators) mistaken in identifying 'blue flowers' as the source for *texotli*? And if not, how did these two (or three) blue dyes (*texotli* and *mohuitli/tlacehuilli*), compare in terms of value, application, or meaning? Why did none of these other blues cross the Atlantic? It seems unlikely the Aztec would have used dayflower as a dye to any significant extent, but the problematic presented by the text (and illustrations), the lack of agreement among scholars, make it impossible to discard the possibility altogether. It leaves us with the suspicion, finally, that the use of indigo as a dye may have been quite limited in the Central Mexican Valley.

The *tlaquiloque* used their colours to convey meaning in various and complex ways – descriptive, metaphorical, and symbolic, which scholars are still far from fully understanding. The blue shade obtained from indigo, *xihuitl*, was broadly associated with time and fire, the

god *Huitzilopochtli,* and the 'blue lord' *Xiuhtecuhtli*, 'mother and father to the gods.'[74] While an examination of the meanings and associations elicited by indigo lies beyond the scope of the present discussion, the pigment's importance, particularly in the form of Maya blue and green, may be highlighted. As described by Magaloni Kerpel, these colours were:

> …related to royalty, preciousness, the southern lands, and commerce; they are probably like lapis lazuli was for the European painting tradition, a colour of prestige used to paint symbolically important concepts and prized objects.[75]

Despite war and massive relocations, the trade in dyestuffs continued relatively uninterrupted well into the last decades of the sixteenth century – as even the existence of the Florentine Codex, completed during the great plague of 1576, confirms. Examples of the use of indigo (corroborated by technical art historians), may readily be found in the earlier post-conquest codices: *Mendoza, Telleriano-Remensis*, and *Huejotzingo*, the *Badianus* manuscript, *Lienzo de Zacatepec*, *Historia Tolteca Chichimeca*, and others, exhibiting a range of blue and green hues, from deep, dark shades to bright azure, brilliant turquoise and lighter tones achieved with varying quantities of palygorskite.[76] The pigment is present in murals from the first half of the century at the convents of Tochimilco (Puebla), San Pedro Tezontepec, and Epazoyucán (Hidalgo), as in the recently discovered water vault for the *Imperial College* of Tlatelolco.[77] Notable examples from the second half of the century include the garden frescoes in the lower cloister of the Augustinian monastery of Malinalco, the florid battle

---

[74] Eulalio Ferrer, 'El Color entre los Pueblos Nahuas', pp.216-217; see also Jorge Gomez Tejada, *Making the 'Codex Mendoza', Constructing the 'Codex Mendoza': a reconsideration of a 16th Century Mexican Manuscript*. PhD diss., New Haven, Yale University (2012), pp. 80-98

[75] Diana Magaloni Kerpel, 'Painters of the New World,' p.72

[76] Piero Baglino et al, 'On the Nature of the Pigments of the General History of the Things of New Spain,' in *Colors Between Two Worlds*, pp.95-96

[77] See Michael Karl Schuessler, *Foundational Arts: Mural Painting and Missionary Theatre in New Spain*, (2013), pp. 85; 94-95; 103; and Salvador Guilliem Arroyo, 'La pintura mural de la caja de agua del Imperial Colegio de la Santa Cruz de Tlatelolco: Pintura mural de los albores Novohispanos,' *Estudios de Cultura Náhuatl*, no.38 (2007), pp.15-32.

scenes on the friezes of the church at Itzmiquilpan, and the series by Juan Gerson at the Franciscan convent of Tecamachalco.[78]

These last, large murals depicting the Apocalypse of Saint John are among the few surviving examples of the use of Maya Blue in the late sixteenth century – the pre-Columbian pigment predominates throughout, with each scene suspended in a 'ubiquitous blue background that defies European conventions of perspective.'[79] It is a striking, beautiful example of Indo-Christian art, where indigo still maintained its fundamental role in the artist's palette. A *tlacuilo*, Gerson would have learned his trade through relatives, but techniques were also kept alive at Tlatelolco, as in the numerous 'painting centres'[80] organized in Franciscan schools. The Augustinians, for their part, founded the College for the higher study of the Arts and Theology (*Colegio de Estudios Mayores de Arte y Teología*) in 1541, at the Convent of Tiripitío – 'feeding all of Michoacán with artisans.'[81] Even as they failed to record indigo's presence, then, the friars would surely have observed it being ground, mixed, and applied at their convents and schools.

While there is substantially more evidence of indigo's use as a pigment (and perhaps significantly so), there are also examples of its application as a dye, doubtless a valuable one, used to colour the hemp thread of the Aztec royal mantle, or *xiuhtalpiltilmatl*, and the brilliant turquoise knotted capes, *xiuhtilmatli*, of the lords of Texcoco, notably rendered in the Codex Ixtlilxóchitl's depiction of lord Nezahualpilli.[82] The Mexica rulers and elite of Tenochtitlán,

---

[78] On the murals at Ixmiquilpan, see Serge Gruzinski, 'Entre monos y centauros: Los indios pintores y la cultura del renacimiento,' in *Entre dos mundos: Fronteras culturales y agentes mediadores* (1997), pp. 349-71

[79] Gavin A. Bailey, *Art of Colonial Latin America* (2005), p.93

[80] Jeanette F. Peterson, 'The Florentine Codex imagery and the Colonial tlacuilo', in Jorge Klor de Alva, H.B. Nicholson, and Eloise Q. Keber, eds., T*he Work of Bernardino de Sahagún: Pioneer Ethnographer of Sixteenth-Century Aztec Mexico* (New York, 1988), p. 285

[81] Pablo Escalante Gonzalbo and Antonio Rubial García, 'La educación y el cambio tecnológico,' in *Historia de la Vida Cotidiana en México* (2004), vol.1, p.392

[82] Carmen Aguilera, 'Of Royal Mantles and Blue Turquoise: The Meaning of the Mexica Emperor's Mantle,' *Latin American Antiquity*, 8:1 (1997), pp.3-19; Guilhem Olivier and Leonardo López Lujan, 'Las Imágenes de

as images in the Florentine and Mendoza codices amply illustrate, showed a preference for blue, with Moctezuma II, his relatives and officials often shown in (presumably) indigo-dyed *tilmàtli*.[83] Among the essential possessions of noble women, further, as described in Sahagun's *Primeros Memoriales*, were the *matlalcaxitl*, bowls or receptacles for blue dye, hinting at the female role in the dye's application, its domestic, if elite use.[84] Native wardrobes underwent substantial, (forced) changes in the century after Conquest, yet few textiles have survived the Mexican climate, and visual sources for the early sixteenth century reveal little more about the use of indigo in the dyeing of textiles.

We may turn, finally, to indigo's medicinal properties: used as an insecticide and diuretic, in the treatment of abscesses, epilepsy, and scabies, it might have been of interest to physician and merchant Nicolás Monardes; yet there is no indication he was familiar with the plant or dye in his *Joyfull News of the New Found World* – a surprising absence in an otherwise comprehensive study of medicinal flora reaching Seville from the Indies. Some years later, following his momentous expedition to New Spain (and by the time interest in the new blue had increased), Francisco Hernández de Toledo described the medicinal properties of *xiuhquilitl pitzáhoac,* or *añil*:

> Its powder cures old sores, washed first with urine, and for this reason many call it *palancapatli*. It is said that the leaves, crushed and applied, or dissolved in water and smeared, relieve pain and reduce excessive heat in the heads of children.[85]

Moctezuma II y sus Símbolos de Poder,' in Leonardo López Luján and Colin McEwan, eds., Moctezuma II: Tiempo y Destino de un Gobernante (2010), pp.79-91

[83] Other examples in *Arbol de la Cesárea regia prosapia del emperador Moctezuma*, Anonymous, 1678 (Col. Archivo General de la Nación, Mexico), and *Chimalpopoca*, Anonymous, 16th C (Col. Biblioteca Nacional de España, España); 'El encuentro de Cortés y Moctezuma,' Anonymous, 17th C Col. Jay I. Kislak, Library of Congress, Washington. Reprinted in *Imágenes de los Naturales*, pp. 48-49. The blue tilmatli are assumed to have been dyed with indigo, although no samples survive, and the inference cannot be corroborated with certainty.

[84] Bernardino de Sahagún, *Primeros Memoriales*, fol.56V; in Thelma D. Sullivan and Henry B. Nicholson, eds (1997).

[85] The *palancapatli* root was also employed in the treatment of sores from syphilis. 'Su polvo cura las úlceras antiguas, lavadas antes con orina, por lo que muchos lo llaman palancapatli. Dicen que las hojas machacadas u aplicadas, o bien disueltas en agua y untadas, calman el dolor y extinguen el calor excesivo de la cabeza de los niños,' my trans. from the transcription in Maria Justina Sarabia Viejo, *La Grana*, p.30

Listing traders in various goods, the Florentine Codex described women who 'smeared the head with mud from some herbs called *xiuhquilitl*, which are good against diseases of the head...'[86] It seems to have been employed, finally, for cosmetic purposes, to dye the hair a purplish hue, with the additional advantage of eliminating lice.[87] None of these applications, however, would reach Europe – and this despite their similarities with the properties Greek physicians would ascribe indigo.[88] Practical reasons probably determined these terms of appropriation: most treatments involved the leaves of *xiuhquilitl* (fresh or dried and ground) – never to be successfully acclimated in Europe, rather than the processed dyestuff.

Ultimately, indigo's late 'discovery' cannot be satisfactorily explained; it seems reasonable to assume that social or cultural, perhaps even environmental factors, may have affected the product's visibility in ways that cannot fully be grasped through the surviving sources. We might expect a corresponding, broader lack of interest in blue dyestuffs – perhaps the colour was to blame – but instead find the Crown showed an immediate, lasting enthusiasm for the prospect of cultivating woad in her newly conquered territories.

II. *A Blue for Spain*

As early as July 1503, a routine response to the officers of Seville's recently established *Casa de la Contratación de Indias* concerning various matters of trade, contained an inquiry into 'the rehearsal of madder and blue bread,'[89] most likely a reference to woad –

---

[86] '…embarra la cabeza con unas yervas llamadas xiuhquilitl, que son buenas contra las enfermedades de la cabeça.' *Historia General*, Book 10, ch.XXV

[87] 'Para hacer relucientes los cabellos, a manera de color morado, usan xiuhquilitl,' in *Florentince Codex*, Book 10, fol.281; see also Sarabia Viejo, *La Grana*, p.30

[88] See: Johann Beckmann, *A History of Inventions and Discoveries,* vol.4 (1817), p.124. On the medicinal uses of indigo in antiquity, see also: *Balfour-Paul, Indigo,* pp.217-219

[89] 'Rubia y el ensayo que de ella hizisteis … y asy mysmo del azul pan…' AGI, Indiferente 418, L.1, fol. 114V

commercialized in 'balls' of dye – the more so in the context of a 'rehearsal' of madder, the principal source of red in Europe, used in combination with woad to produce dark reds, violets, and black.[90] The writings of Antonio de Herrera, *Cronista Mayor de Indias*, cite a recommendation made by the Catholic Kings to the Governor of Hispaniola, Nicolas de Ovando, in office between 1502 to 1509: 'that the order should be given to benefit woad and madder, because it was understood that there was much and very good on the island.'[91] Indigenous to temperate environments, neither plant would have grown wild on the islands, but confusions of this kind were commonplace.[92] Still, we may highlight the simultaneous attempt to grow woad and madder, the two, most fundamental dyestuffs employed by the European dyeing sector. Cochineal was found soon enough, and efforts to cultivate *rubia* appear to have been abandoned altogether – it was surely never exported, nor is it listed among the materials employed in the *obrajes* of New Spain and Peru. By comparison, the persistence with woad seems to suggest that even as settlers were open to the possibility of finding an alternative source of blue, indigo was not (for whatever reason) perceived as such.

In 1518, the Crown offered a grant of 15,000 *maravedíes* a year in perpetual rent to the first man who could cultivate fifteen *quintales* (1500 lbs.) of woad on the islands.[93] Less than a year later, in September 1519, a royal decree issued in Barcelona instructed the officers of the *Casa de la Contratación* to send plants, vines, and 'all manner of trees' in 'every ship departing for Hispaniola' to be distributed amongst the island's *vecinos* and *pobladores*. A second section of the document was more specific, instructing the officers of Seville to 'arrange with some merchant in Toulouse for the purchase of woad,' and to inquire (from those familiar with

[90] Cardon, *Natural Dyes*, p. 107
[91] 'Que se diese orden en beneficiar el pastel y la rubia, porque se entendía que habia mucha y muy Buena en la isla,' Antonio de Herrera y Tordesillas, *Historia general de los hechos de los Castellanos en la Islas y Tierra Firme del Mar Océano*, (1601-1615; repr. Madrid, 1947), vol.2, p. 461
[92] It would be unlikely for woad to have been confused with the native *indigofera dominguensis, L.*, as it lacks any resemblance to the European plant, but the possibility may be noted nonetheless.
[93] Maria Justina Sarabia Viejo, *La grana y el añil: técnicas tintóreas en México y America Central* (Sevilla, 1994), p. 22

the plant) how it might best be transported to the Indies. Stock from Toulouse was selected because of its quality, and either as seeds or as plants, woad was to be sent to the officers in Hispaniola with instructions for its cultivation.[94] These attempts, if they were ever put in practice, would have been unlikely to succeed in the more extreme climate of the islands, too humid for Mediterranean woad. But again, such misled efforts in the acclimation of exotic herbs and spices were routine.

Attempts to cultivate woad in the Indies continued into the next decade; in 1527 a royal decree granted Doctor Beltrán and Licenciado Pedro Manuel, from the Council of the Indies, a licence to cultivate woad (and coral) in the Indies. That same year, one Gaspar Gonzálvez, a 'neighbour of Oporto in the kingdom of Portugal', resident in Seville, granted a power of attorney to the merchant Cebrián de Caritate,[95] enabling him to request a provision from the Council authorising Gonzálvez to cultivate woad in Honduras.[96] Here again, higher temperatures and excessive rainfall would have allowed for a limited harvest at best.[97]

The Crown, it seems, was still unaware of the existence of indigofera species native to the Caribbean (*indigofera dominguensis L.*) in 1538, when the Emperor signed an *asiento* with Joan de Oribe for the cultivation of 'pepper and *malagueta* and *pimienta de mení* and clove and cinnamon and ginger and nutmeg and sandalwood and *lacar*, *menguy* and añir (indigo), and *aguila*,' wherever he saw fit to do so within the Viceroyalty of Santo Domingo, in Cuba,

[94] 'Orden a los Oficiales de la Casa de Contratación' (14.09.1519); AGI, Indiferente 420, L.8, fols. 138R-138V
[95] Records at the AGI would indicate he was a slave trader, possibly Portuguese; see AGI, Indiferente 1963, L.9, fol.11V-12; Santo Domingo 868, L.2, fol.124V
[96] 27 de Febrero: Gaspar Gonzálvez, portugués, vecino de Oporto en el reino de Portugal, estante en Sevilla, otorga poder a Cebrián de Caritate, vecino de Sevilla, para que pida al Consejo de Indias una provisión donde se le autorice a ir a la provincia de Honduras e Higueras, para sembrar pastel en provecho de los moradores y de la Corona. *Catálogo de los fondos americanos del Archivo de Protocolos de Sevilla*, [CAPS], vol.xi, p.319, no.1185
[97] European woad was also imported: on 9 June 1535, 'El Ldo. Rodrigo Barreda, físico, vecino de Santo Domingo, adeuda a Rodrigo de Gibraleón, vecino de Sevilla en la colación de Santa María, 68.500 maravedís, importe de 16 cargas y 8 arrobas de pastel que por su comisión compró al mercader Alonso de Baeza. CAPS, vol. x, p. 268, no.974

Puerto Rico, and *Tierra Firme.*[98] These *asientos,* contracts with the state conceding private investors commercial privileges, or a monopoly over a certain trade, would 'embrace an infinity of affairs'[99] in the Indies: soap, beer, a pair of camels, brazilwood, and most significantly, the mining industries.[100] Oribe's may have been the earliest attempt to grow *indigofera* species in the Americas, but he had the acclimation of Asian, or Middle Eastern indigo in mind.

On 27 March 1535, in 'Belpuch',[101] the Crown made its greatest effort thus far in the promotion of woad across the Atlantic, signing an *asiento* with two Germans, Alberto Cuon and Enrique Eynger, knight of the Order of Santiago and occasional agent for the Welzers, for the cultivation of woad and saffron in New Spain. In this case, examined most extensively by Jean Pierre Berthe, the royal treasury provided labour but little capital, receiving a third of the gross income. The *asentistas,* in turn, enjoyed a monopoly over production and trade for the duration of fifty years, land, and an indigenous workforce at minimal cost. The Germans' agent in New Spain was the Sevillian Alonso de Herrera, whose surname, like Cuon's, or as Berthe has been tempted to suspect, Cohen's, evoked a Jewish heritage.[102]

Two years later, at the request of 'Enrique Ynger' and 'Alberto Con', six master *pasteliers* from Toulouse, Juan Barta, Domingo de San Pablo, Bartolo de Rigazo, Guillen

---

98 'pimienta e malagueta e pimienta de meni e clavo e canela e gengibre e nuez moscada e sándalos y lacar, menguy e añir e aguila' AGI, Santo Domingo 868, L.1, fol.152V-153R. Cited in Jean Pierre Berthe, 'El cultivo del pastel en Nueva España', *Historia Mexicana*, 9:3 (1960), p. 343

99 Berthe, 'El cultivo del pastel', p. 342

100 Ibid, p.342

101 Ibid, p. 344. The Catalan town of Bellpuig.

102 There are numerous (sometimes families of) Herreras in the records of the Sevilian inquisition, several of which had ties to the Andalusian textile industries. See Juan Gil, *Los Conversos y la Inquisición Sevillana*, Vol. IV (Sevilla, 2001), pp. 212-226. Alonso de Herrera was also the first to have received an *asiento* for the production of beer in the Indies, and would also request a privilege for the cultivation of madder. Emilio Luque Azcona, 'Producción y consumo de cerveza en la América colonial: primeras tentativas de Alonso de Herrera en el valle de México', in Antoni Gutiérrez Escudero y Mª Luisa Laviana Cuetos (Coords.), *Estudios sobre América, siglos XVI-XIX* (Sevilla, 2005), pp. 921-928.

Perote, Enrique, Remón and Pedro de Monternay, were granted licences to travel to New Spain.[103] The following June, Queen Isabella of Portugal, acting as regent for her husband, appealed to the *corregidor* of Segovia, a crown official, to find skilled dyers in the city who might, under oath, at his convenience, and in his presence, examine samples of woad sent from New Spain by Cuon, and the heirs of Alberto Eynger.[104] The trials were satisfactory, and the Queen instructed her officers in New Spain to favour the Germans' agents, their dye masters, and any 'other people who understand the said farming in everything that should be convenient for (the industry's) growth.'[105]

This early, somewhat mysterious success notwithstanding, the venture proved to be a complete failure: the climate of the area designated for cultivation, in the vicinities of Veracruz was again, far too humid for woad, while a plague of *tuças* (gophers) eliminated the saffron. Despite the small quantities that resulted, and the manifest poor quality of the dye produced, so inferior it could not even be sold in Spain, production continued until 1559.[106] A heavy, perishable commodity, woad would have been unlikely to ever succeed as an export commodity.[107] It seems hardly coincidental, however, that a few months earlier, after a last, negative evaluation of the dye's quality was conducted in Spanish Segovia, the Crown should have increased its efforts to procure a new source of blue.

On 28 May 1558, a royal decree entitled 'to the President and Judges about woad' was sent to the Chancery of Lima requesting a detailed report concerning a 'weed or mud that there is in those provinces that has the same effect as woad' and is used by the

---

[103] AGI, Catálogo de Pasajeros, L.2, E.3784 and L.2, E.4239. Cited in Sarabia Viejo, *La grana*, 23
[104] AGI, Indiferente 423, L.18, fol.139V-140R. It is unclear when Eynger died.
[105] '…y otras personas que entienden en la dicha granjeria en todo lo que conveniere para su acrecentamiento,' AGI, Mexico 1088, L.3, fol.146–148; Berthe does not mention this first, successful review.
[106] Eufemio Lorenzo Sanz, *Comercio de Sevilla con América en la época de Felipe II* (Valladolid, 1979), t.1, p. 589; Sarabia Viejo, *La Grana*, p. 25
[107] Balfour Paul, *Indigo*, p. 103

indigenous population to 'dye their clothes and wool and cotton blue.'[108] On July 4th, a *consulta*, the result of regular meetings of the Council of the Indies, a summation of 'the views of the various members of the Council on a particular topic,'[109] informed Philip II that news had been received of 'another herb that has the same effect as French woad, and is even better to dye fabric blue.'[110]

The Council stressed the urgency of the matter, suggesting a request for further information be sent to the *Audiencias*, but also warned the King of settlers in the Indies who might, upon hearing of the Crown's interest in this new dye, endeavour to 'discuss some *asiento*, or ask for [a] *merced*, or something else that does not suit His Majesty's service.' They recommended, further, that 'his majesty stay his hand until it is seen what news is had from the Indies of what this (the herb) be.'[111] Ten days later, the Spanish Crown extended its search for blue across its American territories, and five, near identical royal decrees were sent to New Spain, Santo Domingo, and Guatemala, to the governors of the provinces of the Río de la Plata, Sancti Spiritus, and San Francisco.[112]

The King (and Council) were interested in the quality of the dye produced, whether the herb was cultivated or 'is born of its own in the field, or if it is some poison,'[113] and if it could be grown and exported in large quantities. Each letter requested samples of the plant be remitted to Spain, along with a description of its cultivation, the most convenient climate

---

[108] '…somos ynformados que en esas provincias del peru ay una yerba o tierra que ay de mesmo efecto que el pastel porque con ello se tiñe y da color azul a las ropas y paños de lana y algodón …', AGI, Lima 567, L.8: 'Al presidente e oydores del Peru sobre lo del pastel,' (28.05.1578), fols. 347R-347V

[109] John H. Elliott, *Imperial Spain, 1469-1716* (1970), p. 176

[110] '…otra yerba que hace el mismo effecto que el pastel que se trae de fracia y aun mejor para teñir y dar color azul a los paños,' *Consulta del Consejo de Indias*, (4.07.1558), AGI, Indiferente 738, N.29

[111] 'Y porque podrá ser que algunas personas aviendo tenido noticia desto ocurran a v.m. a tratar de algun asiento... o otra cosa que no convenga al servicio de v.m. nos ha parecido avisar de lo que pasa para que v.m. tenga la mano hasta ver el aviso que se tiene de las Yndias de lo que esto es.' AGI, Indiferente 738, N.29

[112] AGI, Buenos Aires 1, L.3, fols. 33V-34V; 37R-38R; Santo Domingo 899, L.1, fol. 113V-114V; letter to the Captaincy General of Guatemala in MacLeod, *Spanish Central America*, p. 426, n.2

[113] '(si es cosa que se siembra) o que nace de suyo en los campos o si es algun veneno,' Santo Domingo 899, L.1, fol. 113V

in which to grow it, and native methods of extracting the dye. They inquired as to the cost and feasibility of transport and asked, finally, whether 'the Indians would benefit, or if some harm would come to them'[114] from the cultivation of this herb. It is a revealing set of concerns, enough to evaluate a new product's potential, with an interest in native production systems, just as it manifested a growing preoccupation for the welfare of a rapidly descending native population.

The incentive for all this was expressed in simple terms, because in this way the Empire would 'be excused from bringing [woad] from France or from another kingdom.'[115] The decrees of 1558 are cited often in the historiography; focusing on regional trades, however, scholars have mentioned only the letter specific to their area, obscuring the broader nature of the search. The letters also hint at the source of all this information: 'a Portuguese (man) has said this weed is also found in Cambay, and if the Crown should give him some *asiento*, he will bring much of it to these kingdoms, where it will serve as woad.'[116] Familiar, perhaps, with the coasts of India, this merchant appears to have been the first to correctly identify the plant. The Portuguese, as discussed in the course of this thesis, had a large and lasting presence in the global indigo trade, and especially during this initial period, emerge as determined advocates for the dye, raising the new product's reputation by word of mouth, even combatting resistance in Europe through the diffusion of dyeing techniques.

Only two responses to the letters of 1558, both from Mexico's *Real Audiencia*, have been identified, and this in a footnote to a brief article presented at the first *Jornadas de*

---

[114] '…si los indios recebiran (sic) algun beneficio o se les seguira algun daño.' Santo Domingo 899, L.1, fol. 114V

[115] '…se escusaria de traer de francia ni de otro reyno.' Santo Domingo 899, L.1, fol. 114V

[116] 'Un portugués ha dicho que en la India de Cambaya hay de esta hierba y que tomándose con él cierto asiento traería a estos reinos cantidad de ello y serviría de pastel,' AGI, Santo Domingo 899, L.1, fol.114R

Andalucía y América.[117] The earliest of these, dated 1 September 1559, noted that 'diligences' were being carried out to investigate a 'weed or mud' that might produce a blue dye but, it clarified,

> …the cloths made in this New Spain by the Spanish, which (are) plenty, are benefitted and given colour with woad that is made here, (which) is like that of Spain or France, and until now another weed or herb of the same effect has not been found.[118]

A few months later, in March 1560, a paragraph in an otherwise ordinary letter from the *Audiencia* referred to the decrees of 1558, noting that the Viceroy, Don Luis de Velasco, had taken charge of the necessary investigations and would submit his report to the Crown.[119] What followed may be gathered from a reference in the *Colección de Documéntos Inéditos Relativos al Descubrimiento, Conquista y Colonización de las Antiguas Posesiones Españolas de Ultramar* (DIU):

> A weed was sent from New Spain saying it had the effect of woad, *and it was found that it was indigo*, and so it was informed of this to the Viceroy, 15 September (1561), and from here, it seems, its benefit began.[120]

News would reach the textile markets of Europe even before it could make its way back across the Atlantic: on 2 February 1561, Étienne Ferrières, a woad merchant in Toulouse, received news of 'some dye from the Indies.'[121] In the months that followed,

---

[117] Maria Justina Sarabia Viejo, 'Intentos de Aclimatar Productos Americanos en Andalucía en el Siglo XVI: el Añil,' in *I Jornadas de Andalucía y América* (Huelva, 1981), p. 46 n.6

[118] 'los paños que en esta nueva espana labran los espanoles que es cantidad se benefician e dan color con pastel que aca se haze que es como lo de españa e francia e hasta agora no se a hallado otra yerba ni tierra que haga el efeto.' AGI, Mexico 68, R.27, N.91, Fol. 135R

[119] 'el visorrei tomo a su cargo hazer las deligencias nescesarias y escribe a V.m lo que a hecho e podra hazer e la dignidad e aprovecho que para ello ay.' Ibid, fol. 147v

[120] 'Enbióse de la Nueva España una yerva diciendo que hazía el efeto del pastel, y hallose que era añir, y assi se aviso dello al Virrey, 15 de Setiembre [1561], y de aqui parece que comezó su beneficio.' In *Colección de documentos inéditos relativos al descubrimiento, conquista y organización de las antiguas posesiones Españolas de Ultramar* (DIU), vol. xiv, p. 231

[121] 'Quelque teinture des Indes' Gilles Caster, Types Économiques et Sociaux du XVIe Siècle: Le Pastelier Toulousain', *Annales: Économies, Sociétés, Civilisations*. 9:1 (1954), p. 70. Cited in Jean Pierre Berthe, 'El Cultivo del Pastel en Nueva España', *Historia Mexicana*, 9: 3 (1960), p.367 n.68

reports 'multiplied from London, Antwerp, Bordeaux and Lyon'; indigo had been found in the New World.[122]

The search for blue continued, and justifiably so: by this time at least three red colourants had been found in the Indies. In 1568, Don Francisco de Toledo, Viceroy of Peru, was instructed by the Crown to 'provide whatever is convenient concerning the *asiento* and *capitulación* that Juan Jimenez de Puertollano requests in the promotion of certain materials he has discovered to dye wools and cloths a very perfect blue.'[123] Some *indigofera* species grew in Perú, but a local industry never prospered, and the Viceroyalty would later rely on Central American imports for the textile centres of Cuzco and Quito.'[124]

Nor were attempts to cultivate woad abandoned altogether: in 1573, Macario de Anzures wrote to his brother in law in Brihuega, Francisco Barbero, requesting he join him in the burgeoning town of Puebla, New Spain, where Anzures had acquired 'some farms of woad.' Barbero was familiar with 'things of the countryside,' that is, the agricultural, and could tend to cultivation, while Anzures would employ the *woad* at his dye and cloth works (*tinte y obrador*).[125] Earlier, Cristóbal de Ribas had set up a woad mill in the city, closed by the council in 1565 following complaints of 'foul (and insalubrious) odours.'[126] For a brief period, then, woad, Asian and American indigo coincided at the Poblano textile *obrajes*.

---

[122] Caster, 'Types Economiques', p. 70; while Caster does not clarify whether this '*teinture des Indes'* was from the East or West Indies, the date suggests the reference is to the American dye.

[123] One Juan Jiménez from Puertollano is listed in the Catalogue of Passengers to the Indies, travelling to New Spain in 1535, AGI, Pasajeros, L.2, E.188; 'El Virrey don Francisco de Toledo provea lo que convenga sobre el asiento y capitulación que Juan de Puertollano pide sobre el beneficiar ciertos materiales que ha descubierto para teñir azul muy perfecto,' DIU, 1568, p.154

[124] MacLeod, *Spanish Central America*, p. 195

[125] '… y pues él entiende cosas del campo,' in Enrique Otte, *Cartas Privadas de Emigrantes a Indias, 1540-1616* (Sevilla, 1988), pp. 155-156. Cited in Altman, *Transatlantic Ties in the Spanish Empire: Brihuega, Spain, and Puebla, Mexico, 1560-1620* (Stanford, 2000), p. 62; it is always possible Anzures was in fact referring to indigo here, using the more familiar term *pastel*; his brother Macario, at least, was evidently aware of the difference between indigo and woad. Alonso de Molina, we may note, would translate *xiuqilitl* as pastel in his *Vocabulario en Lengua Mexicana y Castellana* (1571).

[126] Altman, *Transatlantic Ties*, p.171

These examples may further indicate that even in the earliest phases of textile production, an active dyeing sector had been incorporated into the *obrajes*. A number of *tintoreros* are listed in the AGI's *Catalogue of Passengers to the Indies* for this period, most of whom would have been required to dye a piece of cloth in blue for their examination by the guilds.[127] But native and European traditions may also have coexisted in this early phase, especially within the community *obrajes*, under the direction of Indians.[128]

The transition from woad to indigo, even in the Indies, was not the abrupt process described in the historiography; it would not seem, as Maria Justina Sarabia Viejo has claimed, that in 1563 – as the Indian pueblos forced to tribute in woad for Eynger and Cuon shifted back to maize – 'indigo became the basic blue colourant' employed in the New World.[129] Rather, settlers relied on European formulas that demanded a base of woad, even when dyeing with indigo – they were more familiar, surely more comfortable and at less risk of error with woad – and it is likely *pastel* continued to be produced (if only on a small scale, and for local consumption), perhaps imported as well, for use in the textile *obrajes* of New Spain.

---

[127] Dyers were apprenticed for three to six years before undergoing the examination for master dyer. The rigorous test could consist of a '"master-piece" of forty-eight yards of linen dyed blue, along with several pounds of woollen thread dyed in blue and green.' Butler Greenfield, *Perfect Red*, p. 31; see also José Carlos Caro Fajal, 'Tintureros de Aragón: Pervivencia del Pastel', in *III Jornadas de Estudios sobre Aragón en el umbral del siglo XXI* (Zaragoza, 2000), p.196; and Miño Grijalva. 'Manufactura colonial comparativa,' p.117. Regarding dyers making the Atlantic crossing, see, among others: AGI, Indiferente 1965, L.13, fol.458: 'Real Cédula a los oficiales de la Casa de la Contratación para que den licencia a Baltasar Hernández, tintorero, vecino de Toledo, para pasar a Nueva España,' (29.12.1557); AGI, Indiferente 1967, L.16, fol.11V: 'Real Cédula a los oficiales de la Casa de la Contratación para que den licencia a Juan López, tintorero de seda, para pasar a Nueva España, llevando su mujer e hijos,' (5.12.1566); AGI, Indiferente 2087, n.109: 'Expediente de concesión de licencia para pasar a Valdivia a favor de Rodrigo Díaz, tintorero, vecino de Sevilla, con su mujer Antona de Biberos, sus hijos, su cuñada Ana Pérez de Biberos y 2 criadas, para vivir con su cuñado Juan de Zamora,' (1575); AGI, Indiferente 2075, n.40: 'Expediente de concesión de licencia para pasar a Los Angeles a favor de Juan Caballero de la Carrera vecino de Brihuega, maestro tintorero, hijo de Juan de Caballero de la Carrera,' (1614).

[128] When and what to dye would become an issue of controversy in Tlaxcala in 1624. See Manuel Miño Grijalva, 'Industria textil y vestido: la herencia española,' in *Herencia española en la cultura material de las regiones de México. Casa, Vestido y Sustento. XII Coloquio de Antropología e Historia Regionales* (Mexico, 1993), p.274-275

[129] 'A partir de entonces (1563) el añil quedaba como colorante azul básico,' Sarabia Viejo, *La grana y el añil*, p.25

In November 1567, the Crown reaffirmed its interest in New World indigo, their enthusiasm no longer expressed in terms of woad, but because the indigo 'which is presently used comes from the sea of Sablón, which is a land of infidels, where it is made with many dusts and herbs, and has never been made in Christendom, and it is very expensive for Castile.'[130] The adulteration, or unintentional corruption of indigo (that would also afflict New World exports), is discussed in later chapters; what may be highlighted here, is the awareness that as they embarked on the path of production, Spanish settlers were manufacturing a dye that had 'never been made in Christendom,' just as they provided Spain with its much desired, own source of blue. If 'mercantilist policies' were never 'consistently pursued'[131] by the Spanish Crown, attempts to liberate the textile industry from its dependence on foreign dyes were, if not systematically, at least quite regularly (and enthusiastically) encouraged.

III. *Monopolizing Añil*

In 1563, one Pedro de Ledesma wrote at length to Philip II with various commercial propositions for the increase of revenues to the Royal treasury. He advised the King to promote the cultivation of olive trees, vineyards, ginger, sugar, and silk in New Spain, and cautioned against 'the great and excessive expenses made from your majesty's royal treasury' in expeditions to China and Florida. The America's had much to offer, he argued, but all its riches were being lost for want of financial support and the Crown's failure to grant sufficient economic privileges. Should such 'negligence' in the exploitation of the New World's agricultural and mineral resources continue, Ledesma concluded, 'your majesty will

[130] 'El que ahora se utiliza viene del mar de Sablón, que es tierra de infieles, que se hace con muchos polvos y hierbas y nuna se ha hecho en la cristiandad y es muy costoso para Castilla.' Cited in Nicolás Garcia Tapia, *Patentes de invención Españolas en el Siglo de Oro* (Madrid, 1994), p.48

[131] John H. Elliott, *Imperial Spain,* p. 198

lose what is here promised and I the privileges that for this I hope to receive.'[132] Sound propositions, as historian François Chevalier would insinuate (not without a hint of approval).[133]

First, however, Ledesma discussed indigo. 'These past years', he began, 'your majesty wrote to the Viceroy... that he should see if there was *añil* to give the colour blue to silks;' samples had been sent, but they had tested poorly in Spain. The earliest of trials had, indeed, generated some resistance: that same year, the *Cortes de Madrid* petitioned to ban indigo, on grounds that it 'spoiled' the cloth ('*estragaba los paños*').[134] Ledesma was unconvinced, and adamant: 'I have procured to understand (the matter) in depth and it is true that what there is here is much better that that of Barbary, which they call *nadador.*'[135] Production, he continued, had suffered for want of labour; indigo was traded locally in the *tianguis* (Indian markets) at a costly eight pesos the pound, and so 'it is used only in painting.' Such a state of affairs, he continued, was altogether unnecessary; production could be increased 'at a small expense and without the work, or vexation of Indians.'[136] Properly cultivated, enough indigo might be produced to satisfy 'not only all of Christendom, but all of Turkey if it were necessary.'[137]

Here Ledesma turned to woad, and again claimed the plant would grow well and the dye could rival that of Toulouse if it were placed in better hands. Ledesma was interested in

---

[132] '…Vuestra Magestad perderá lo que aqui se promete y yo las mercedes que por ello espero recibir,' AGI, Mexico 168; published in DIU, vol. 1, pp. 377-385

[133] François Chevalier, *La Formación de los Latifundios en México: Haciendas y Sociedad en los siglos XVI, XVII y XVIII*, (3RD ed, 1999), pp.123-124

[134] 'Leyes y prematicas de las Cortes de Madrid de 1563 sobre los trajes,' (Alcalá de Henares), in Silvia Saladrigas Cheng, Joan Soler i Jiménez., eds., *El Arte Real de Perseguir a los Sombreros: Textos y Documentos para la Historia del Tejido y la Indumentaria en las Monarquías Hispánicas, s.xiv – xviii* (Barcelona, 2009), pp.200-201; Modesto Ulloa, 'Unas notas sobre el Comercio y la Navegación Españoles en el siglo XVI,' *Anuario de Historia Económica y Social*, vol.2 (1969), p.197

[135] '… yo he procurado entenderlo de rrayz (sic) y es cierto que lo de aca es muy mejor que lo de berveria que llaman nadador,' in DIU, vol.1, pp. 377-378

[136] '…sin trabajo ni vexacion de yndios,' Ibid, p.378

[137] '…no solo para toda la xpiandad mas para toda turquia si fuere menester,' Ibid, p.378

all manner of trades and commercial opportunities, but news of the Crown's interest may have encouraged him to begin on the topic of dyestuffs. The textile industry had grown, and local demand, it would seem, was unsatisfied: around this time, Diego de Anzures (brother to the earlier mentioned Macario), a key figure in the development of transatlantic ties between Brihuega and Puebla,[138] advised his cousin in Spain to 'bring fifty or sixty pounds of indigo,' that might ensure a profitable start to his residence in the Indies.[139]

Ledesma's letter was sent alongside recommendations from the Archbishop of Mexico and the Viceroy D. Luis de Velasco.[140] Less than a year later, he was granted the *estanco* (monopoly) of indigo in New Spain for the duration of ten years,[141] inaugurating Spanish attempts to develop *xiuhquilitl* into an export commodity. Little is known about Ledesma; he is mentioned briefly in some histories of indigo, but these have been limited to general observations gathered from the correspondence of Ledesma, the Viceroys Luis de Velasco and Martín Enriquez. An account of Ledesma's earlier exploits as a conquistador may be assembled from his *relación de méritos y servicios*, recorded in 1557.[142] These *probanzas* included a statement by the individual describing his previous service to the Crown, followed by various other testimonies, usually supporting, but on occasion challenging the account. The more detailed of these, as Chamberlain has noted, 'are in fact brief autobiographies,'[143]

---

138 Ida Altman, *Transatlantic Ties*, pp. 35; 38-39

139 'Se traiga consigo cincuenta o sesenta libras de añil,' Otte, *Cartas Privadas*, p. 152; Cited in Altman, *Transatlantic Ties*, p. 62

140 In DIU, vol.1, pp. 395-97

141 While a document to this effect does not appear to have survived, it is mentioned in the Viceroy's correspondence to the Crown in 1572 and 1575, AGI, Mexico 19, n.90

142 'Probanza de méritos y servicios de Pedro de Ledesma' (1556) AGI, Patronato 60, n.5, R.1; I identified this document as relating to the same Pedro de Ledesma through a letter from the Archbishop of Mexico, recommending Ledesma to Philip II in 1563, which refers to his participation in the conquests of Yucatan, Coçumel and the Golfo Dulce. There are various other documents concerning a Pedro de Ledesma in this collection, but I could not tie any of these conclusively to the same man.

143 Robert S. Chamberlain, 'Probanza de Méritos y Servicios of Blas González, Conquistador of Yucatan', *The Hispanic American Historical Review*, 28:4 (1948), p. 526

constructed narratives – deliberately emphasizing or disregarding, with the essential aim of gaining some dispensation from the Crown.

After crossing the Atlantic in 1537, Ledesma joined Pedro de Alvarado's forces, following the *adelantado* to Guatemala 'until this army concluded,' when he turned to Montejo 'el Mozo' and the conquest of Yucatan.[144] Despite attempts at a fair distribution, war and disease had struck randomly amongst the indigenous population, leaving some *encomiendas* significantly reduced.[145] With many others, Ledesma claimed the land he received was 'poor, and of little possibility', and so returned to the business of conquering, joining the forces of Gaspar Pacheco, another veteran of Yucatán, in an expedition to Guatemala. After recovering from a life-threatening illness, Ledesma took arms again, this time discovering 'Teguzgalpa' (*sic*), the oriental region of Honduras, with Francisco del Barco. But having 'suffered many losses to his estate,' Ledesma travelled to the *Audiencia de Gracias a Dios* to ask for 'something with which to eat, being as he was 'tired, poor and in need.' Francisco de Montejo happened to be in the city, and sent him in the charge of *alférez general* to conquer the provinces of the Golfo Dulce.

By 1557, Ledesma had settled in the city of Mexico with a wife and children, from where he wrote to the Crown, 'begging' (yet again), 'to be granted (some) privilege,' something 'with which to eat in this New Spain.'[146] Should there be nothing for him here, he wished to be given an 'empty' *encomienda* in Yucatán. Ledesma made several more specific requests: some *estancias* of cattle and licences for his brother, Juan de Cubillas Caravajal, his

[144] This and following quotes from 'Méritos y Servicios: Pedro de Ledesma', AGI, Patronato 60, n.5, R.1, fols. 17R-18V
[145] Chamberlain, *Conquest*, pp. 275-276
[146] '…suplica le haga merced de mandar se le de de comer en la dicha Nueba España…' fol.17R

wife, children, servants, and slaves to join him in the Indies.[147]

After obtaining the monopoly of *añil* in 1563, unable to find a sufficient supply of labour or afford the costs of production, Ledesma formed a partnership with Martín Cortés, Marqués del Valle, for the production of the dye in Yautepec, near Cuernavaca (within Tomson's lands of the Mixteca).[148] The eldest, and only legitimate son of the conquistador, Martín Cortés had returned to New Spain in 1562, after more than two decades abroad, a wealthy heir to his father's 'Marquesado del Valle de Oajaca'. He was received with celebrations befitting a 'royal person'; crowds and fiestas followed the procession from Yucatán to the city of Mexico, and 'money was spent, that went without count, in galas, and games, and parties.'[149]

The partnership, it was agreed, would last until 10 June 1569; Cortés made an initial investment of 1965 pesos, a *tomín* of gold, six pounds of indigo and fifteen woad vats,[150] most likely to test the dye after production, although they might also have been recycled for use in the production process. By 1565, the Marqués had been accused of treason, pardoned and exiled, yet contemporary accounts of the failed rebellion do not mention Ledesma, and it seems production may have continued despite these inconveniences, at least until property rights were formally revoked. But as described by Viceroy Martin Enriquez in September 1572, however, this first venture in the production of New World indigo was ultimately a failed one: Ledesma 'earned little, and abandoned it, and was not allowed (to continue)

[147] Maria Justina Sarabia Viejo has suggested Pedro de Ledesma was Eynger and Cuon's factor in Mexico City; while there is no reason to doubt her assertion, the reference is not provided, and I have been unable to corroborate the assertion. Alonso de Herrera was clearly their first factor, but it is altogether possible Ledesma intervened at some stage.
[148] AGI, Mexico 19, n.90: Correspondencia del Virrey Martin Enriquez (22.9.1572), 'Respuesta al secretario Juan de Ledesma: Añil,' s/f
[149] Juan Suárez de Peralta, *La conjuración de Martín Cortés y otros temas* (XVIc; 1945), p. 111, my trans.
[150] Francisco del Paso y Troncoso, *Epistolario de la Nueva España, 1505-1818* (1939), vol. xi, p. 27

because the Marqués gave him many Indians, and they were overburdened' with the work.[151] It is unclear whether these, like other towns within the Cortés estate, filed legal complaints in relation to their treatment.

Some months later, the Viceroy would officially liberate the cultivation and commercialization of indigo, because he felt 'this business has need of a great number of people' and Ledesma 'could make little quantity (of it).'[152] This is all that may be gathered from the documents available at the Spanish archives; a rather different, and far more interesting story emerges from the notarial protocols of the city of Mexico – Ledesma, it would seem, was even more enterprising than historians (in those brief paragraphs dedicated to him), have suggested.[153]

Between October 1570 and July 1573, Ledesma would form at least six partnerships for the cultivation and manufacture of indigo in the vicinities of the city of Mexico, 'leasing out' his rights of monopoly. [154] First, however, in one of many attempts to secure an extension of his *estanco*, he enabled Cristóbal Suárez de Solis, *regidor* of the city of Salamanca, Spain, to represent his interests at Court, requesting 'a royal dispensation for the industry of indigo, so that for 40 years, he (Ledesma) be given the monopoly (of indigo) in New Spain,

---

151 '(en la cual compañia con el Marqués del Valle, Ledesma) ganó poco y así la dejo, y no se le permitiera porque le dava el Marqués mucha cantidad de yndios y eran muy vejados,' AGI, Mexico 19, n.90, 'Respuesta al secretario Juan de Ledesma: Añil,' s/f

152 'Y como este negocio ha menester cantidad de gente, él podia hazer poca cantidad…' AGI, Mexico 19, n.90, s/f; cited in Sarabia Viejo, *La Grana*, p.27

153 The recent publication of several thousand transcriptions from the late sixteenth and early seventeenth century by the University of Mexico (UNAM), has allowed access to a collection of documents that, for practical reasons –a lack of catalogues or indexes, and the poor state of conservation of some of the earlier notarial protocols– has been neglected by historians. They allowed for the identification of numerous documents concerning Ledesma, which I later consulted in person at the *Archivo General de Notarias* (Mexico D.F).

154 A total of 5991 documents notarized by Antonio Alonso, where Ledesma appears to have conducted most of his business, have been included in the publication. Records are missing for the years 1558 to 1561, 1565, 1568, 1574 and 1575; CPM, 'Introducción', pp. 24-25

the New Kingdom of Galicia, and Yucatan.'[155] In a second notarized document to this effect, issued the same day (July 5th, 1570), Ledesma was joined by Doña Catalina de Montejo, daughter of the elder Francisco de Montejo and mother in law to Suárez de Solís.[156] Heir to her husband's *encomienda*, we may suggest she may have also have been involved with indigo – perhaps a new, wealthy partner for Ledesma. It was a time of increasing interest for *añil* in Yucatán, as the following chapter will discuss, and it is possible Ledesma may have extended his investments to the Peninsula. In his ambitious task at Court, however, Suárez de Solís was unsuccessful.

The earliest of Ledesma's partnerships was signed just a few months later, on October 6th, 1570, with one Silvestre de Solórzano. The two-and-a-half-year contract bound each partner to invest an equal amount of 300 gold pesos for the production of *añil* in Michoacán, Temascaltepec, and Malacatepec. In April 1571, Ledesma formed a ten-year company with Juan de Villaseñor Cervantes for the production of indigo at the latter's estate of *La Calera*, in the province of the Chichimecas. Here, Ledesma would also undertake the responsibility to personally visit the *estancia*, where he would provide instructions for the dye's manufacture with 'the new invention I have to make it' (*según la ynbencion nueva que tengo para hazerlo*).[157] While the improvement was never specifically described, later documents would suggest he had incorporated the use of large vats for processing (*pilas*), allowing for the production of indigo 'in large volumes' (*en cantidad*).[158] Each contract identified Ledesma as the beneficiary of a royal privilege; his partners were thus given legal licence to produce

[155] '…mercedes reales sobre la industria del añil, para que, por 40 años, le den el monopolio para trabajarlo en Nueva España y en el Nuevo Reino de Galicia y en Yucatan,' Poder a Cristóbal Suarez de Solís, 05.07.1570, AHN, Antonio Alonso, not.1, vol.9, no.32, fol.796V

[156] J. Ignacio Rubio Mañé, *Los primeros vecinos de la ciudad de Mérida de Yucatan*, p. 25

[157] "Compañía: Juan de Villaseñor Cervantes y Pedro de Ledesma,' 28.04.1572, AHN, Antonio Alonso, not.2, vol.4, fols.83R-84V

[158] 'Poder a Diego de Esquivel,' 19.08.1572, AHN, Antonio Alonso, not.1, vol.9, fols.181R; his ideas on production are also mentioned in: 'Carta del Virrey Martín Enriquez,' 24.10.1575, AGI, Mexico 19, n.166, as discussed further in the following chapter.

the dye or, as with Solórzano and later Diego de Esquivel, to form other companies for the manufacture of *añil*, even grant further licences.[159] Records of Ledesma's ventures identify Temascaltepec, Michoacán, and the Province of the Chichimecas as areas designated for production, where *indigofera* species appear to have grown wild in significant quantities. None of these contracts suggest any efforts at cultivation.

At the end of July 1572, the Viceroy extended Ledesma's *estanco* for an unsatisfying single year;[160] but true to character, Ledesma immediately put his hands to the task of benefitting from the privilege in the time he had, and in whichever way he could. Just a few weeks later, on August 16th, he granted a legal power to Diego Vigil, resident in Mexico City, to revoke any previous contracts, partnerships, and companies, and collect any remaining debts in his name. Vigil was enabled, further, to enter into partnerships and grant further licences for the manufacture of indigo, to make and commercialize the dye himself (splitting profits in half with Ledesma). For his part, Ledesma undertook to dissolve any other partnerships and revoke licences in the mines of Temascaltepec or Tajimaróa, where Vigil intended to produce the dye.[161] Three days later, Ledesma entered into a near identical partnership with Diego de Esquivel, this time for the province of Michoacán. As a final means to exploit his royal privilege, he entitled both agents to denounce anyone found in violation of his monopoly – and collect the pursuant fines, which the partners would divide equally. The year, however, would rapidly come to an end.

---

[159] 'Poder a Diego de Esquivel,' 19.08.1572, fols.181R-182R

[160] On the topic of invention and monopoly rights, see Marius Buning, 'Inventing scientific method: The privilege system as a model for scientific knowledge-production,'*Intellectual History Review* 24:1 (2014), pp.59-70. While the Spanish model presents some differences in relation to Buning's Dutch examples, the following observation may illuminate the Viceroy's decision to extend Ledesma's estanco for no more than a year: '… authorities would grant the inventor a limited amount of time (usually about one year) to crystalize his ideas, or else his privilege rights would expire. This formula allowed the inventor to seek investors, who were prepared to put in the money to realize the invention in exchange for a percentage of the profit that could be made on the basis of the future monopoly rights,' p.60

[161] 'Poder a Diego Vigil,' 16.08.1572, AHN, Antonio Alonso, not.1, vol.9, fols.179R-180V

Tireless in his endeavours, Ledesma travelled personally to Seville where he joined the crowd of petitioners to the Council of the Indies, but his request for the monopoly, or some economic advantage in the cultivation of indigo (and cochineal) was again refused, and he returned once more to the city of Mexico.[162] The council would later propose a royal *estanco* on the valuable *grana cochinilla* as a means to reduce adulteration and fraud, but the motion found few supporters among officials in New Spain.[163] Motivations may not have been complex: increasing interest in both dyes after 1570 would have diminished the incentive to limit profits to a single individual. For his part, Ledesma maintained an interest in the trade, perhaps even investments, and a decade later resumed his correspondence to the Crown, sending a detailed description of the cultivation and manufacture of indigo in New Spain.[164]

Ledesma's curiosity for and involvement with the production process was unusual, even exceptional for a man of his background, in this age. Through his various contracts, social and commercial relations, Ledesma contributed, further, to the diffusion of practices and expertise (as the following chapter will continue to explore); and while his own commercial ventures and aspirations may have been cut short, his activities inaugurated a period of experimentation across New Spain, generating interest (among officials and settlers) for the unfamiliar *añil*. His example may underline the influence of individual agents in the expansion of new, Atlantic trades, but more significantly, it gives us a sense of *how;* the first steps in the development of a novel product into a viable export commodity – in this particular case, without any monetary dispensation from the Crown, and despite the half-hearted support of local officials.

---

[162] In 'Carta del Virrey Martín Enriquez,' 24.10.1575, AGI, Mexico 19, n.166
[163] Sarabia Viejo, *La grana*, p. 29
[164] 'Carta sobre el beneficio del añil,' Pedro de Ledesma, México, 20.03.1584, AHN, Diversos-Colecciones 26, n.3

Conclusion

By the end of the century, war and plague had taken their toll on the rich Mesoamerican palette; Maya blue and green, surely other pigments as well, were lost to the passage of time. Reflecting on the visual evidence for this 'aesthetic tragedy' in native codices and maps, Serge Gruzinski writes:

> Lines lost their vigour and control, and were replaced by rapid, often careless, draftmanship. Sketches became a stopgap, and then the rule. Color drained away as multicolored images were replaced by the gloomy contrast of black and white...[165]

Indigo crossed the Atlantic as a dye, and one with the presumed potential to substitute European woad – historians have viewed it likewise. Yet the evidence opens a (still opaque) window onto what was lost, those uses and applications that would not survive the broader, dramatic transformations tearing the Native world apart. In its most valuable, symbolic form, as a component of Maya blue, indigo's presence would not be 'rediscovered' before the late twentieth century; even as a pigment on its own, while still present in the palettes of Early Modern European artists, it would altogether lack the fundamental role and significance *tlacehuilli* once had for the *tlacuiloque*.

In a somewhat different turn of events, as Elena Phipps has observed, increasing supplies of dyestuffs reaching the viceroyalty of Peru after 1550, as trading networks recovered from the conquest – notably Central American indigo and Mexican cochineal –, 'fortified the already vivid Andean palette with a dynamic new range of colours.'[166] Whereas evidence of indigo's use preceding the conquest, even the colour blue on pre-Hispanic textiles is rare, dye and shade were quite eagerly incorporated into the attires and emblems of

---

[165] Serge Gruzinski, *Painting the Conquest: the Mexican Indians and the European Renaissance* (1992), p.221

[166] Elena Phipps, Johanna Hect, Cristina Esteras et al., *The Colonial Andes: Tapestries and Silverwork, 1530 -1830* (2004), pp. 86-87

Inca rulers, becoming a fashionable colour for the remaining nobility.[167] Several examples of colonial tapestries garments dyed in Guatemalan indigo have survived in one of the few global climates that will allow for this kind of endurance; cloaks, wedding mantles, a blue and red female dress worn 'wrapped around the body and pinned with two large silver pins,' or an early seventeenth century coca bag embroidered in blue alpaca thread.'[168] These more unique items aside, the archaeological record is replete with cheap, indigo-dyed woollen textiles.[169]

When settlers finally did 'see' indigo, it was largely as a result of official interest – the letters of 1558 evidently influenced the discovery, within a few years, of not one, but two blue dyes: indigo and logwood, both introduced to Europe as substitutes for woad. If news of demand in Spain alerted colonists to the product's potential, for the trade to develop and take hold, they also had to familiarize themselves with the techniques used for extraction, and make the investment viable – a complex process not without risks, as Pedro de Ledesma's example may illustrate. The following chapter turns to the development of these processing methods on the Peninsula of Yucatan, the gradual transition from trials and tests to the cultivation, extraction, and commercialization of indigo for export – all within an environment of increasing uncertainty as a succession of plagues devastated the native population.

---

[167] Ibid, p. 187; see also, by the same author: 'Textile Colors and Colorants in the Andes,' in *Colors between Two Worlds*, pp.269-271

[168] Phipps, *Colonial Andes*, pp. 165-169

[169] See, for example: Carrie J. Brezine, *Dress, Technology and Identity in Colonial Peru*. PhD diss., Cambridge Mass., Harvard University (2011)

Chapter 2

Cultivation and Manufacture in the Colonial Context: Indigo in Sixteenth-Century Yucatán

In February 1542, during the final phase of a protracted conquest, Francisco de Montejo '*el Mozo*' founded the city of Mérida upon the Mayan ruins of T'ho.[1] Land was distributed amongst her seventy new citizens – the best set aside for Montejo's family and friends – local officials were designated, and plans were made for construction. For most, it was a bitter end to a taxing ordeal; lacking in gold and silver, unsuitable to the great herds of cattle that might supply a profitable trade in hides, the once promising, paradisiacal peninsula would only disappoint. 'The best of these lands,' Governor Guillén de las Casas would write to the Crown, 'are of no use, nor will, nor can they ever be, because there is nothing here but stones.'[2] It was a 'sterile land,' the Spanish agreed, 'without industry or trade as there are in Peru and New Spain... where an officer has only his office, and the land is so poor even these men cannot make enough to sustain themselves.'[3]

Some chose to leave and try their luck elsewhere. A few, more enterprising settlers introduced sugarcane, livestock, domestic animals, and a variety of fruit trees from the West Indies. Most, however, seemed content to live off the tribute from their *encomiendas* – honey, wax, or cotton *mantas* – and whatever they could barter in exchange, taking every opportunity to try and complement these earnings with remunerations from the Crown. In this context, where the most obvious sources of wealth were unavailable, indigenous labour – and with it the institution of the *encomienda* – retained that particular importance it would

[1] Robert Chamberlain, *The Conquest and Colonization of Yucatan, 1517-1550* (1948), p.213
[2] 'Carta de D. Guillén de las Casas, Gobernador de Yucatán, al Rey, Don Phelipe II,' in *Cartas de Indias* (1877), pp.364-366
[3] '(Porque en esta tierra) no ay ningun trato ni grangeria como ay en el piru y la nueva españa, a cuya pretension acuden gentes, aqui solo le vale al oficial su oficio, y aun a estos (es la tierra tan corta) que no pueden ganar pa sustentarse,' AGI, México 367: 'Carta del Gobernador, Don Diego de Santillán, al Rey,' (24.05.1571), fol.165R

enjoy in Yucatán.[4] Settlements grew slowly; in 1550, Mérida 'had seventy or more citizens, that is, male householders, Valladolid perhaps forty-five, San Francisco de Campeche about forty, and Salamanca de Bacalar between fifteen and twenty,'[5] figures that remained practically unchanged three decades later.

It is likely the new settlers were not unfamiliar with indigo – harvested from the wild, used and applied for various purposes by the Yucatec Maya – when news of the Crown's interest in a fast, blue dye reached the Peninsula. Here, however, the Spanish reacted with unusual enthusiasm (there was no 'slaving, silver, or cacao' to 'divert their attention elsewhere'[6]), and by 1577 forty-eight indigo works were in operation, with an annual output exceeding 600 *arrobas* (15,000 pounds). The industry failed with spectacular speed after little more than two decades; yet during this brief, at times quite promising period, Yucatan became an unexpected stage for experimentation and innovation, trials and tests, as one historian has noted, 'that took place outside the traditional venues of guilds, universities, and humanist circles,'[7] through which a new, plantation culture of indigo was gradually developed. Evidence of these endeavours has survived in surprising detail, encouraging a case study of indigo production in the region.

The vast literature dedicated to this comparatively small, 'peculiar, and above all, interesting region,"[8] has not ignored its brief experiment in indigo; yet the venture has been approached broadly for its role within the Peninsula's larger socio-economic history, neglecting those aspects that might inform a study concerned with the dye itself, the development of cultivation and processing techniques in the Spanish Americas. While a

[4] The point has been made variously by historians specializing in the region; see the works of García Bernal, Scholes, Gerhard, and Chamberlain, cited in this chapter.
[5] Chamberlain, *Conquest and Colonization*, pp.330-333
[6] Macleod, *Spanish Central America*, p.177
[7] *Science and Empire in the Atlantic World*, p.183
[8] Manuela Cristina García Bernal, 'El afianzamiento de un precario comercio: los intercambios entre Sevilla y Yucatán, 1590-1600', *Historia Mexicana* 50:2 (2000), pp. 201-269

single commodity focus might readily be accused of unduly magnifying the relevance of a particular trade, or at the very least obscuring the wider picture, it may be justified in the present case, insofar as it illuminates an episode in the history of indigo that remains unexamined.[9] The aim of this chapter, then, is twofold: first, to shed light on the evolution of processing methods in the earliest stages of indigo production, that is, the progression from artisanal, indigenous systems of extraction, to the Spanish *obraje*; and second, to examine how the particular context of Yucatán influenced this progression, shaping the broader history of indigo in the Spanish Empire.

This discussion begins by piecing together evidence of the earliest experiments, trials, and attempts to cultivate indigo on the Peninsula – the attitudes of settlers, officials, Crown and Council towards the fledgling industry. A second section turns to the development of production methods, identifying changing practices and techniques through a close, comparative analysis of existing reports from the late 16th and early 17th centuries. A third and last part of this discussion, finally, focuses on the controversy over the use of indigenous labour in the manufacture of indigo, as it evolved in Yucatán. Involving encomenderos, local and Spanish authorities, even a passionate Defender of the Indians, the lasting conflict encouraged innovations in processing methods (that eventually made their way to the French and English West Indies), just as it contributed to the industry's rapid decline.

---

[9] An earlier, well researched, lucid article on the topic is Mario Humberto Ruz, 'El Añil en el Yucatán del Siglo XVI,' *Estudios de Cultura Maya*, 12 (1979), pp.111-152; because Ruz was working with documents held at Mexico's AGN, however, he did not include a number of relevant sources from Seville's AGI. Several of the documents mentioned in this chapter are discussed in Ruz's article, although he consulted the Mexican versions. Yet the present discussion is focused on different themes, and has approached the topic with an eye for questions related to evolution, knowledge and its circulation, or the agency of individuals in these processes, in contrast to Ruz's more straightforwardly informative piece. The indigo trade in Yucatán is discussed in: García Bernal, García Bernal, *Yucatán: Población y Encomienda Bajo los Austrias*, (1978), pp.450-451; Craig A. Hanson, 'The Late Mesoamerican Village,' Ph.D. Thesis, Tulane University (2008), pp.330-336; Nancy Marguerite Farriss, *Maya Society Under Colonial Rule: The Collective Enterprise of Survival*, (1984), p.36; Kimberly Henke Breuer, 'Reshaping the Cosmos: Maya Society on the Yucatecan Frontier,' Ph.D. Thesis, Vanderbilt University (2004); François Chevalier, *La Formación de los Latifundios en México: Haciendas y SOciedad en los Siglos XVI, XVII y XVIII* (1976), pp.159-160

The discovery of logwood on the Yucatecan coasts of Campeche shortly after indigo, both dyes perceived and pursued as substitutes for woad, meant they were often discussed together, demanding the occasional digression in the interest of contextualizing the trade that concerns us here. Yet the dialogue between Crown, officers and settlers in relation to both dyes may also illustrate the moving force behind their development into Atlantic commodities: the Empire's desire for its own, home-grown substitute for woad.

The Crown and Council's reports, requests for information, and decrees from this period on the topic of indigo, moreover, were systematically directed at authorities in New Spain, Yucatán, and Guatemala. These last two, geographically contiguous regions (intermittently part of the same Colonial jurisdiction) proved especially suitable for the cultivation of *indigofera*, and saw the earliest Spanish intervention in production systems. But while the industry had all but disappeared from the Peninsula by 1590, it boomed thereafter along the coasts of El Salvador, Honduras, and Nicaragua. In the interest, then, of following developments in production techniques and the debate over the use of indigenous labour into the first quarter of the seventeenth century, this discussion has turned, insofar as possible, to records from Central America.

The historiography, in this case, is somewhat more extensive, including Murdo Macleod's summary of production methods (the basic source for secondary material on the topic), and a more insightful, if still unsatisfying chapter in José Fernández Molina's doctoral dissertation.[10] But as Prakash Kumar noted recently: 'the early pre-Hispanic history of indigo production and the period of engagement between the native and Spanish systems has not

[10] Macleod, *Spanish Central America*, pp.178-181; José Antonio Fernández Molina, 'Colouring the World in Blue: The Indigo Boom and the Central American Market, 1750-1810,' Ph.D. Thesis, University of Texas at Austin (1992).

been explored by historians so far.'[11] Drawing on Macleod and Molina, finally, Kumar was able to state: 'direct Spanish involvement with indigo production started in the early seventeenth-century.' [12] The discussion that follows will date this development several decades earlier, hopefully illuminating how, and under what circumstances this involvement began.

I. *'Inventing' Indigo*

Pedro de Ledesma was not alone in claiming the invention of indigo as his own; two encomenderos – one from Mérida, the other from neighbouring Valladolid – sought recognition for the same 'discovery' in Yucatán. Their lives and experiences, amply documented, may frame and introduce the present discussion, illuminating the earliest stages in the development of the American indigo trade within the broader context of conquest and colonization – these were *conquistadores* who had found neither gold nor silver, men who had arrived too late for the Aztec treasures and missed the spoils of Cajamarca. But they were also settlers, turning from conquest to commerce, avid entrepreneurs seeking a source of profit wherever it might be had. They may have crossed paths and together witnessed the indigenous use of añil (we must consider Ledesma served under the Montejos at this time as well), or found a similar answer to the questions presented by discovery and settlement.

[11] Prakash Kumar, *Indigo Plantations and Science in Colonial India*, (2012), p.46
[12] Kumar, *Indigo Plantations*, p.46; this author has also argued 'Guatemala indigo...won a reputation for its high quality,' in the second half of the 18th century although, as Chapters 3 and 6 will suggest, it seems to have enjoyed this reputation already a century earlier.

Hernando de Bracamonte

The historiography of the region has singled out Hernando de Bracamonte for the honour of 'discovery'; Diego López de Cogolludo, that eminent, seventeenth-century authority on the region, dedicated a few lines to the occasion:

> The leaf of indigo was known and discovered in this land by Fernando de Bracamonte around the year of one thousand five hundred and fifty. It was sent to Spain…and approved in Segovia. So, being a valuable commodity, its cultivation increased.[13]

A more detailed version by the nineteenth-century Mexican historian, Juan Francisco Molina Solís, suggested Montejo and his men witnessed a profitable indigo trade during their incursions into Honduras,

> But amongst them, Hernando de Bracamonte was the first to introduce the industry in Yucatán, with notable improvements to its invention, for which he solicited a prize from the king.[14]

While I found no other references to the Honduran episode, it may be worth noting, as mentioned above, that Ledesma would likely have been present in the same company. There is, however, evidence that Bracamonte was among the first to cultivate indigo (and credited as such by his fellow encomenderos), that he requested a Royal dispensation in recognition of his 'invention', and in time exported the dye to be commercialized in Spain by his brother Francisco de Bracamonte (as I will return to in Chapter 3).

An account of the brothers' earlier exploits may be gathered from their *probanzas de méritos y servicios,* recorded between 1569 and 1572.[15] Hernando crossed the Atlantic in August

[13] 'Descubrió y conoció la hoja del añil en esta tierra Fernando de Bracamonte por el año de mil y quinientos y cincuenta, y habiéndose experimentado ser muy bueno por haberlo remitido a España, y haber parecido bien en Segovia, se fué aumentando el beneficio de ello por ser trato en material considerable,' Diego López de Cogolludo, *Relación de las cosas de Yucatán* (17thC; Campeche, 1954), t.2, p. 212

[14] '…mas entre ellos, Hernando de Bracamonte fue el primero que introdujo la industria en Yucatán, con notable mejoras en su invención,' Juan Francisco Molina Solís, *Historia del Descubrimiento y Conquista de Yucatán* (1896), p.861

of 1534 at the young age of 14;[16] arriving in Peru, he joined the forces of Gerónimo de Ortal for an expedition up the Orinoco in search of gold. The violent incursion proved fruitless, and after huge losses on both sides the few Spaniards to survive deserted Ortal, and with them Hernando, who returned 'lost and naked' through the jungle. Reaching Puerto Rico, he turned to Antonio Sedeño, who charged him with a company of 80 men for an expedition to the province of Maracapana; but Sedeño died suddenly, and Bracamonte took his forces to Pedro de Reynoso, resuming what would be recalled as a particularly cruel campaign. No more successful than the last, Hernando found himself yet again, 'lost and wrecked.'[17]

Sometime before 1542, Hernando joined Montejo in the conquest of Yucatán and, with his brother, was present to sign the founding act of Mérida. Granted the administration of Cuxbil,[18] he assumed the usual responsibilities of an *encomendero*, encouraging the conversion of the natives, keeping a house and arms, and marrying Leonor de Cabrera, with whom he had three sons and seven daughters.[19] His brother Francisco was less forthcoming about his earlier ventures. Like Hernando, he was granted a licence for passage with a horse in 1534 that suggested he would join the forces of Hernando Pizarro or Diego de Almagro. Yet he would mention none of this in his *probanza*. Instead, he chose to emphasize his labours in Yucatan: four years older than Hernando, Francisco had better luck, receiving the large, prosperous *encomiendas* of Tecax and Motul. There is other evidence he was close to Montejo; godfather to the conquistador's first son, Francisco built a house on the southeast

---

[15] Several copies are extant: 'Méritos y Servicios Hernando de Bracamonte', AGI, Patronato 68, N.1, R.4; 'Méritos y Servicios Hernando de Bracamonte' AGI, Patronato 83, N.4, R.4; 'Méritos y Servicios Francisco de Bracamonte' AGI, Patronato 72, N.1

[16] Testifying at a trial in 1560, he claimed to be 40. It is likely he travelled with his elder brother Francisco, although the accounts in their *Probanzas* are somewhat inconsistent.

[17] 'Y los que quedamos volvimos desbaratados y perdidos,' AGI, Patronato 68, n.1, r.4, fol.8R

[18] After 1549 he is listed as *encomendero* for *Tekit*; see García Bernal, *Población y Encomienda,* p.38 and 514

[19] In their *Probanzas,* the encomenderos of Yucatán refer often to their numerous female offspring, usually with the intention of justifying a request for Royal dispensations, to afford their dowries. The rather disproportionate number of women, however, raises some suspicions.

corner of the plaza mayor, only a few feet away from the 'plateresque' residence of the Montejos,[20] where they gathered often to play cards.[21]

Commanding small forces within Montejo's army, Francisco and Hernando were back at war some years later during the violent Maya uprising of 1546. Even more so than his brother, Francisco seems to have played a significant role in defeating the rebels. If we are to trust the witnesses for his *probanza,* he was an excellent soldier and captain, 'loved by his troops.' The Bracamonte brothers next took arms against a band of 'French Lutheran corsairs' who had attacked the neighbouring port of Campeche. Theirs is also an illustrative example of the monopoly exercised by the encomenderos of Yucatán in local government: Francisco and Hernando both held the offices (more than once) of captain, lieutenant governor, mayor, and *regidor*.[22] The encomenderos of Yucatan, as Garcia Bernal's work has highlighted, exercised a strict policy of endogamy in their matrimonial choices,[23] and the Bracamontes were linked in this way with various other prominent families that would become involved with *añil*. Other, scattered references remind us of their close contact with the Maya throughout this period – the pre-Hispanic world they witnessed and then destroyed – the ambivalence of their feelings towards a native population they had fought against, but also with, and that was now, as encomenderos, under their care.[24]

Around 1550, Bracamonte returned to his native Medina del Campo for the purpose (as stated in his license), to marry. His timing may have been motivated by the *juicio de residencia* on the elder Montejo, although he does not appear to have suffered from the

[20] Rubio Mañé, *La casa de Montejo en Mérida de Yucatán*, (1941), p.5
[21] Cogolludo, *Relación de las cosas de Yucatán*, t.3, p.390
[22] AGI, Patronato 83, N.4, R.4; Garcia Bernal, 'Las elites capitulares indianas y su poder en el s.XVII,' *Anuario de Estudios Americanos*, 57: 1 (2000), p. 95
[23] García Bernal, 'Las Elites Capitulares', p.101
[24] See, for example: Scholes, *DDQ*, p.168 & 264; Henke Breuer, 'Reshaping the Cosmos,' p.187 and 306; John F. Chuchiak IV, 'Forgotten Allies: The Origins and Roles of Native Mesoamerican Auxiliaries and Indios Conquistadores in the Conquest of Yucatán, 1526-1550,' in Laura E. Mathew and Michael R. Oudijk, eds., *Indian conquistadors: indigenous allies in the conquest of Mesoamerica*, (2007), p.175

inquest: following the dismissal of Montejo's *regidores*, with aim at terminating his control over the *Cabildo*, the Viceroy was ordered to look into Francisco's qualifications (with several others) as a replacement for the office.[25] After several years in Spain, Francisco crossed the Atlantic for a third time in August of 1555 with his new wife, Leonor de Garibay, six household servants, and four slaves for his personal service.[26] In preparation for the family's departure, Pedro Zarfate was empowered to purchase all clothing, merchandise, and any commodities 'he deemed convenient' and necessary for the passage to and settlement in the Indies.[27] By the time Francisco returned, his brother had acquired the larger *encomienda* of Tekit, where he would soon be cultivating *indigofera*.

Marcos de Ayala

In neighbouring Valladolid, Marcos de Ayala was busy conducting his own experiments. A curious, enterprising man, he began by planting mulberry bushes and growing the silkworms that fed upon them, manufacturing silk on his estate in the vicinities of Valladolid, which he exported with some success to Spain and Flanders.[28] A native of Toledo, with its 'thriving silk industry,'[29] Ayala may not have been unfamiliar with processing methods and markets. He would eventually attempt to dye the silk, 'but lacking materials from Spain… sought to search if there were some in this land…' And so it was, Ayala

[25] Cogolludo, *Historia de Yucatán*, p.193
[26] 'Licencia de Pasajero: Francisco de Bracamonte y cuatro esclavos para servicio personal', AGI, Indiferente General 425, L.23, f.132V; the license was granted on the condition that he travel with his slaves, which we may assume he did.
[27] 'Poder de Francisco de Bracamonte, de Mérida' (20.04.1555), AHPV, Protocolos 6.830
[28] What follows has been gathered from: 'Méritos y Servicios: Marcos de Ayala Trujeque' (1561) AGI, Patronato 64, R.7; and 'Méritos y Servicios: Marcos de Ayala Trujeque' (1561), AGI, Patronato 80, N.3, R.4
[29] John H. Elliott, *Imperial Spain* (1970), p. 296

claimed, 'that I experimented with all the trees and herbs in this province,'[30] discovering 'many colours, especially that of indigo and a log that in this language is called Ec,' yellow from the Maya *kante* tree, and 'another two, or three colours' extracted from the *palo negro*.[31]

But he did not do so alone: Ayala had consulted with the 'Indians of the land,' and hired master dyers from Spain and Flanders, brought at this request to the Peninsula.[32] Here, we may imagine, indigenous American and European knowledge met on common ground, with experts from altogether different traditions consulting – if not on equal terms – in a familiar trade.

The Franciscan Diego de Landa (later to fiercely oppose the use of indigenous labourers for the production of *añil*) referred briefly to dyestuffs in his *Relación de las Cosas de Yucatán*, compiled around 1566:

> There are colours in many diversities made of the inks of some trees and flowers, and because the Indians have not known how to perfect them… they fade. But those who make silk have already searched for remedies, and they say they (the colours) will be made as perfect as in those places where they are most perfectly made.[33]

The friar may have had Ayala in mind when he wrote the passage; in 1578, Feliciano Bravo, a witness for Ayala, declared he had 'not seen another person dare to do so (grow silk) in this province with as much curiosity as Marcos de Ayala has done and does.'[34]

---

[30] 'Faltando materiales de España procure buscar si avia algunos en esta tierra con q poder teñir las dichas colores y ansi fue que yo esperimente todos los arboles e yervas que avia en la dicha Provincia.' AGI, Patronato 64, R.7, fol.2R

[31] '(Habiendo descubierto) muchas colores especialmente la del añir y la del palo que se llama en esta lengua Ec;' 'Y el palo negro, de que se dan otras dos o tres colores,' Ibid.

[32] 'Información de los Méritos y Servicios de Marcos de Ayala Trujeque en la conquista y pacificación de la provincia de Yucatán y en el descubrimiento de la invención del añil y maderas para los tintes; a petición de Diego Trujeque de Ayala, su hijo.' (1591), Patronato 80, N.3, R.4, s/fol

[33] 'Colores hay de muchas diversidades, hechos de tintas de algunos árboles y de flores, y porque los indios no han sabido perfeccionarlos para que no desdigan, desdicen. Pero los que cogen la seda ya han buscado remedios y dicen se darán perfectos como en las partes que más perfectos se dan.' Diego de Landa, *Relación de las Cosas de Yucatán* (Madrid, 1985), p.176

[34] '...no a visto que otra persona alguna se aya animado a lo hazer en esta provincia con la curiosidad quel dicho marcos de ayala lo a hecho e haze,' Patronato 80, s/fol.

Around 1561, and armed with his recent discoveries, Ayala travelled to the city of Mexico, where he performed various experiments to the Viceroy's satisfaction. It seems the Viceroy also informed him of the Crown's corresponding interest in a new blue dye, news with which Ayala returned to Yucatán. Some years later, in May 1564, Don Diego Quijada, then Governor of the province – evidently also aware of official interest – wrote to the Crown with news of the discovery of two dyes, both with the potential to substitute woad. After extolling a budding trade in logwood, echoing Ayala's opinions (with whom he was well acquainted), Quijada continued: 'in these provinces there is also *añil*, a blue dye for woollens and silks, and the fields are full of the weed with which it is made. And a *vecino* in Valladolid tells me he will be harvesting twenty arrobas (roughly 500 pounds) this year.'[35]

Encouraged, Quijada pressed Ayala to pursue the matter further, and within a year, a letter to the Crown reported the *encomendero* had 'insisted much in this business,' and finally found 'how it is done.' The governor sent samples with the letter, and informed the king that some *vecinos* had begun growing 'these trees' of indigo, but were requesting a privilege for the use of indigenous labour. In familiar words, Quijada insisted this indigo was better than that of Barbary, and that 'as much and more' than what was brought from the infidel coasts could be produced in Yucatán alone. The real news, however, was cultivation; this may well be the earliest reference to the planting of *indigofera* – a Spanish development that seems to

[35] 'Dase también en estás provincias el añil, que es la tinta azul para paños y sedas, y están los campos llenos de la hierba con que se hace. Y un vecino de la villa de Valladolid me dice que coge hogaño veinte arrobas de ello,' Governor Diego Quijada to the Crown (20.05.1564), in France Vinton Scholes and Eleanor B. Adams, *Don Diego Quijada, Alcalde Mayor de Yucatán (1561-1565): Documentos Sacados de los Archivos de España*, vol.1, p.92. Some months later, in what may have been the first official request for information concerning logwood, the Crown expressed itself much as it had in 1558: a 'log' had been found 'that is much better than (woad) used in Spain,' and so 'to be excused from sending for woad to other parts outside the kingdom,'[35] a 'reasonable quantity' of the dye was to be shipped to Seville for examination.

have occurred first in Yucatán (in New Spain, as in Guatemala, the plant would be harvested from the wild into the early 1570s).[36]

The Governor's eager *vecinos* included Ayala's nephew, Guillermo de Peralta, who had heard of royal interest in the matter from his uncle, and wished to communicate his own enthusiasm for the trade.[37] Following Ayala's instructions, received by way of a written report, Peralta had also 'succeeded' in the manufacture of indigo, expertise that he would later share with Martin Ruiz de Arce and Juan Lopez de Mena. These last two encomenderos wrote to the Viceroy on January 15th, 1565, in a letter that would include a vivid account of the informal tests and trials that gradually shaped production methods – the kind of episode rarely described in surviving sources. 'One afternoon,' Ruiz de Arce related,

> …the boys brought a bit of leaves and we left them till the next morning… but not as much indigo came out as in the vat from the day before. And another day too many leaves came and I said to Juan Lopez that what was left we should leave to soak that night... And it seems, without a doubt, that we carelessly hit upon the spot that indigo needs, for soaking it from one day to the next twice as much is made than cooking it fresh... And this is the 'point' of it, to cook it in a way that it does not boil, nor heat up more than in the time of an Apostle's Creed (*credo*).'[38]

Appropriate steeping times will vary considerably depending on the alkalinity and temperature of the water employed, so it not impossible that in this particular context the leaves could be left to soak overnight before a shorter, heated maceration process (essentially an extending steeping time) with positive results – insofar as the leaves were soaked and later heated in the same vat, of course.

---

[36] See Macleod, *Spanish Central America*, p.178

[37] AGI, Indiferente 1092, R.11, D.242; see also Scholes, DDQ, p.179 – letters from these *vecinos* were sent with the Governor's letter to the Crown.

[38] '…y una tarde truxeron los muchachos un poco de hoja y quedo para otro dia manana y estaba muy marchita quando la pusimos a cozer y no salio tanto añir como la caldera del dia antes y otro dia vino hoja demasiada y dije yo a Juan Lopez de Mena que lo que sobrava lo echasemos a remojo aquella noche para ver si era mejor y parece que dimos con el punto descuydadamente de lo que a menester el añir sin duda ninguna porque echando a remojo de un dia para otro sale dos vezes mas que cosiendo asi fresco como lo traen y esto es el punto dello el cozer que no a de hervir ni a de calentar mas de enquanto se dize un credo…' AGI, Indiferente 1092, R. 11, D.242: 'Carta de Juan de Arce' (15.01.1565)

With his letter, as noted in the marginalia, Ruiz de Arce was sending a sample of the indigo produced, just a single 'loaf', he clarified, as the rest had been sold. In the end, this was one more petition to the King from yet another *encomendero*: Arce and Lopez de Mena both requested dispensation to use the Indians of their *encomiendas* in the manufacture of indigo. Yet these brief accounts may give us a sense of how practices and expertise were created and diffused, transferred from the indigenous to the Spanish, validated through empirical trials, and ultimately circulated through friends and relatives throughout the region (even in writing!), practices that – as the following section will explore further – were also quite malleable in this early period, and continually subject to revision.

In 1567, Ayala finally received royal confirmation of his *estanco* on the production of logwood in Yucatán. The document, issued in 1561, had been lost somewhere in the Viceroy's gardens in Mexico city, only to reappear once Ayala made a new request, this time with the additional demand for a monopoly on indigo.[39] Local encomenderos in Mérida and Valladolid were quick to complain:

> And it may be that by (the) sinister relation of some particular your highness grant the privilege of monopoly in the exploitation of (indigo)… from which great harm would ensue to the entire governorship… I beg (your majesty) not to allow for this monopoly to be granted.[40]

It was at this time that the Crown began to take notice of a potential trade in dyestuffs from Yucatan, and requested a 'reasonable quantity' of logwood, indigo, and cochineal be sent to the officers of the Casa de la Contratación in Seville, with the first fleet to leave New Spain. We may note the systematic trials and tests these new goods were subjected to, conducted by Spanish master dyers, with significant consequences for the

[39] In Scholes, *DDQ*, p.178

[40] 'Y podria ser que por relacion siniestra de algun particular vuestra Alteza le hace merced de poner estanco el beneficio de la dicha oja dando la facultad para que la tal persona y no otra alguna la beneficie de lo qual resultaria gran daño a toda la governacion … suplico no permita que se ponga el dicho estanco.' AGI, Indiferente 1383A, s/fol: 'Consulta de Alonso de Herrera' (1568)

product's reputation and saleability. The Governor redacted his reply on September 30th, 1568:

> A great quantity of logwood has been shipped to those kingdoms by Marcos de Ayala, by virtue of a dispensation he was given for it, as the discoverer of this dye... it was bought in Seville by the Flemish Juan de Melen Bruc, to take to Flanders, where they say it is a valuable dye, good for linens, buckrams, silks, and other things.[41]

The land, he continued, was also well disposed for the cultivation of indigo – 'a neat thing, and good for the phlegm of the Indians... who make it without burden or risk to their persons.'[42] If the industry had not grown more, it was because the natives disliked the work, a matter easily resolved with official orders to impose a tribute in indigo. A day later, however, he wrote to the Viceroy in more direct terms: 'in what concerns logwood, much has been taken to Castile from these parts, and it is not held in much esteem, as it was not well received – nor does the indigo come out so perfectly that it is had for something.'[43]

For all the governor's misgivings, enthusiasm among the encomenderos showed no indication of waning. In 1572, while Pedro de Ledesma was advocating for a monopoly of his own that would extend to Yucatan, Pedro Gómez and Francisco Pacheco, officers of the city of Mérida, resumed their accusations against Ayala:

> In this land… there is no other farming but (logwood)... and a little indigo that begins to be made… and your majesty gave *merced* of the use of this log to Marcos de Ayala … for ten years, which have passed, and we have news that he seeks for prorogation, and for a privilege in the farming of indigo. We beg your majesty…

---

[41] 'De este palo a ydo mucha cantidad a esos reinos por virtud de una merced que para sacarlo se hizo a un marcos de ayala descubridor dello por termino de diez años – comprolo en Sevilla un Juan de Melen Bruc, Flamenco, para navegarlo a Flandes, adonde dizen tiene valor por ser tinta que aprovecha para liencos, bocaçies paños, sedas y otras cosas,' D. Luis de Céspedes al Rey (30.09.1568), AGI, Mexico 367, fols.100R-101R

[42] '…es cosa prolixa pero mui a proposito para la flema de los yndios –los quales sin ninguna pesadumbre de travajo ni riesgo de sus personas lo hazen y benefician – pero como no es cosa que dello hasta aora an tributado no se dan todos a ello – si se les impusiese tributo dello lo podrian dar con facilidad ynponiendoles poca cossa para expiriencia provea vm lo que fuere servido.' AGI, México 367, fol.100V

[43] 'En lo del palo ay mucho en castilla q se a llevado destas partes y se tiene en poco porque aca no se a dado buena nueva del – ni el añir sale tan perfeto que lo tengan en algo,' Don Luis de Céspedes al Virrey (01.10.1568), AGI, Mexico 367, fol.104RV

> that no one be granted such privilege! But for all to enjoy this farming, because otherwise these provinces will be depopulated… and at much risk to corsairs.[44]

The fact of the matter was, as notary Gerónimo de Castro would argue, that the decree granted a decade earlier,

> …was won through misrepresentation, because before these provinces were conquered, the indigenous inhabitants used the said dyes and the said *palo Ec*, and after (the conquest) these dyes were used by *conquistadores* and settlers for cloths and silks... and so it cannot be said that Marcos de Ayala was the first inventor of the said dyes.[45]

That year, Francisco de Bracamonte returned to Spain with his wife, leaving his *encomienda* under the administration of Leonor's brother, Martin de Palomar. Several months before the voyage, in April 1572, Hernando redacted a legal power entitling his brother to administer his estate in Spain, that is: 'to claim, receive, and collect any and all *maravedíes*, pesos in gold, silver, jewels, slaves, beasts, cattle, merchandise, and any other things that are owed or should be owed to me henceforth.'[46] In the most explicit description of his involvement in the indigo trade, Hernando undertook to ship the dye to his brother in Seville, whom he authorized to 'create companies, sell the amount of indigo that he deemed convenient, grant deeds of obligation or sale, and any others that should be requested in the

[44] 'En esta tierra… por no aver como no ay otra granjeria alguna y si no es una que en esta tierra a aviso de un palo de tintas que ay en los montes y un poco de añir que se comienza a hazer con que los abitantes se podran sustentar de su trabajo. Y del uso de las tintas del dicho palo su magestad hizo merced a Marcos de Ayala … por diez años, los cuales se han cumplido, e tenemos noticia de que obra por prorrogacion y por merced para la granjeria del añir. Suplicamos a Vuestra Magestad sea servido de condolerse… y mandar que no se de a nadie tal merced! Sino que todos gozen en general deste bien por que de otra manera estas provincias se despoblarian… y quedarian en mucho riesgo por los corsarios.' AGI, Mexico 364: 'Carta del Ayuntamiento de Yucatán al Rey,' (08.04.1573), fol.62

[45] '(La cédula) fue ganada con syniestra relacion porque ansi que antes que estas provincias se conquistasen los naturales dellas usaban de las dichas tintas e del dicho palo Ec. E ansimismo despues que se conquistaron se an dado las tintas entre los conquistadores y pobladores dellas para el aprobechamiento de lienços...e ansi no se puede dezir el dicho marcos de ayala aber sido el primer ynbentor de las dichas tintas.' 'Contradicion' (4.03.1572), AGI, Patronato 64, R.7, fol. 89R

[46] '...aber, recibir y cobrar todo e qualesquier mrs., pesos de oro, plata, joyas, esclavos, bestias, ganados mercadurias e otras cualesquier cosas que se me deban e debieren de aqui adelante', AGI, Patronato 72, R.1, s/f: 'Meritos: Francisco de Bracamonte' (1572), 'Poder', Mérida, 6.04.1572

transactions he should concert on this mission,' that is, in the sale of indigo.[47] Hernando requested, finally, that Francisco should ask the Crown to take notice of this 'new thing', pleading – as 'one of the first inventors of it' – for a royal dispensation from paying the *almojarifazgo* or 'any other entry or exit duties on the indigo that I should cultivate, produce, and ship to the provinces of Spain or elsewhere,'[48] remitting a sample with his brother for official evaluation.

The 1570s were in other ways a decade of experimentation for the American indigo trade. Efforts were made to acclimatise New World indigo in Andalucía and the Philippines, while Asian *indigofera* species were introduced to New Spain and Central America. Among the proponents of these ventures was Francisco Hernández de Toledo, who recommended the sowing of American indigo in 'the warmer regions like Andalucía, or in those (regions) bathed by the sea.'[49] The attempt was made in 1572; that September, Viceroy Martín Enriquez sent a standard report of various administrative and commercial concerns, including an addendum on *añil*, where he presented his understanding of the trade's economic potential. Indigo, he wrote, 'is a herb of much importance because in addition to being so necessary for colours, it produces the same effect as woad.'[50] With his report, the Viceroy sent detailed instructions of the climate and conditions most propitious for the

[47] '… hazer companias con qualesquier persona, bender la cantidad de anyr que le pareciere, hazer qualesquier conciertos y otorgar en mi nombre las escrituras de obligacion venta compania e otras que le fueren pedidos con las capitulaciones que en su mision concertare…' Ibid, s/f

[48] 'Y pedir a S.M. sea servido atento ser cosa nueva el dicho añir que se llebare destas probincias e ser yo uno de los primeros ynbentores del e por mis meritos se a servido de me hazer merced de mandar que del añir que yo hiziere y labrare y sacare e ynbiare de tal probincias a españa e otras partes que no pague derechos de almoxarifazgo ni otros ningunos de entrada y salida,' AGI, Patronato 72, R.1, s/f

[49] Simon Varey, ed., *The Mexican Treasury: The Writings of Dr. Francisco Hernández* (Stanford, 2000), p. 187

[50] 'La yerba de añil es de ymportancia, porque demas de ser necesaria para las colores haçe el effecto que el pastel.' AGI, Mexico 19, N.74, s/f: 'Carta del Virrey Martín Enriquez, 22.09.1572

cultivation of this plant, and some seeds of *añil* from Yucatán. These, it was noted in the marginalia, had been received and would be cultivated in Spain.[51]

The report was later remitted to the *Corregidores* of Guadix, Murcia and Ecija with instructions to discuss its content with 'labourers and gardeners,'[52] and proceed to plant the seeds. The endeavour should be understood, Justina Sarabia Viejo has argued, within the context of a declining silk industry in Andalucía following the expulsion of the *Moriscos* in 1569, and the various efforts made to revive this regional trade. More recent studies would suggest the industry recovered with relative speed (as I return to in Chapter 4), and it may have been as a complement – to boost rather than 'revive' the industry – that these attempts were made. They were, finally, part of a larger project to expand the cultivation of indigo in the Empire, as demand increased across Europe in the early 1570s, discussed at length in the following chapter. No other evidence of these efforts has survived, and it is unlikely the venture prospered.

On 6 February 1574, Ayala's petition for a monopoly on the production and commercialization of logwood and indigo was formally refused by the Council of the Indies. Still, Viceroy Martín Enriquez remained sceptical of the new trade: 'I do not have this for a business that will amount to something, because I do not hold farms as good for Your Majesty, nor will this business come to much while the Indians do not cultivate it for themselves.'[53] Ledesma himself claimed to be unable to put his ideas for production in practice without 'many pesos of gold' for construction and cultivation.

---

[51] AGI, Mexico 19, N.74; Sarabia Viejo has published a brief article on these attempts: 'Intentos de Aclimatar Productos Americanos en Andalucía en el sigo XVI: el Añil', in *I Jornadas de Andalucía y América* (Huelva, 1981), pp.39-48

[52] 'Labradores y ortelanos,' AGI, Indiferente 427, L.29, fols.2V-3V; cited in Sarabia Viejo, 'Intentos de Aclimatar,' p.42

[53] 'No le tengo por negocio que llegara a efecto porque granjerias para Vuestra Magestad no las tengo por buenas ni que pueda venir este negocio a ser de momento como los yndios no se apliquen a benefficiallo por particulares.' 'Cartas del Virrey Martín Enríquez' (24.10.1575), AGI, Mexico 19, N. 166, fol. 1V

The Yucatecan encomenderos were undeterred; enthusiasm for indigo was high, and evidence of expansion and development in Yucatán was already quite visible, centred round the 'fertile, humid districts to the East and South,'[54] under the jurisdictions of Mérida and Valladolid. In the coming years, references to the industry swelled in correspondence from the region, including detailed relations of evolving production methods, as discussed below. Yet this growth would also coincide with a period of famine, plague, and drought on the Peninsula, to the detriment of the new trade – suspected of exacerbating conditions for a rapidly declining indigenous population – tensions that visibly shaped the contents of the surviving descriptions of production.

II. *Towards the Royal Obraje*

The particular circumstances of Yucatán – a sense that indigo presented the only way out for an otherwise stagnant region, compounded with an especially vocal opposition to the industry, resulted in a series of reports designed to convince the Crown of the dye's potential, the need for indigenous labourers and land. This rich documentation may illuminate the transition from the use of smaller scale, native techniques, to a more mature, Spanish system of extraction, a gradual evolution that has not, so far, been subjected to scrutiny.

Historians have generally assumed vat processing systems in the Spanish Americas, the British and French Caribbean, were 'clearly developed out of the Indian (that is, South and South-East Asian) prototype,'[55] expanded and improved in the Atlantic colonies, practices that were later adopted, in turn, by the indigo factories of nineteenth-century

[54] Farriss, *Maya Society*, p.53
[55] Jenny Balfour-Paul, 'Indigo in South and South-East Asia,' *Textile History*, 30:1 (1999), p.104

Bengal and Bihar.[56] Even scholars concerned with Spanish *añil* have all but ignored the question of an indigenous influence on the methods employed in the later *obrajes*, ultimately assuming an Asian influence was dominant.[57] Yet the accounts examined below suggest otherwise, drawing attention to the presence of pre-Hispanic techniques and technologies in the later organisation and form of large-scale processing facilities. Much as Prakash Kumar has argued for the broader history of the dye in this period, 'the knowledge of indigo culture was a variable one reflecting the numerous circumstances of its production and use in the world... It is this aspect of simultaneity of emergence of modern indigo knowledge that is overlooked in the current studies.'[58]

1. A Memorial on the Cultivation and Manufacture of Indigo (1573?)[59]

The earliest description of the manufacturing methods employed in the region may be found in a report from D. Carlos de Arellano,[60] *alcalde ordinario* of the city of Mérida, to the Crown, accompanied by the usual letter of praise for the new industry, with a final request for a Royal decree authorizing the encomenderos to produce *añil* within the 'Indian *pueblos* of their *encomiendas*... and with the Indians from them.'[61] The document is undated, but

[56] Kumar, *Indigo Plantations*, p.2; Balfour-Paul, *Indigo*, pp.99-100

[57] The comparison with Asian production techniques, the broader attempt to identify influences in production techniques and their evolution has not been made. Fernández Molina limited himself to stating: 'it is not clear how the colonists learned vat-processing technology,' *op. cit.*, p.111

[58] Kumar, *Indigo Plantations*, p.14

[59] 'Memoria de como se a de beneficiar el añir', AGI, Indiferente 1530, n.17, s/f; transcribed in Appendix 1. This document has been published in Sarabia Viejo, 'Intentos de Aclimatar,' pp.44-45

[60] An uncle of Martín Cortés, Arellano had arrived with his company in 1562 and married Doña Francisca de Montejo y del Castillo, daughter of 'el Mozo,' in Jorge Ignacio Rubio Mañé and Federico Gómez de Orozo, *Los primeros vecinos de la ciudad de Mérida de Yucatan* (1935), p. 27

[61] '…en los pueblos de sus encomiendas y beneficiallo con los yndios dellos.' Carta de D. Carlos de Arellano,' AGI, Indiferente 1530, n.17, s/f

likely created in 1573 (as approximated by the Archive of the Indies) and no later than 1575.[62]

Arellano began with cultivation: 'first, the hottest land must be found, and there must be water to irrigate, and the more protected it is from the ice, the better.' The land should be ploughed and weeded – an arduous task left to the Indians – and the seeds sowed 'in four by four,' making a small hole, placing the seed within and covering it lightly. The seeds should be planted at the beginning of the rainy season, around June, and where there was a means of irrigation, in early May. Properly watered, they would germinate in seven or eight days, and the plant should later be watered every third day, 'or according to the need the land might show for it.' The plant would be ready for harvesting within an approximate four months, sometimes longer. A perennial, indigo was harvested four times a year, cut or pruned so that it would regrow ('neither too high or too low'), and replanted every three or four.

A second section, on the manufacture of the dye, described three methods of extraction. As described by Jenny Balfour-Paul, and mentioned briefly in the introduction to this thesis, there are three ways, more and less complex, of obtaining indigo dye from *indigofera*. The most basic method involves combining the shrub with a fermenting agent directly in the dyeing vat, and immersing the cloth, yarn or other, within. A second requires 'compositing the leaves' first, and later drying the mass, as in the case of European woad. The third, and only method to produce 'a commodity suited to long-distance trade,' demands extracting the dye through a process of fermentation followed by oxidation: the leaves of indigo are covered in water and left to ferment. When this process reaches a 'critical stage', the shrub is discarded and the liquid beaten continuously until a precipitate of

[62] It is likely, as Sarabia Viejo has suggested, this document was sent alongside the Viceroy's samples, in 1572/3, later to be distributed in Andalucía in the course of attempts to acclimate indigo in Spain.

indigo is formed, that will gradually sink to the bottom of the recipient. The resulting 'paste' can be removed and used in this form, or filtered and dried, in which case it is usually cut into squares or shaped into balls.[63] All of the accounts below refer to this last method, hinting at the possibility that pre-Hispanic processing techniques were no less evolved than those employed by their Asian contemporaries, producing a comparable good (in both form and quality).

In the first of the methods described by Arellano, the leaves were 'thrown into a vessel (filled with water) and put to the fire' immediately after they were cut, 'or the next day at the latest.' When the water boiled, the vessel (*vaso*) was removed from the fire, and the leaves discarded. The liquid was then poured slowly into a second vessel, where it was 'beaten very often until cold' (stimulating oxidation), and finally sieved into a last vessel (*vasija*), where it was 'left to set until the next day,'

> And when it has set, the water should be removed little by little so that only the sediment remains, and this sediment must be thrown in some clay moulds in the manner of large *escudillas* (a wide bowl), and put in the sun and there the water is dried, and the 'buns' are formed.

For the second method, the leaves were placed first in several vessels, while water was heated in others. When this water was 'very hot, almost boiling', it was poured onto the leaves and left to cook the mass until it 'seems to lose its colour'. Then, the liquid was transferred into a third set of vessels where it was beaten steadily until cold, and left to set. With this sediment the 'buns' were made as in the previous system.

In a last alternative the leaves were covered in cold water and left there 'one night only,' or again, 'until it seems the leaf loses its colour.' Then the vegetation was discarded and the liquid beaten 'until it appears to turn black,' when it was passed through a 'sieve of

[63] See Jenny Balfour Paul, 'Indigo in South and South-East Asia,' pp.103-105

bristles' and left to set. After an indeterminate amount of time, the water was slowly removed and the sediment thrown onto a rough hemp cloth placed on a hole, so the remaining water drained. When the sediment was 'ready to be made into buns,' it was transferred to another *cañamazo* cloth set on a table lit partially by the sun, where the buns were 'polished as they dried.' This last method, Arellano clarified, was generally considered best.

The attempt to identify an indigenous influence in these methods is frustrated by the lack of surviving accounts describing pre-Hispanic production techniques among the Maya, and must therefore involve a degree of speculation. The first and second methods are designed for production on a smaller scale and may bear a closer resemblance, or perhaps quite faithfully reproduce, native techniques. The third method presents greater differences – fermentation and beating, for example, are conducted in the same recipient – and also incorporates new materials: a table for drying, the sieve and *cañamazo* cloth. This last utensil may be Asian inspired: it was not present in the first two of Arellano's methods, those closer to pre-Hispanic systems, and resembles contemporary practices in India.

As described by the Dutch merchant and 'expert indigo-buyer', Francisco Pelsaert in the first quarter of the seventeenth century: once the sediment had sunk to the bottom of the 'put' it was 'taken out, and laid on cotton cloths until it becomes as firm as soap, when it is made into balls.'[64] In this sense, the Yucatecan version had also been adapted to context, replacing cotton with a native hemp weave. The finished product was also different: although the same term was used, buns or *panecillos*, the sediment was extended over a table and cut, rather than dried in a bowl.

[64] Francisco Pelsaert, *Jahangir's India: The Remonstratie of Francisco Pelsaert*, (1630), W.H. Moreland, trans., (1925), p.11

Arellano's report may be compared to a description of production by Francisco Hernández de Toledo; written no more than a few years later, it incorporates elements from all three methods described:

> The way to prepare the colourant that the Spanish call *caeruleum*, and the Mexicans *mohuitli* or *tlacehuilli*, is as follows: the leaves are torn and thrown into a copper pot, filled with hot water that has been removed from the fire and left to cool, or better – as the experts affirm – cold, without having been heated at all. (The mass) is stirred well and vigorously, and the tinted water gradually emptied into a pot, or vat, which has a hole at a certain height, through which the water is drained. A sediment remains, and this is the dye, which is sieved through a hemp sack, and placed in the sun to dry, and with it some *tortillas* (or circular loaves) are made, hardened on plates placed over coals, which are stored for use throughout the year.[65]

As mentioned in the previous chapter, the account coincides with the briefer description provided in the Florentine Codex, and there is no reason to suppose Europeans had already altered these techniques in any significant way. The pot or small vat with a hole is suggestive: the vat system in the Americas, like that of India,[66] evolved to include several holes, sealed with wax (*bitoques*), that would be broken when necessary to allow the liquid to pour through, as described for Guatemala, below. Yet this type of receptacle, in various sizes, may still readily be found in the Mexican Valley. The system may also have been employed in Yucatán, and the detail escaped the reports – more general in their descriptions of utensils.

Likewise, the use of heated plates to harden the dye is not mentioned elsewhere, and may have been an indigenous practice witnessed by Hernández; again, however, the detail is

---

[65] 'Hechase las ojas picadas en un baso de cobre, o en una tina de agua caliete q se aya quitado del fuego q este ya tibia, y au mejor sera segun affirma los q tiene mas experiecia q el agua este fria, y no aya llegado al fuego, y menealas muy bien con mucha fuerça, y luego saca poco a poco el agua teñida y la pone en una olla, o tinaxa, a la qual tiene un agujero o falsete algo alto, por donde sale el agua mas clara quedado en el vaso, y haziedo asiento todo lo q de las ojas se quedo en el agua, el qual asieto q asi se haze es el color q se pretede, el qual se cuela por un saco de cañamaço, y se pone a secar al sol, y de alli se forma unas tortillas que puestas en platos o vacias sobre las brasas se endurezen, y se secan desta manera, y se guardan para usar dellas en todo el año...' Francisco Hernández de Toledo, *Quatro libros de la naturaleza y virtudes de las plantas y animales que estan receuidos en el uso de la medicina en la Nueva España*, 1615 (*World Digital Library*), Libro Primero, Parte Tercera, Cap.XII, pp.55-56, my trans.

[66] Syed Ali Nadeem Rezavi, 'The Design of Pre-Modern Indigc Vats in North India: A Study of Seventeenth and Eighteenth century Indigo Vats of Bayana and Kol Indigo Tracts,' *Journal of the Asiatic Society*, 51:3 (2009), p.74; and Pelsaert, *op. cit*, p.11

significant, evidence that indigo may have been commercialized in this dry, circular form before the Conquest.[67] As for the copper vessels, it is unlikely their use preceded the Conquest, and may more closely resemble the small copper cauldrons used in European dyeing. These 'genealogies,' or 'lines of influence,' to use Prakash Kumar's expression, are difficult to trace with any certainty; yet they may still point to the multiple sources and fluid character of knowledge as it related to production processes, the 'composite nature' of evolving systems.

The most relevant divergence in Arellanos' methods relates to the temperature of the water used for fermentation, perhaps the earliest focus of debate in the manufacture of indigo. Traditional processing methods in pre-Hispanic Mesoamerica seem to have involved heating, but the use of cold water would lower costs and appeared to work just as well. But perhaps not: the highest quality indigo produced in Guatemala was made by the indigenous *poquiteros* (or small scale producers) through hot water extraction; the same was true of artisanal production in India, where hot water (affordable only on a smaller scale), was associated with a higher quality product.[68]

We may wonder whom Hernández de Toledo had in mind when he wrote of 'those with more experience,' whether they were Indians or Spaniards, and if he was not, perhaps, referring to Pedro de Ledesma. In 1575, Viceroy Martín Enriquez wrote to the Crown:

> In what concerns indigo, I sent for Pedro de Ledesma and was informed of the way in which he thought (this trade) could grow and be of such use as he had written. And his resolution was to say that at present it was made in small vessels and with hot water, that he would make it with cold water and in vats that held a greater quantity, and that for this, houses and other mills were to be made.[69]

---

[67] In the larger factories of late Colonial India, indigo paste was boiled 'to prevent further fermentation,' which may explain the indigenous American practice; Balfour-Paul, 'Indigo in South and South-East Asia,' p.106

[68] On hot water extraction, see Molina, *Colouring the World*, pp.127; and Kumar, *Indigo Plantations*, p.71-76

[69] 'Para lo que toca al añir embie a llamar a Pedro de Ledesma y me ynforme del de la forma que pensava tener para que fuese tan adelante y de tanta utilidad como avia scrito. Y su resolución fue dezir que aora se benefficiava con vasijas pequeñas y con agua caliente. Y que el daria forma como se benefficiasse con agua fria

Two years later, forty-eight indigo obrajes with these characteristics were operating in Yucatán. Ledesma could have been describing an existing system to the Viceroy, but it seems altogether possible he did, in some way, influence the development of the *obraje* in New Spain.

The import of an Asian influence in this evolution cannot really be determined, but we may say that it shares features with Arellano's third method and even more with those that follow. Pelsaert's account of production as he would witness from Surat to Agra, remains a key source for the reconstruction of processing methods and materials in late 16th and 17th century India. The more relevant passages to the present comparison may be cited:

> The yield of one bigha is usually put into each put,[70] and allowed to steep for 16 or 17 hours, the put being about 38 ft. in perimeter, and its depth the height of an ordinary man; the water is then run oft into a round put, constructed at a somewhat lower level, 32 ft. in circumference and 6 ft. deep. Two or three men standing in the put work the indigo back and forward with their arms, and owing to the continuous motion, the water absorbs the dark-blue colour. It is then allowed to stand again for 16 hours, during which the matter, or substance, settles in a bowl-shaped receptacle at the bottom of the round put. The water is then run off through an outlet at the level of the bottom; the indigo which has sunk down is taken out, and laid on cotton cloths until it becomes as firm as soap, when it is made into balls.[71]

This system may be kept in mind as we turn to the next account, evidently quite similar, but hardly a reproduction; increasing the scale of production through larger vats, as practiced in India, could have reached Ledesma (or others) through Portuguese traders, or other networks, but the Yucatecan encomenderos created their own, peculiar, and rather less efficient version.

---

y en pilas que cupesen más cantidad y que para esto se avian de hazer casas y otros ingenios.' AGI, Mexico 19, N.166, s/f: 'Carta del Virrey Martín Enríquez,' 24.10.1575

[70] As W.H. Moreland suggests: 'the description... points to receptacles not very different from the modern vats,' in Pelsaert, *Jahangir's India*, p.11

[71] Ibid, pp.11-12; in Indian Bayana, as in the Central American *pilones*, a single vat was used for fermentation and beating in the 17th and 18th centuries; see Kumar, *Indigo Plantations*, p.302

2. Of the Plant and Industry of Indigo (1577)[72]

In May 1577, the officers of the Mérida Cabildo: Francisco Pacheco, Pedro Goméz, and Francisco de Castro (who had earlier opposed Ayala's request for an *estanco*), sent a report to the Crown in two parts: a first on the geographical distribution and collection of logwood, and a second, more detailed description of *añil*.[73] 'We have more news about this plant,' the latter began, 'because it has been grown by the Spanish in these parts for twelve years, although the industry has gained strength in the last four.' The report would describe a much more evolved system of extraction, on a visibly larger scale: vessels had been replaced by vats, which were now located within the edifice of an *obraje*, or 'house of *añil*,' with a water mill to supply it – possibly the earliest description of this kind of structure in existence. The context had also changed: every opportunity was taken to downplay the amount of work indigo posed to the Indians.

The account of cultivation was similar to Arellano's, re-emphasizing the need to weed the land with regularity, adding the recommendation (of some) to soak the seeds the night before planting, and delaying the initial harvest to six or seven months after sowing. The plant grew well in the entire Peninsula, because it was warm and humid, except Tabasco, where excessive rain interfered with the plant's cycle. Harvesting was described more specifically than before, with an emphasis on the facilitating use of 'knives and shears.' 'Until now,' the report maintained, 'the Indians have not grown it, but only the Spanish, because it is costly, and requires great care.' The comment reveals an important degree of familiarity

[72]AGI, Indiferente 1530, N.4, 'Del arbol del hec y del añil,' (1577); the text has been transcribed in Appendix 2.
[73] This document has been described as one 'of particular importance, because it provides perhaps the first Spanish description of logwood, and the regions where it grew,'[73] Contreras Sánchez, *Historia*, p. 27; among the more interesting documents relative to the early history of logwood are the letters of the Italian Francisco de Armas to the Spanish Crown, where he claimed to have found the 'secret' to achieving a perfect black with logwood, a development that has usually been dated several decades later; see AGI, Indiferente 1530, N.18: 'Relación de memoriales dados por Francisco de las Armas, sobre la aplicación del palo de Campeche, cédulas y consultas sobre dicha materia,' (undated), and AGI, Patronato 171, n.1, R.23: 'Francisco de Armas, italiano: Tintura con Palo Campeche' (1575).

with the plant – rarely will *indigofera* processed from the wild yield a sufficient or high quality dye, 'producing good indigo requires diligent cultivation.'[74] And in this respect we may also recall Diego de Landa's brief comment on the poor quality of native dyes, most likely including indigo.[75]

After cutting, the leaves were thrown into baskets and carried in carts or on horses to the house of the *ingenio* – that is, not on foot. Here, a large, shaded corridor was made, where the leaves were left from one day to the next,' but not longer, as the mass would rot within three days. The excessive heat still threatened the harvest, and so the piles had to be 'shaken several times between day and night.'

The report continued with a description of 'the shape of the house and *ingenio*' (see fig. 2.2). A tall water mill (*noria*) was built next to the main building, preferably located on sloping ground. Mules would carry water from here to the highest vat within the edifice, which could hold some 150 liquid *arrobas*.[76] Two cauldrons were placed underneath to heat the water until it 'could not be suffered by the hand', when it was released through pipes into a second vat, below the first, that contained the leaves. The mass was then covered with wooden planks or stones (keeping the 'stench' from leaking out), and stirred three or four times within the hour, so that the leaves should 'cook' (or macerate) evenly. Fermenting the leaves in an interior would have increased incentives to cover the vat, and we may note that while the practice was employed in Guatemala, it would only be introduced to India (and from the Caribbean), in the nineteenth century.[77]

---

[74] Balfour-Paul, 'Indigo in South and South-East Asia,' p.103

[75] See n.30 in this chapter

[76] It is difficult to say how much this amounted to, the liquid arroba varied considerably between regions and according to the good measured (the arroba of wine was slightly over 16 liters, while that of olive oil was 12,5 liters)

[77] K.K. Trivedi, 'Innovation and Change in Indigo Production in Bayana, Eastern Rajasthan,' *Studies in History*, 10:1 (1994), pp.64-65

When the mass had reached its 'point' – a decisive moment that should be 'carefully considered,' the leaves were discarded and the liquid released through 'thick pipes' into a third vat, next to the last, where it was beaten continuously for several hours. In Guatemala, the beating seems to have been initially performed by indigenous labourers standing within *canoas* (wooden troughs) or *pilones* (large mortars), a hazardous activity discussed further below. While there is no specific evidence of the practice in New Spain or Yucatán, the description of the beating process in this particular report suggests that either for this, or other reasons (even beating from without should have been exhausting), methods had evolved:

> (In this vat) there is a wooden wheel placed on a long axis that comes out through a window, to the exterior of the house, where it is attached to two wheels in a wooden contraption, rotated by one or two mules as quickly as possible, making the wheel within (the vat) move at great speed, and beat the water in a half hour or less, until the indigo is seen to be ready.

It was important, finally, to stop the beating in time, 'neither before (the liquid) has reached, nor after it has passed the necessary point.' The liquid was then allowed to flow through two separate ducts, and passed through sieves placed over the last two vats, 'which are called settling vats (*pilas de asentar*).' Within a day, sometimes less, the sediment would sink to the bottom of these vats, and the remaining water was drained from the building. The sediment was placed in hemp sacks (*capirotes de manta*) where it was left for another day, or until the water had evaporated – and then, the indigo was made 'to perfection.' From here, it was removed with a trowel (or similar instrument), and thrown over some cloths set on tables under the sun, or if the weather failed, in a high abode with racks made 'for this purpose'. When it was 'half dried', the paste was cut and made into buns of four fingers in four and one finger thick,' and left to dry completely before being stored.

The most critical moments in the process, we may observe, had already been identified: first, the point at which to interrupt fermentation (the steeping time), and second, when to stop the beating. Whereas the earlier report used the approximation: 'when the mass looses colour,' this document referred to a 'point', a term used consistently for the next three hundred years. The determination of these elusive moments – fundamental to the quality and quantity of the dye produced – remained unresolved well into the nineteenth century, the subject of endless discussion (on a global scale) amongst manufacturers.[78] But as Beauvais-Rasseau would conclude: 'in this art, no specific rule is laid down for the time or fermentation, nor for that of beating, as both these points depend on the quality or body of the plant.'[79]

The evolution of machinery for the beating process – clearly an American development – may be highlighted: it is likely the smaller estates continued to use paddles turned manually, while the larger plantations had wheels inserted into the vat, as described, rotated by mules or, in time, water-wheels (see fig. 2.3). The influence of restrictions on the use of indigenous labour in the development of these technologies, here before anywhere else, seems evident. As for the debate on water, although the notion that it might be used cold was already in circulation, it had still to be adopted in Yucatán. A simple means to reduce costs, the heated vats were soon discarded, once producers found 'the fermenting leaves cooked the mash sufficiently.'[80] It would be wrong, therefore, to suggest an excessively linear model of development; the evidence indicates various systems and

[78] As discussed further in the Epilogue.
[79] 'L'art n'indique point de regle précise sur la durée de la fermentation & sur la mesure du battage, parce que ces deux points dépendent de la qualité our corps de l'herbe,' M. de Beauvais Rasseau, L'Art de L'Indigotier (facs., 1770), p.35; cited in Kumar, *Indigo Plantations*, p.45
[80] Chevalier, *Grandes Latifundios*, p.73

practices coexisted in this period, where the presence of an indigenous influence could be more or less marked.

The officers of the Cabildo calculated the cost of these manufacturing units at 2000 to 3000 pesos, not an insignificant investment. Yet the system described for Yucatán is especially elaborate, as the accounts examined below may illustrate, incorporating various, costly features unique to this particular context. The construction of an edifice is the most blatant example, an unnecessary, less than optimum choice for fermenting vegetation, that does not seem to have been employed elsewhere – on a Global scale, there is no evidence of fermentation and/or beating being carried out indoors. It may have been an attempt to protect the production process from rainfall, but these facilities may also have been more readily available than we suppose: among the accusations made against the indigo producing encomenderos, was their use of the stone houses of the native *caciques* for their *obrajes*.

The report indicated forty-eight *ingenios* were in operation, producing an approximate 600 arrobas each year, with the pound of indigo selling for two *pesos de tepuzque* (16 *reales*), a *tomín* (in this case the equivalent of one *real*) more or less depending on the dye's quality (*bondad*).[81] If we assume, as later reports would claim, that those manufacturing indigo were, with few exceptions, encomenderos, and, further, that some producers might have shared processing facilities, then the degree of involvement is considerable – of 100 *vecinos* in Mérida, 60 were encomenderos, while the ratio in Valladolid was 50 to 36. A final recommendation encouraged drying the dye as much as possible, reducing its final weight, but also, and significantly, because this was how it was preferred in Spain: 'they ask that it be blue over purple, and light.' The sediment dried on tables, as opposed to *escudillas* or plates, was likely more compact, containing less humidity – a product more suitable for export. But

[81] In 1576, the pound of indigo sold in Seville for 28-30 *reales*; see Chapter 3.

producers were also well informed of the preferences and standards of European master dyers – 'purplish hues' were considered indicators of high quality well into the 18th century[82] – and, insofar as possible, modelled their goods accordingly.

3. An account of the sowing and quality of jiquilite, of the land and times in which it is made, what must be done to sow it, how it is harvested, and worked into a dye; and of the labours imposed upon the Indians, and the dangers that may follow from them (1612)[83]

In 1610, the Crown delivered its own instructions for the cultivation and manufacture of *añil*, setting a standard for production, in what would come to be known as the 'royal obraje' (see fig. 2.4).[84] Little over a year later, Juan Maldonado de Paz, Crown attorney for the Captaincy General of Guatemala, responded with a report of his own, expanding upon some of the issues raised by royal decree, and suggesting minor amendments. Both documents shared the 16th century preoccupation with cultivation, dedicated largely to a detailed description of the process.

Whereas the Crown recommended, quite soundly, that a year should be allowed to pass before the first harvest, Maldonado proposed a short five to six months instead; the harvest, he clarified, could be delayed somewhat longer, but done before the plant had flowered, as it would otherwise yield 'little dye and not as good.' A novel practice was the use of cattle to 'bury the seed' and weed the land, 'as no animal or bird' would eat the indigofera – although Maldonado would clarify horses and mules worked best, as cattle *would*

---

[82] Balfour-Paul, 'Indigo in South and Southeast Asia,' p.106

[83] 'Relación de la siembra y calidad del jiquilite y de las tierras y tiempos de beneficio que se le a de hacer para sembrarlo como se coje, y beneficia hasta hacerse tinta, que trabaxos padecen los yndios y los daños que dello se les pueden seguir,' AGI, Guatemala 13, R.4, n.41: 'Carta de Juan Maldonado de Paz, fiscal de la Audiencia de Guatemala,' (31.05.1612); that the term employed generally in Guatemala even at this early stage for indigo should be Aztec in origin suggests the degree of influence from New Spain in the developing Central American indigo culture.

[84] AGI, Guatemala 386, L.2, fols.557R-559R, 'A la Real Audiencia de Guatimala (sic) avissando la de la forma que aca se entiende que se beneficia el añir para que ynformen de lo que se les ofrece,' (01.11.1610)

occasionally eat the plant, or otherwise damage it with its horns.[85] These inconveniences notwithstanding, cattle grazing would be combined with indigo plantations on the Central American *haciendas* well into the eighteenth century. In Guatemala, as described by Macleod, the agricultural cycle of indigo would include a single harvest, between June and August, with production remaining 'dormant' for the other 'ten months of the year' – all of which rendered slave labour unprofitable.[86] Without going further into the details of cultivation, we may observe that planters were conscious of the influence of cultivation on the dye content of the plant, and actively attempting to increase their yield.

As for the manufacturing process, the *obraje* described differs noticeably from the 'houses of añil' constructed several decades earlier in Yucatán. It is a simplified version, reducing the costs of the edifice and materials, and may represent an alternative rather than an evolution of the Yucatecan building. To begin with, it is no longer a 'house' – which may have been an option in Yucatán where raw materials (and the Indian *caciques*' stone houses) were available – but was otherwise unnecessary. Heating (and the materials involved), have been discarded, and the final stages in the process simplified as well: instead of sieving the liquid after beating into a separate 'settling vat,' the precipitate was left to settle in the same vat, or *pila de batán*. Processing, we may note, was organized as in India, with the large vats similarly placed. But while the Central American (and later Caribbean) vats were rectangular, masonry structures, the Asian version was circular (and more efficient, one historian has suggested). From Guatemala, the rectangular vat would reach the Caribbean, and finally make its way to India in the nineteenth century, as K.K. Trivedi has proposed, with less than beneficial results.[87]

---

[85] Described in Macleod, *Spanish Central America*, p.179
[86] Ibid, p.190
[87] Trivedi, 'Innovation and Change,' p.63; and Kumar, *Indigo Plantations*, p.302

There is a renewed insistence, in both accounts, on processing the leaves fresh, cut in the morning and steeped at the earliest moment possible. The earlier debate on the temperature of the water used for steeping had also evolved; whereas the Crown recommended using cold water from a clean source (ideally building the *obraje* close to a river or stream), advising against the use of water from swamps or marshes, Maldonado maintained otherwise: the warm water of swamps and springs was actually best, as it 'cooks the herb better.' Whereas the Crown referred quite generally to the steeping time as extending until 'the tenth hour of the following morning,' Maldonado was rather more exact, indicating the mass should be left an ideal eighteen hours, sometimes more in the steeping vat (*pila de remojo*), and the process interrupted when the liquid 'foams and turns blue.'

The second point (at which to stop the beating process), had also gained importance, and the liquid was observed for 'different foams' until it was judged ready, but a sample of the liquid was also drawn out in plates, to see if the precipitate was forming.[88] In Guatemala, this second 'point' was eventually determined by specialized *punteros* (or 'professional point-watchers).[89] The final drying process remained unchanged: the sediment was sieved through hemp cloths (although the Crown referred to the much more European cotton *angeo*), and dried on tables under the sun. While neither the Yucatecan, nor the later accounts mentioned the use of precipitants, it seems likely they added lime (readily available throughout the region), as described in later descriptions of production. The Crown turned, finally, to the problem of labour:

> (We are informed) that in this industry many people become ill and die, because this herb is so strong... that it eats their flesh; and when they (the Indians) beat the liquid,

[88] As the beating increases, oxygenation converts indoxyl into indigo, and the foams on the surface of the liquid gradually turn from a greenish-white to deep blue.
[89] Macleod, Spanish Central America, p. 180; see also Juan de Dios del Cid (attrib.), *El Puntero Apuntado con Apuntes Breves* (1746), and José Luis Reyes 'Acotaciones para la Historia de un Libro,' (1960), for questions relative to the dating and authorship of this work.

> they raise a smoke so evil it penetrates the brain and causes other damages, that have caused the death of many Indians…

Maldonado's response would clarify the dangers involved: first, were the fumes released by the fetid mass when it was removed from the vat and discarded. Second, but more harmful, was the beating process, which in the smaller estates was conducted within the *pilones* or canoas by Indian '*pileros*'. Standing half submerged in 'warm, fermenting liquid' for several hours was enough for the workers to 'catch a cold and die' – a most 'unpleasant job' that may be imagined by looking at photos from late nineteenth-century indigo factories in Indian Bihar.[90]

By the time Maldonado described these adverse effects, however, almost half a century had passed since the Crown issued a first, of many restrictions on the use of indigenous labour in the manufacture of *añil*, beginning what José Molina has quite accurately described as a '150-year contradiction.'[91] Repeatedly flouted, on occasion relaxed by the Crown, but at all times a matter of contention for planters, traders, and authorities,[92] these various measures had little effect on the Central American industry (even if those involved felt otherwise), topics that, for the seventeenth and eighteenth centuries, have been covered extensively by Macleod, Manuel Rubio Sánchez, and Robert Smith.

Regarding the origins of these restrictions, however, historians have seemed content to rely on Macleod's succinct explanation: work in the early Guatemalan indigo works was hazardous, and by the time technologies evolved to reduce these dangers, 'it was too late. The detailed reports and complaints were already in.'[93] But when, in 1581, the Crown finally

---

[90] Jenny Balfour-Paul, *Indigo*, p. 110-111

[91] Molina points to the 1581 decree as the earliest Royal prohibition of the use of Indians in the indigo industry, but restrictions in this particular sector may be dated back to a first decree in 1563, followed by a second in 1579, noted later in this chapter.

[92] An earlier, general prohibition on the use of indigenous labour in harmful activities was passed after a first epidemic, in 1542; see Smith, *Indigo*, p.145

[93] Macleod, *Spanish Central America*, p.185

prohibited the use of indigenous labour in the manufacture of *añil* under any and all circumstances, it was a decision heavily influenced by developments in Yucatán – a long, rather less straightforward affair.

III. *'Before there are no more Indians'*

Around 1575, as the new industry gained momentum, it also drew increasing opposition from the Franciscans, Bishop Diego de Landa, and Francisco Palomino, lay 'defender of the Indians and of the faith in the provinces of Yucatán.'[94] The controversy would centre around the jurisdiction of Mérida (the administrative capital and home to the Bracamontes), where production seems to have been most intense. On the other side, supporting the trade with relentless enthusiasm, were the Governor and officers of the Cabildo (all with investments in indigo). The resulting dialogue between these two parties and the Crown is at once chaotic and repetitive, filled with personal accusations, blatant lies, and endless descriptions of minor altercations.

Indigo was hardly the source of hostility between the Franciscans and encomenderos – relations had soured after Landa's violent persecution of the Maya more than a decade earlier, and worsened in 1572 when Palomino reported a fourth of the indigenous population had died, and tributes should be recalculated,[95] but it would reinflame these tensions, with significant consequences for the industry. A close examination of the

[94] A position first held by Bartolomé de las Casas. In 1520, the Crown granted bishops of the Indies the faculty to designate 'Protectors of the Indians.' Francisco Palomino would hold the position in Yucatán from 1569 to 1586, although he was temporarily removed from office in 1579. On the office in Yucatán: Caroline Cunill, *Los defensores de indios de Yucatán y el acceso de los mayas a la justicia colonial, 1540-1600,* (2012), and on Palomino in particular: Sara Miller, 'Francisco Palomino: Protector y Defensor de los Indígenas,' *Mesoamérica*, 6:9 (1985), pp.133-153

[95] As the *Cabildo* of the Indian *pueblo* of San Francisco de Campeche wrote to the Crown in 1566: 'we cannot pay the tribute, and they want us to pay for those who have died,' cited in Sergio Quezada: 'Tributos, Limosnas, y Mantas en Yucatán, Siglo XVI,' *Ancient Mesoamerica*, 12 (2001), p.76. Palomino's earlier, successful efforts to have these tributes reassessed are discussed in this article, p.75

conflict's progression highlights the attitudes and agency of the parties involved, the opportunities and complications presented by a distant Crown – who should have been confused, at best, by the massive contradictions present in reports from the Peninsula.

In late March 1575, Governor Francisco Velazquez de Gijón presented a forceful defence for the production of indigo: through his own auspices, the industry had grown, with some *vecinos* extracting 'a thousand pounds each year, which they have sold for 20 *reales* the pound, allowing them to live with less need and good hopes.'[96] Yet this had all been threatened by a royal decree restricting the use of Indian labourers on indigo plantations and works to those who would 'voluntarily' occupy themselves in this industry – hopeless ambitions, the governor insisted: the natives were reluctant to work even for their own survival.[97] Pressing his case further, Gijón subtly suggested the encomenderos might be prepared to desert the *Peninsula* if they were thus limited in the production of *añil* – the only industry in this barren land; and if the prospect of an invasion of French corsairs on the Southeastern frontier of New Spain were not enough to convince the Crown, he described the other foreseeable result of restrictions to the use of indigenous labour:

> …even if some of those who make indigo could buy slaves (which they can't) I think it would be best to give them Indians, for many reasons. First, because the Indians are not burdened with this crop, because they are needed mostly to harvest the leaves, which even small boys can do, as the plants are short and thin. And introducing blacks into it (the industry) would be to put the land at risk, because the Indians are many and the Spanish few, and if they should ally with the blacks…[98]

---

[96] '…a avido algunos vezinos que an sacado a mil libras por año y vendido a veinte reales cada libra de cuya causa tienen de bivir con menos necessidad y buenas esperanças.' AGI, México 359, r.4, n.15, s/f: Carta de Francisco Velázquez de Gijón, Gobernador de Yucatán, 26.03.1575

[97] As Farriss observes: 'Spaniards in Yucatán found something perverse, if not passively defiant in the Maya's ability to content themselves with a handful of tortillas and beans, a miserable hut, and no more possessions than they could carry on their back.' Farriss, *Maya Society*, p.49

[98] 'Porque acaso que algunos de los que hacen el dicho añir pudiesen comprar los eslavos necesarios (que no pueden) tengo por mas acertado se les den yndios por muchas raçones, una que como dicho los yndios no son bejados en esta grangeria porque para lo que son mas necesarios es para coxer la hoja y esto lo pueden hazer muchachos muy pequeños por ser las plantas bajas y delgadas y meter en ello negros seria poner en riesgo la tierra porque los yndios son muchos y los espanoles pocos y si se hiziesen a una con los negros…' Ibid.

With equal fervour, Gijon denounced the activities of an ever-meddlesome Palomino, who had been busy antagonizing a third, of five successive governors he succeeded in falling out with. Palomino's accusations of abuses perpetrated upon the Indians, the governor insisted (after reading a copy remitted by the Crown), were nothing but the 'lies and exaggerations' of a 'restless and passionate' man.[99] His claims found support in letters from the Cabildo:

> This land had come to such extremes of necessity, that we aspired to no other remedy but to inconvenience your majesty for aid, when Francisco Velazquez de Gijón was charged with her government, and inspired by God encouraged this new industry of a plant called añir…[100]

For this industry to grow, the Cabildo requested 'two things': first, permission to employ native labourers in their 'free time', paying for their work, 'or to be more accurate, occupation of their time, because all they do is cut the leaves ... which can be done by boys of eight or nine.'[101] Second, they asked the king to leave Gijón in office for as long as possible, because 'he understands the land, and knows its settlers, as a result of which there is general contentment.'[102] Palomino disagreed, and sent a second memorial condemning the industry and producers of indigo in February 1576, suggesting, further, that in an attempt to influence his actions Don Carlos de Arellano had been buying up his debts. In a letter dated that same February 28th, Bishop Diego de Landa intervened, bluntly summarizing the state of affairs:

---

[99] '...certifico a vra. mag. que es hombre ynquieto y apasionado.' AGI, México 359, r.4, n.15, s/f

[100] 'Avia llegado esta tierra a tanto estremo de necesidad que ya no se aspiraba a otro remedio que a ynportunar a v.m. por algun socorro al tiempo que nos hizo merced de embiar a fco. velazquez de Gijón con cargo del govierno della lo qual ynspirado por dios dio faborecer una nueba grangeria de una planta que se dize añir....' AGI, México 94: 'Carta de los oficiales del Cabildo de Mérida,' 20.01.1576

[101] '… dos cosas: una que los indios naturales nos ayuden en los tiempos desocupados segun la orden que a vuestros governadores paresciere que conbiene pagandoles su trabajo o por hablar mas propio ocupación de tiempo porque lo que ellos hazen que es deshojar una planta... que pueden hazer muchachos de ocho o nueve años.' Ibid.

[102] '…porque tiene entendida la tierra y conoscidos los moradores della de cuya causa ay contento general.' Ibid.

> The Indians are dying of maltreatment, and Francisco de Palomino is persecuted for defending them, and the problem is they make them tend to their [the encomenderos'] crops when they should be caring for their own.[103]

Bearing in mind the poverty of his diocese, further, Landa had attempted to make the encomenderos tithe in indigo, but despite his censures they had still not 'and will never do so.'[104] Rumours of the Bishop and Defender's communications seem to have reached the officers of the Mérida Cabildo, Gómez and Pacheco, who sent a hurried defence to the Crown –along the same lines as the governor, but now with more (convincing) details:

> And if priests or friars or defenders should inform your majesty that it is not convenient for indigo to be made, because it dangerous for the Indians, your majesty must understand that it is not… boys can harvest (the plant) as well as men because it is tender… and now by order of the governor the leaves are brought with beasts and wagons…and the water the Indians used to carry themselves is drawn by beasts… and everything that was done by hand is now done by beasts… and this is the truth.[105]

It is unlikely the Council of the Indies had received these reports, when in June 1576 they instructed the governors of Yucatán, Campeche, and Tabasco 'to encourage the production of indigo however possible, to do everything necessary for this trade to expand.[106] By the time news of this much awaited, official encouragement reached the Peninsula, however, so had the plague. The disease spread with force from the Central Mexican Valley, reaching the Peninsula in September, when a malnourished, overburdened native population

---

[103] 'Y los yndios mueren por malos tratos y Francisco Palomino es perseguido por defenderlos, y el tema esta en que los hacen hacer las grangerías de los españoles cuando deberían estar cuidando de las suyas.' AGI, México 369, fol.29R: Carta del Obispo de Yucatán, 28.02.1576

[104] '… ni lo haran jamás,' Ibid.

[105] 'Y si acaso frayles defensor ynformazen a v. m. que no conviene que se haga añir por ser cosa de mucho trabajo para los yndios, entienda v.m que no lo es… es cosa fácil porque los muchachos la cogen tan bien como los hombres por que es tierna y no se lastiman las manos... y ahora por orden del governador se trae con bestias y carretas adonde pueden andar y el agua que solian sacar a brazos lo sacan en bestias agora... que todo lo que se hiço a mano lo traen bestias… y esto es la verdad.' AGI, México 365: Carta de los oficiales reales de Yucatán, (22.03.1576), fols.94R-98R. This letter also includes a brief reference to Bracamonte, supporting his own claim for a privilege (not a monopoly, of course), an indication of his proximity to the officers of the Mérida Cabildo, speaking to the division of loyalties on the Peninsula.

[106] '…ayudasen y favoreciesen en todo lo que conviniece y fuese necesario para que engrosase.' AGI, Patronato 171, n.1, r.23, s/f: Cédula para que el gobernador de Yucatán ayude al beneficio del añir, y avizen del beneficio della, Aranjuez, 04.06.1576

succumbed in massive numbers to the violent, still unidentified *Cocolitzli*.[107] That November, Palomino resumed his correspondence to the Crown with a detailed account of the miseries afflicting those in his care.

> …the natives have diminished greatly since this industry of indigo began...because the time to sow indigo is the time when the Indians sow their *milpas*... and when they weed the indigo, is when they must weed the maize. And when they harvest the indigo and [make the dye] is when the naturals sow their beans and other vegetables, which give them as much sustenance as maize.... and since this industry began they die of hunger.[108]

The accusations may readily be substantiated; indigo and maize were cultivated shortly before the rainy season, and both required regular weeding at specific stages to avoid the loss of soil nutrients to competing plants. If we take into account the additional interruptions supposed by harvesting and processing, we can assume it would have interfered significantly with the *milpa* system used by the Maya. If, as Pedro de Ledesma would suggest, a pound of indigo could be made with six *cargas* of plant matter (some 300 pounds), then the 15,000 pounds of dye reportedly produced in 1576 would imply the harvesting and processing of 4.5 million pounds of *indigofera*[109] – so we may doubt whether Palomino was even exaggerating.

Encouraged by the Crown, the Defender continued, settlers had rushed to the trade, and now everyone was making indigo – except for 'the bishop, the friars, myself, and one or another *vecino*.'[110] They were taking the lands of Indian pueblos and using the homes of

---

[107] Rodolfo Acuña-Soto, David W. Stahle, Matthew D. Therrell, et al., 'When half of the population died: the epidemic of hemorrhagic fevers of 1576 in Mexico,' *FEMS Microbiology Letters*, 240 (2004), pp.2-3

[108] 'Después que se dio en esta grangería del añir los naturales van en gran disminución... que quando siembran este añir es al propio tiempo que los yndios siembran sus milpas... y cuando desiervan (sic. desherbar) y escardan el añir es quando an de deservar el mayz y quando le bienen a sacar el dicho añir y hazer el efeto que del se presente es quando los naturales siembran sus frigoles y otras legumbres que les es de tanto sustento como el propio mayz por manera que el añir y el mayz todo es en un mesmo tiempo... y despues que se dio esta grangería mueren de ambre.' AGI, Mexico 100, s/f: Carta de Francisco Palomino al Rey, 10.11.1576

[109] The carga, in this case, refers to the approximate load that could be carried by a single individual (two *arrobas*, or 50 pounds), as specified by Ledesma: 'que de cada 6 cargas se sacara una libra de añil, es cada carga lo que puede llevar un yndio aunque si esta cerca la sementera coge todo lo que quiere.'

[110] 'si no es el obispo e los frayles e yo…' AGI, Mexico 100, s/f

native chiefs to build their obrajes,' or worse, destroying them for raw materials.[111] The influence of the encomenderos was such, Palomino insisted, that despite royal prohibitions, the local native chiefs (*caciques*) were still supplying labourers at the Spaniards' request.[112] On the one hand, then, the Spanish were moving onto Indian lands in the interest of controlling production – as expressly prohibited by the Crown,[113] but workers were also being rented (as the accounts of production claimed), or requisitioned from the Indian *pueblos*, as Palomino observed, with foreseeable consequences for the natives. Neither of these accusations was new, but indigo had quite suddenly inflamed the encomenderos' need for land and labour.

Palomino proceeded to list the principal culprits and producers of indigo, members of the Mérida Cabildo, '*oydores* and *alcaldes ordinarios* of this city, who are all encomenderos.'[114] The exception was Martin de Palomar who might not have an *encomienda* of his own, Palomino clarified, but was administrating Francisco de Bracamonte's lands (his plantations and indigo processing facilities) during the latter's residence in Spain. A few, more specific accusations followed: officers Gómez and Pacheco were employing Indians that tributed to the Crown for their plantations and *obraje* (half a league from the city of Mérida), while the Governor was accused of profiting from an *obraje* of his own (an altogether illegal activity), which he disguised through his friend and partner (managing the estate in person), Juan González.[115]

---

[111] Ibid, s/f

[112] Curbing the overarching power of the encomenderos was an underlying theme in Palomino's correspondence, and he would eventually propose half the Cabildo should be composed of those without *encomiendas*

[113] Included with Palomino's Memorial was a transcription of a royal decree, dated January 4th, 1575, prohibiting Spaniards from residing within the Indian pueblos under their control. For a summary of the historiography concerning this 'normative frame,' see Caroline Cunill, 'Siete Cartas Inéditas de Yucatán: Comunicación Privada Entre Mayas y Españoles, y Explotación Ilegal del Añil en el Siglo XVI,' *Estudios de Cultura Maya*, 65 (2015), p.96, n.10

[114] '(También tienen esta granjería) el Cabildo y Oydores desta ciudad y los Alcaldes Ordinarios que todos son encomenderos.' AGI, Mexico 100, s/f

[115] It was a curious story: It seems the Governor had been moving Indians unlawfully in partnership with a local encomendero, who had made the mistake of referring to their activities in writing. The governor had

In a stroke of luck, Caroline Cunill recently discovered seven letters that once accompanied Palomino's report, but were later mislaid at the archive, an especially valuable find because of their private character, but also their recipients, including various Indian *caciques*. Largely concerned with the movement of Indian labourers for work on indigo plantations, they provide the present discussion with that rare opportunity to consider the roles, perhaps even attitudes of the native Maya as they were pulled into this new, Spanish enterprise. Cunill's insightful analysis of the documents may readily be complemented with the results of this investigation, albeit limiting our observations to the question of *añil*.[116]

Viewed together, the letters present a picture of intense activity: a water mill needs fixing and materials are procured, Indians are being mobilized regularly for weeding and pruning, with the number of labourers requested increasing substantially towards the harvest in September (we must recall they were still pruning the plant three times per year). The dedication involved in cultivation, we may surmise, would doubtless have increased the plant's yield, perhaps even the dye's quality. If we are to trust Palomino, some encomenderos had two *obrajes*, a first on their encomienda and a second in Mérida, moving their Indian labourers around as required.[117] It was this movement that later became the focus of accusations, perceived as the likely culprit in the sudden death of so many Indians – removed from their homes, they failed to care for their land, and famine only fuelled disease. I am tempted to agree with Cunill in viewing the system that emerges as a 'cooperative of sorts,'[118] with the encomenderos, and Cristóbal Sánchez in particular, facilitating the movement of

---

carelessly dropped the letter, Palomino suggested, where it was found by one Tomás de Bohorqués, imprisoned at the time in the 'government houses' (*casas reales*), who finally presented it to Palomino. And this was one of the sources of the letters attached. Ibid.

116 Cunill, 'Siete Cartas,' cited earlier. All seven letters have been transcribed in this very recently published article, an especially welcome addition to the present chapter. Several points worthy of note have been left out from the present discussion, to avoid the unnecessary repetition of her work.

117 AGI, Mexico 100, s/f: Carta de Francisco Palomino al Rey, 10.11.1576

118 Cunill, 'Siete Cartas,' p.102

Indian workers between encomiendas. The importance of influence in this context can hardly be overstated.

Five of the letters were directed at native Caciques, two from the officers of Mérida, Pedro González and Francisco Pacheco to D. Pedro Pech, governor of the Indian pueblo of Telchac. The first promised wine, and the second official control over the pueblo of Dzemul for the Pech family, dispensed by the Governor, requesting Indians for work on the indigo plantations in return. They sent the Indian Pablo Chu to gather these workers, ideally every week for an unspecified period. But it had also been Pedro Pech who delivered the letters to Palomino – was the Defender simplifying what he knew to be a more complex situation when he wrote to the Crown describing the Indians as meek servants to their encomenderos, compelled to give them ever increasing workers? Or were the Caciques, perhaps, playing both sides, doing what they could to profit from circumstances? What does seem evident is the encomenderos' awareness of the need to negotiate with the native caciques, and that they did so on terms less abusive than Palomino claimed. The Caciques, in turn, did their best to profit from the requisition of labourers, but ultimately sought redress for the increasing burden through Palomino.

Two of the letters sent to *caciques* were from Fernando de Arceo, who seems to have managed his father, Francisco de Arceo's indigo plantations and *obraje*. He requested and received Indians labourers for regular weeding – Cristóbal Sánchez sent him 18, rather than the 12 he requested, so he would not complain he 'had kept to the letter.'[119] But I would suggest his tone is also remarkably different from the letters from the officers of Mérida, and otherwise surprisingly informal and close. As Cunill observes, these second generation Spaniards were often raised by Mayan women, and could become quite versed in their

[119] 'A Fernando de Arceo envie diez y ocho porque no diga que me ate a la letra que manda que le den doce,' Cunill, 'Siete Cartas,' p.114

language, perhaps the case of Fernando. There is something altogether more familiar in his letters, than we find in those from the other Spaniards – when he asks Martín Tun and the nobles of Xanabá to tell notary Agustín Chan he is 'wishful to see him,' or that he has 'very much enjoyed receiving news that Our Lord has given you such a good year.'[120] And this brings us to the informal, unrecorded interactions that contributed to the development of production methods, the degree of 'interethnic communication'[121] we often neglect to take into account.

The fifth letter (as numbered and transcribed in Cunill's article), from Juan González to Governor Gijón, is especially tantalizing: in this brief text, González manages to admit to employing the Indians of encomendero Tomas de Bohorqués during his imprisonment in Mérida, accuses Alonso de Castro and Cristóbal Sánchez of having more labourers than they admit to, and further accuses Sánchez of leaking news of their activities to the Franciscans. It speaks to the weight of the Bishop and Friar's opposition to the industry.

Palomino's memorial concluded on a final, dramatic note: Bishop Diego de Landa had decided to excommunicate, or at the very least refuse confession to all those who continued to produce indigo, 'to see if in this way he can halt the damage, before there are no more Indians'[122] And this was the state of things when production reached 48 *ingenios* with an output of 600 arrobas, and Governor Guillén de las Casas arrived in Mérida to take office.

---

[120] 'Encomendádme a todos los principales, y a Agustín Chan mis encomiendas, y que tengo mucho deseo de verle,' in Ibid, p.113; 'Hermanos, mucho me he holgado de que Nuestro Señor os haya dado tan buen año,' Ibid.

[121] Ibid, p.105

[122] 'Para ber si por esta bia puede ynpidir este daño, antes que los yndios se acaben.' AGI, Mexico 100, s/f

The new governor was a colourful character: son to a former governor of Nicaragua and Costa Rica, the Sevillian Guillén de Casaus (Casaos, or de las Casas[123]), had 'served very well in the War of Granada,' the Morisco rebellion of the Alpujarras, before being appointed governor of Yucatán in 1575.[124] Rather than take office directly, he spent a year in the city of México before finally heading to Tabasco, where he took an extended tour though the region, reaching Mérida (to complaints from the Crown) only in 1577. A handsome man of 34 with an appetite for wine and women, his 'donjuanesque adventures'[125] soon earned him the negative reputation of a frivolous governor, overly passionate, and much too young.[126] Above all, he appears to have exacerbated the already tense relations between Franciscans and encomenderos.

By March 1577, well aware of Palomino and Landa's reports, surely informed of an outbreak of plague, the Crown finally responded in the affirmative to the Bishop's proposal for tithing in indigo; the Viceroy would be notified to send official orders, and Landa was authorized to organize and enforce collection. Still, and as a testament to his notoriety, the Bishop was admonished to proceed with 'all temperance and softness, in such a way as not to cause inconveniences, and without trying, for now, to make the Indians pay the said tithe, but only the Spanish.'[127] Four days later, the King wrote at length to the new governor on the topic of *añil*: the use of indigenous labour on the *encomiendas* was condemned in no uncertain

---

123 Neither Peter Gerhard, nor David Henige have 'mistakenly referred' to Casaos as Las Casas, as Richard Kagan has implied in *Lucrecia's Dreams: Politics and Prophecy in Sixteenth-Century Spain* (Berkeley, 1990), p.200; 'de las Casas' was the name he assumed in the Indies, signing and being referred to generally with this name.

124 'Vezino de Sevilla ha servido a V.M. muy bien en la Guerra de Granada y su padre muchos años en las Indias.' AGI, Indiferente 738, n.152: El Consejo de Indias propone a Guillén de Casaus para la gobernación de Yucatán (19.11.1575).

125 Rubio Mañe, *Primeros Pobladores*, p.15

126 A description provided so that he could be identified upon arrival in Yucatán described Casaos as 'tall and black-bearded,' (*alto de cuerpo y barba negra*), in AGI, Indiferente 738, n.152; on the Governor's character and reputation, see Raúl E. Casares, ed., *Yucatán en el tiempo: Enciclopedia Alfabética*, (1998), vol.2, pp.134-135

127 '…procediendo en ello con toda templança blandura de manera que no se pueda causar ynconveniente y sin que por ahora se trate de que paguen el dicho diezmo los yndios sino solamente los espaõnles.' AGI, Mexico 2999, L.3, fol.34RV: 'El Rey al Obsipo de Yucatán, 22.03.1577

terms, and De las Casas urged to enforce the existing restrictions.[128] Should there be any remaining doubts in the governor's mind, a royal decree relieving the Indians from work on the indigo *obrajes* was sent alongside.

In a second letter composed the same day, however, the Crown explored the possibility of substituting native tribute in a pound of wax, to one of indigo. They asked if it was true the Indians had to go far in search of wax, that most knew how to make indigo, while the others could easily learn. Would it be less burdensome for the Indians to tribute a pound of indigo? And if so, would the encomenderos be satisfied? What profits could be foreseen from such a venture? It asked, finally, for the governor to extend his opinion on the matter, so they could rule appropriately.[129]

In Yucatán, meanwhile, Casaos had taken an immediate dislike to the Franciscans, Landa, and the Defender of the Indians, and towards the end of 1577 initiated a *juicio de residencia* (the formal evaluation of an official's term in office) against Palomino – terminating his employment by default, and prematurely. The Defender was condemned on charges of corruption, and in what would later become the source of new accusations, Bishop Landa loaned the accused 3000 pesos to secure his release from prison. In January 1578, as soon as proceedings had been finalized, Palomino requested license to travel to Spain (together with his son), where he intended to appeal the verdict.

That March, the Bishop returned to the problem of indigo: work on the *obrajes* was so distressing the Indians, they were fleeing (in even greater numbers) to the highlands, where 'they turn to their idols and bad, old customs, while others die having to bear their labours, and from diseases God gives them.' All of which, he proceeded more optimistically, could be resolved 'if your Majesty should order the Indians, just as they cultivate their

[128] AGI, Mexico 2999, L.3, fol.32V: El Rey a Don Guillen de las Casas, 26.03.1577
[129] Ibid, fol.33RV: El Rey a Don Guillen de las Casas, 26.03.1577

milpas, to grow their own *milpilla* of indigo, to harvest and manufacture the dye' – an easy task that would free them, further, from leaving their homes 'as they do for the Spanish.'[130]

Relations with the governor and encomenderos, in turn, had reached a new low: they 'despised' him. Most upsetting, however, was his enmity with De las Casas:

> Your governor Don Guillen de las Cassas, has come to this province to do nothing but take residence upon my person, the friars, and defender of the Indians. And he has succeeded, for although we were already at odds with the Spaniards.... he has disturbed them to such a point, that they have done everything but stone us.[131]

Landa accused the Governor, further, of enabling the encomenderos to gather forced Indian labourers for their *obrajes*, concluding on a damning note: 'in the thirty years I've known this land, I have not seen so much unrest in this city, as there has been since Don Guillén came to it.'[132]

Possibly aware of Landa's letters (as the choice of wording may suggest), an equally incensed Casaos wrote to the Crown a few days after the Bishop, on March 14th, 1578. In rather lighter tones, he suggested the Indians stood to benefit from indigo, but just weren't capable of understanding so; it was a profitable enterprise, and 800 arrobas would be harvested that year (22,400 pounds more than the year before, indicating the extent to which the Crown's prohibitions had been ignored). He seemed almost to have taken his words from former governors, perhaps even Pedro de Ledesma, when he added: 'it appears that

---

130 This was a common theme, moving the Indians and disrupting their daily routines and agricultural cycle was considered especially detrimental.

131 'Vro. gvor Don guillen de las cassas, no paresce que vino a esta provinçia a tomar residencia sino a mi persona y a las de los religiossos y al deffensor de los yndios y a tenido en esto tal orden que allen de nosotros por las causas que e dicho estavamos mal vistos de los espanoles... los a Alterado de tal arte contra nosotros y yndignado que no a faltado sino apedrearnos publicamente.' AGI, México 369, fol.12V: Memorial del Obispo de Yucatán (03.1578)

132 '...en treynta anos q a q yo conozco esta tierra, no e vistos tantos desasosiegos en esta çiudad, como a avido despues que don guillen esta en ella...' Ibid; in a second, of four letters sent to the Crown between February and March of 1578, largely filled with accusations against the Governor, Landa included the tantalizing suggestion that Casaos had been arrested by the Holy Office during his year in New Spain, preceding his arrival in Tabasco, although the specific charges went undescribed. I found no other evidence of this arrest, but it seems less than improbable – Casaos would die at 52, incarcerated in the prisons of the Inquisition in Toledo.

with (this industry) imports from Barbary may cease.'[133] In response to the Crown's earlier questions, Casaos dismissed the possibility of having the Indians tribute in indigo:

> …the naturals have been persuaded by the Bishop and friars of this province to abhor this industry, and if it weren't for the great care and work of he who governs, a pound of indigo would not be made in all the land.[134]

The Governor had also tried to make peace between the encomenderos and Franciscans, but to no avail:

> I begged and asked the Bishop as governor, man and citizen... but was never able to soften his firmness founded upon paradoxes that even men of average understanding may see the passion he has in his chest.[135]

He would agree with the Bishop on a single point: 'this land has never been in the state it is today;'[136] beyond these personal antagonisms, the peninsula was evidently suffering from depopulation, drought, famine, and excessively high prices. In February 1579, the encomenderos received a dubious opportunity to present their case when proceedings were reticently begun to collect the *Relaciones Geográfias*. Even as they could laud the profitable new industries of indigo and logwood, they were forced to account for a vast decline in the indigenous population – to rather creative results.

Between 1578 and 1582, a meticulous survey of the recently conquered territories and subjects of the Indies was compiled at the request of Philip II. Questionnaires demanding descriptions of the history, flora, fauna, and general characteristics of each village or *encomienda* were distributed throughout the colonies, to be completed by local administrators.

---

[133] '…que con ellas podria escusarse el de berberia...' AGI, México 359, r.5, n.21, s/f: Guillen de las Casas al Rey (14.03.1578)

[134] 'Y tienen tan aborrecida estos naturales la grangeria del añir por la persuasion q el obispo y frayles destas provincias en ellos cada dia hazen q si no fuese con gran cuydado y trabajo del que govierna no se haria una arroba de añir en toda la tierra.' Ibid.

[135] 'Y rogándolo y pidiéndoselo al obispo como governador y como hombre particular y como ciudadano y como un pobre todo lo yntente y jamas pude ablandar su dureza fundada en paradojas que aun a los hombres de mediano entendimiento les dan a entender la pasion que tiene en el pecho y no el celo que el con ellas quiere persuadir...' AGI, México 359, r.5, n.21, s/f

[136] '…nunca esta tierra a estado como el dia de hoy.'

The resulting texts, known collectively as the *Relaciones Geográficas*, were accompanied by hundreds of colourful maps (where we may note the significant presence of indigo derived pigments), in most cases the work of *tlacuilos*, and 'one of the most spectacular visual examples of the Mexican Renaissance.'[137]

Fifty-three *Relaciones* have survived from the peninsula of Yucatán, most from the regions under the jurisdiction of the Cabildos of Mérida and Valladolid. Several were compiled after consulting with local Indians – albeit those who had closer relationships to the Spaniards – advice that was noted in the text. These native guides were recognized as co-authors in three of the accounts, including the *Relación de Motul*, completed by Martin de Palomar and Juan Pech (chief and governor of the *pueblo*),[138] in Francisco de Bracamonte's absence, and Hernando de Bracamonte's *Relación de Tekit*, signed with the Indian nobles: Diego Pui, Fernando Tucuch and Francisco Yom.[139]

Particularly relevant to this discussion are responses to question five, concerning the size of the native population, their language and customs. It placed the encomenderos in a tight spot; they wanted to avoid further restrictions on the use of indigenous labour at all cost, but could not ignore what they saw. It was obvious, as Juan de la Cámara, encomendero for *Sinanche and Egum* would rather bluntly state, that 'the naturals have diminished since our arrival to this land.' Clearly, 'this land appears to have been well

---

[137] Gruzinski, *Painting the Conquest*; on the presence of indigo and Maya blue in these maps, see Mary E. Haude, 'Identification of Colorants on Maps from the Early Colonial Period of New Spain,' *Journal of the American Institute for Conservation*, 37:3 (1998), p. 260

[138] The prominent Pech family, mentioned earlier in the letters accompanying Palomino's 1576 memorial, has received considerable attention from historians; see, for example, Farriss, Maya Society, p.383 and Sergio Quezada, *Pueblos y Caciques Yucatecos, 1550-1580,* (1993), p.152

[139] Mercedes de la Garza and Ana L. Izquierdo, eds., *Relaciones Histórico-Geográficas de la Gobernación de Yucatán: Mérida, Valladolid, y Tabasco* (1983), XXXIV; the originals have been digitalized and can be consulted through PARES, AGI, Indiferente 1530, N.5: 'Descripción de los Pueblos de Yucatán,' (1579).

populated before now, and so in all the land there is evidence of it having been populated and the land sown.'[140] But what to say about causality?

Answers varied: 'having removed them (the Indians) from their land', 'eating fish with little salt', 'drinking a beverage called cacao', 'not having *atol* for breakfast' – a 'very healthy' drink made with maize, and so forth.[141] Juan Farfán, *encomendero* of Kampocolche, suggested the Indians had 'grown sad, and their grief is such, that they let themselves die from these thoughts.'[142] Bathing was considered especially hazardous, a custom the Indians just refused to abandon; so, Hernando de Bracamonte's *Relacion de Tekit* maintained:

> For some years, there has been a pestilence of smallpox, measles and typhus. To appease the fires these diseases bring to their bodies – although their masters tell them the remedy for such evils is to guard oneself from the wind and not to bathe – they wash in cold water, and many die.[143]

His brother's *Relación de Mutul*, instead, co-authored with Juan Pech, presented one of the more sensible answers:

> The Indians were healthier, and lived longer, it is understood, because they used to live with more freedom, and according to their natural customs. Those who led them were their own, and they all lived in like manner. And in this time it was licit to do many things against reason, Christianity, and good order, which they are not allowed to do now…[144]

Responses to question five also differed markedly between the *cabildos* of Mérida and Valladolid. In documents from the first of these, where most authors were also indigo producers, answers seemed designed to shift the blame away from the encomenderos, to the

---

[140] 'Han venido los naturales en disminución después que estamos en la tierra.' Ibid, *Relación de Sinanche y Egum*, p.124; 'Esta tierra parece haber sido bien poblada antes de ahora, y así en toda la tierra hay señales de haber sido poblado y sembrado.' Ibid, *Relación de Citilcum y Cabiche*, p.183

[141] Ibid, *Relación de Kizil y Sitilpech*, p.198

[142] *Relación de Kanpocolche y Chochola*, p.310

[143] 'Y también de pocos años a esta parte, ha sobrevenido pestilencia de viruelas y sarampión y tabardete. Con el gran fuego que tienen en sus cuerpos, de las dichas enfermedades, se lavan con agua fria y mueren muchos, no embargante que sus amos les avisan el remedi, que para estos dichos males es guardarse del viento y no lavarse.' *Relación de Tekit*, p.286

[144] 'Bibian antiguamente mas sanos y abia indios mas biejos que aora, entiendese que por bivir entonces con mas libertan y conforme a su natural y costumbres, por que los señores que tenian dominio sobre ellos heran dellos mesmos y bivian todos a un modo y heranles licito en aquella saçon muchas cosas contra razon, cristiandad y buena orden, lo qual en la hora presente no se les permite.' *Relación de Mutul*, p.83

over zealous Franciscans, the customs of the natives themselves, or the will of God manifested through pests and plagues. Valladolid's encomenderos had a rather different perspective on the causes of indigenous mortality: with few exceptions, they blamed *añil*. Summing up their various accusations, Juan de Urrutia wrote:

> The cultivation of indigo has been invented in this governorship, that is to be the end of the few Indians that (are) left, and the waste of those Spaniards who conquered (these lands), for the effects of the said cultivation are well known.[145]

Historians have interpreted this opposition as evidence that on this matter, the encomenderos sided with the Franciscans in the interest of preserving what meagre manpower they had left.[146] Yet the *Relaciones* also reveal a more specific divide between Mérida and Valladolid: it is only in accounts from the latter's jurisdiction that accusations against *añil* can be found, as mentioned above, whereas references to indigo are altogether absent from those composed by the Mérida encomenderos. Neither the Bracamontes, nor any of those who could be identified as indigo producers, would even admit to manufacturing the dye; in fact, the encomenderos of Mérida finished their *Relaciones* under compulsion from the Governor (with Royal orders), only in 1581. A fear of repercussions to the broader privilege of *encomienda* may have influenced the encomenderos' reticence in this regard, but those with investments in indigo appear to have been particularly hesitant to comply.[147]

The geography of the plague of 1576 indicates death rates in Mérida and Valladolid were comparable, although some of the indigo producing areas appear to have been

---

[145] 'Allende desto se a ynventado en esta governación una granjería de añir, que a de ser el remate de los pocos indios que quedan y el perdimiento de los españoles que conquistamos, pues está bien esperimentado el efecto que hace dicha granjería.' *Relación de Chuaca*, p.69; cited in *Enciclopedia Yucatanense* (Mérida, 1981), t.ix, p.279

[146] *Enciclopedia Yucatanense*, t.ix, p.279; and later Breuer, 'Reshaping the Cosmos,' p.198

[147] On the encomenderos motivations and fear of loosing the encomienda, see De la Garza, *Relaciones Histórico-Geográficas*, p.XXIX

especially hard hit – work on the *obrajes*, a significant interruption to their agricultural cycle, may easily have left the natives more vulnerable to disease. There is evidence the Mérida Cabildo exerted greater control over the contents of the *Relaciones* than its counterpart in Valladolid,[148] and this may be the case here. If we compare attitudes towards indigo in the *Relaciones* from the cities of Mérida and Valladolid, however, we find similarly antagonistic opinions, suggesting feelings among the dominant groups in both regions were also divided. Whereas the report from Mérida took the opportunity to laud the benefits of a developing indigo trade:

> There is a plant from which indigo is made that was used by the natives of these provinces to dye or paint in blue, which encouraged the Spaniards to take advantage of it, and great fields have been sowed from which much quantity (of indigo) has been made in these provinces and, for the last eight years, taken to Spain, from which great benefits have come to his Majesty and his royal coffers.[149]

The Valladolid Cabildo assumed a rather more indifferent, if still critical position:

> There are no mines of gold or silver; there is a herb of indigo of which great quantities are harvested, in general, in these provinces (of Yucatán) with much work to the natives, and at a great expense: there is logwood, brasil, and others herbs used to dye yellow…[150]

The construction of an *obraje* was a costly investment, one that encomenderos in Valladolid – fewer in number, less affluent than their counterparts in Mérida – might not have had the resources to finance, even less in a context of drought and pestilence. As the number of available workers declined, moreover, as Nancy Farriss has pointed out, only

---

[148] See Ibid, p.XV

[149] 'Hay el palo o planta de que se hace el añil, del cual antiguamente usaban los naturales de estas provincias para teñir y pintar de azul, de que tuvo origen para aprovecharse de ello los españoles, y dieron en hacer grandes sementeras de ques e ha venido a hacer mucha cantidad en estas provincias, y de ocho anos a esta parte se ha llevado a España de ques e le ha seguido a su Majestad y a su real haber mucho interés.' *Relación de Mérida*, p.74

[150] 'No ay minas de plata ni oro; ay una yerba de añir que se saca mucha cantidad de el, en general, en estas provincias con mucho trabajo de los naturales y mucha costa de dinero: hay palo negro, brasil y otras yerbas con que tiñen amarillo, y palo colorado de tinta para curtir los curtidores,' *Relación de Valladolid*, p.36

those with the 'enough political influence to requisition the necessary labour,'[151] were likely to engage in cash crops. This last statement by the Valladolid Cabildo, finally, may also point to the influence of the Crown and Council's receptivity in the development of native goods into Atlantic commodities: Ayala's yellow from the Maya Kante tree, discovered in 1561, is mentioned here again, two decades later, a possibility that flickered, but failed to flourish.

On Wednesday April 29th, 1579, Palomino lost his long time ally, Diego de Landa. A sober report from the governor wasted no grief on the matter, requesting a new prelate but one with which the land 'might have more tranquillity than with the last,' preferably not of the Franciscan order.[152] Yet De las Casas would have been wrong to think his troubles were over; entrusted with royal decrees prohibiting the use of indigenous labour on indigo plantations, Palomino and his son returned to Yucatán at the end of that year.[153]

They came back to a less than welcoming environment. From Madrid, Palomino had sued the city of Mérida and her local encomenderos, demanding a reduction in the impositions placed upon those in his care, and was sued in turn by Don Carlos de Arellano, for 'the grievances alleged to his Majesty to the dishonour of the said province.'[154] What followed was not unforeseeable: news of the decrees Palomino had in his possession reached the governor, who simply had him arrested.

Palomino later claimed Casaos visited his home, requesting to see his papers; when his wife claimed not to have a key to the case, the governor entered by force, broke the lock, and sequestered the documents. These, according to Palomino, contained the decrees, but

---

[151] Farriss, *Maya Society*, p.54

[152] '…prelado con que tengan mas quietud que con el pasado, y entiendo ciertamente que yria mucho en que no fuese fraile franciscano,' in AGI, México 359, r.6, n.23, Carta del Governador D. Guillén de las Casas (30.04.1579), s/f

[153] AGI, Indiferente 2060, n.27; Indiferente 2059, n.157

[154] Francisco Palomino, protector de los indios de la provincia de Yucatán, con la ciudad de Mérida y encomenderos sobre que no se carguen los indios (1579); Don Carlos de Arellano, procurador de la provincia de Mérida de Yucatán, con Francisco Palomino, defensor de aquellos indios, sobre los agravios que supuso a Su Majestad en deshonor de dicha provincia (1579), both in AGI, Justicia 1016, n.6, r.1-2

also testimonies and descriptions of the abuses perpetrated upon the Indians by encomenderos on the indigo works (perhaps those Indian voices noticeably absent from this narrative). His conclusions were summarized in the marginalia: 'the benefit of indigo has never been so ahead, nor have the Indians ever been so mistreated, for all the land has been appropriated (by the Spanish), and the people's time taken in its benefit.'[155] The arguments remained the same: land was being illegally acquired, the Indians were being moving around, forced to travel leagues each day for work, and production itself interfered with the agricultural cycle of maize.

After nineteen days in prison (or sixty, depending on the account), during which he was not allowed 'to see or speak' to anyone, Palomino was sent during the night to the nearby port of Campeche and forced onto a ship departing for Spain. The prisoner was particularly outraged at the manner in which this had all been carried out; he had been provided neither supplies for the journey, 'nor a bed in which to sleep, so that it was necessary to arrange to be given food and other essentials with the lord of the ship, which cannot, and should not be done, and it has never been done (this way).'[156] Having reached Seville (little over a year after departing), Palomino was incarcerated in the prisons of the *Casa de la Contratación*, from where he sued the governor. All of this, Palomino's lawyer claimed, had 'all been done so that your majesty's royal decrees in favour of the said Indians

[155] 'El beneficio del añir nunca a ido tan adelante… por haverse empadronado toda la tierra y sacarse el tiempo de la gente para el beneficio del añir,' AGI, Justicia 183, N.3, R.2: 'Francisco Palomino, vecino de México y defensor de los indios de Yucatán, contra don Guillén de las Casas, gobernador de aquella provincia, sobre haberle apresado injustamente,' (1579-80), s/fol.

[156] '…sin dejarme probeer de malotaje para el camino, ni de una cama en que dormir, por lo qual me fue necesario concertar que me diese de comer, y lo necesario el señor del nabio, lo cual no se puede ni debe hazer, ni jamas se ha usado,' in AGI, Justicia 183, n.3, r.2, s/f

not be executed, for there to be (no one) who asks or gives news of the grievances that the Indians have received and receive from their encomenderos.'[157]

The case was decided in Palomino's favour, and the governor instructed to pay the sum of 100,000 *maravedíes* as reimbursement for the expenses made during the voyage to Spain and in Seville, and to finance a return to the Indies – his fifth and last Atlantic crossing. Palomino reached New Spain at the end of 1581, triumphant: he had with him a royal decree, addressed to the Governor of Yucatán, prohibiting the use of indigenous labour in the manufacture of indigo, in the clearest terms yet.

> We are informed that the neighbours of that land have persisted in the cultivation and industry of the leaves of indigo, which grow in abundance and, being very profitable, and there not being blacks, they have put the Indians to it, who manufacture the dye with manifest danger and risk to their lives, because it is harmful work... And (we are informed) that if the Indians were to proceed in this industry, there will soon be none left.... We order that from here on under no circumstances should you allow or consent to the Indians working in the said industry of indigo, even if they should wish to do so of their own will, because this is our will.[158]

Casaos left office shortly thereafter, in 1582; his *juicio de residencia* proved especially scandalous, including the accusation by Hernando de Bracamonte, that the Governor had 'raided' his home and 'spoiled his daughter,' who had subsequently died during childbirth.[159] After a brief imprisonment, Casaos 'took leave of his wife and returned to Madrid in order to gain royal support for a planned expedition to New Mexico.'[160] He was either refused or

---

[157] 'Todo hecho a fin de que vras reales cedulas en fabor de los dichos yndios dadas no se executen ni aya quien pida ni quien de noticia de los agrabios que los dichos yndios an recebido y reciben de sus encomenderos, y pues no es justo que semejante delito agrabio de mi parte y desacato contra vras. Reales cedulas quede sin castigo,' in Ibid, s/f

[158] 'Nos somos informados que los vezinos de esa tierra prosiguen en la lavor (sic) y beneficio de las ojas del añir que en ella se da en abundancia y que, por ser de mucho aprovechamiento y no haver negros, an metido en ello a los indios, los quales lo venefician con manifiesto peligro y riesgo de sus vidas, y, por ser travajo dañosisimo... y que si se proseguia se acavarian (los Indios) en breve os mandamos que de aqui en adelante por ninguna via dexeis ni consintais que los dichos yndios labren ni veneficien el dicho añir, aunque de su voluntad quieran hacerlo, porque esta es nuestra voluntad.' AGI, México 2999, L.3, fol.45RV: El Rey al Gobernador de Yucatán que no consienta que los Indios de aquella provinia travaxen en la lavor y beneficio del añir, 15.05.1581

[159] In Casares, ed., *Yucatán en el tiempo,* vol.2, p.135

[160] Kagan, *Lucrecia's Dreams*, p.111

ignored, and a growing displeasure with Philip II, an interest in the 'magical arts' and astrology, led Casaos to Alonso de Mendoza and the small group of opposition to the King that coalesced around the young, female visionary, Lucrecia de León. He was among the few who privately transcribed Lucrecia's apocalyptic dreams, and was arrested by the Inquisition in May 1590, but did not survive to see the conclusion of his trial.[161]

Palomino's motivations are less transparent: on the one hand, he appears to have been genuinely upset by what he saw, while the tenacity with which he took on the Governor and Cabildo may speak to his commitment. On the other, however, as Caroline Cunill has observed in a brief article dedicated largely to the Defender's finances, he would not report the excesses committed by the friars – the burdens imposed upon the Indians in the construction of churches and their ornamentation. Not, at least, at first: towards the end of his last tenure in office he did, in fact, begin to make accusations against the Franciscans.[162] There is also the question of corruption: in 1579 and again in 1586, he was accused of stealing from the Indians; yet he 'defended himself well'[163] from these accusations, and has convinced this historian at least, that he was less than hypocritical in the administration of his office. Cunill's analysis, in turn, reveals that while he does seem to have defrauded the Indians on more than one occasion, totals over the course of more than a decade were trivial. Judged by his actions, Palomino would at least succeed in reducing the

[161] Ibid, p.26; Casaos' interest in astrology and the 'magical arts' may have originated in Yucatán, when he was instructed by the Crown to observe the lunar eclipse of 1581, in the course of a proposed geographic survey of the Peninsula. His antagonism towards Landa, in turn, may have rendered him more open to the 'idolatries' the Bishop tirelessly fought against, but the encounter with the native world may have otherwise inclined him towards the magical. He seems to have found his way to the León household through Lucrecia's mother, Ana Ordoñez, whose sister resided in Yucatán, and would send news to Madrid through him. This was probably María Ordoñez, married to Gerónimo de Castro, encomendero and officer of the Mérida Cabildo, mentioned variously throughout this chapter (see AGI, México 242A, n.23, fol.289R: Confirmación de ayuda de costa en Yucatán a María Ordoñez, 20.06.1615). By chance, the transcribed accounts of the dreams of Lucrecia de León were the first archival documents I consulted, at Madrid's AHN, as a student at UC Berkeley, in the course of research for my undergraduate thesis on the dreams of this young woman.

[162] See Sara Miller, 'Francisco Palomino,' p.43

[163] Casares, ed., *Yucatán en el tiempo,* vol.5, p.34

tribute of numerous *pueblos*, and ultimately relieving the Maya from work on the obrajes, although just how beneficial this last accomplishment may have been in the long run is less evident.

In the absence of an indigenous voice, finally, we are left with assumptions: it seems reasonable to assume the Indians would have indeed disliked the labour-intensive, foul smelling indigo *obrajes*, as the Franciscans claimed, and we may further doubt the use of mules was as widespread as the encomenderos would have the Crown believe. The issue of land was significant; while the *encomienda* did not imply rights of property, as García Bernal has noted, 'it facilitated its acquisition.'[164] In Yucatán, but also throughout the indigo producing regions of the Captaincy General of Guatemala, the development of the indigo trade became a moving factor in the 'illegal' acquisition of indigenous land, perhaps the most damaging of indigo's consequences for the native population.

As for an exchange of wax for indigo, the procurement of beeswax from the highlands would likely be more time consuming than the production of a pound of dye for tribute, and while the Maya held wax in little regard, they felt quite differently about indigo. Landa's suggestion for a *milpilla* of indigo could have been welcomed, yet the interference with the agricultural cycle might have been difficult to sustain in the ever-worsening conditions on the Peninsula. Here as well, Pedro de Ledesma contributed with his ideas: indigo was a promising candidate for tribute, it was just a question of sowing *indigofera* together with, and in between maize. But for the Maya, social and cultural concerns would likely have come into play in any alteration to the traditional *milpa* system, matters that lead into the field of anthropology and lie somewhat beyond the scope of the present

[164] Charles Gibson, *Los Aztecas Bajo el Dominio Español: 1519-1810* (1967), p.281; cited in García Bernal, *Población y Encomienda,* p.454, n.79

investigation. Regrettably, if the Indians ever expressed their misgivings in writing, as Palomino claimed, these do not appear to have survived.

Conclusion

In 1586, the Governor of Yucatán, Antonio de Voz Mediano, received a letter from the Crown demanding whether the harm inflicted upon the natives working on indigo plantations was as great as had been described. While he could not deny the reports, it was a thing of the past; as a result of the Crown's prohibitions against the use of indigenous labour, the Governor claimed, production 'has diminished so much, that very little is harvested, only what in the land is spent in woven and wrought cloth made by Spanish and Indian (women), without there being enough to take to other parts.'[165]

Palomino seems to have finally won his battle: between 1590 and 1600, only 28.5 *arrobas* were legally exported from the port of Campeche.[166] Perhaps, as García Bernal has argued, indigo could have been 'the great export product of the Peninsula, but was limited by a Crown that had first encouraged it;'[167] or perhaps the trade had little future, as Nancy Farris has been inclined to conclude: 'one can only surmise colonists capitulated so easily on this issue because of competition from Guatemala.'[168] As it was practiced in Yucatán, the manufacture of indigo was a costly, less than profitable affair: 'those who make use of this

[165] '… se disminuyo tanto, que se coje muy poco, sélo lo que en la tierra se gasta para labrados y tejidos, que las españolas e indias hacen sin que haya para sacar a otras partes,' in Cogolludo, *Relación de las cosas de Yucatán*, t.2 p. 350
[166] García Bernal, 'El afianzamiento de un precario comercio,' p.207
[167] García Bernal, *Desarrollo agrario en el Yucatán colonial: repercusiones económicas y sociales*, (2006), p.45
[168] Farriss, *Maya Society*, p.36

industry are very poor and in debt,' wrote Juan Cano (the elder) at the end of his *Relación de Tenum y Temozón*, 'because the costs are greater than the gains.'[169]

In time, Yucatecan manufacturers could have lowered costs and otherwise adapted, but whether the encomenderos would have been prepared to do so is less than evident – they remained stubbornly attached to the notion that Indian labour would suffice to revitalize the industry.[170] The only attempt to recover the industry, in the late 18th century, involved a machine developed 'to make indigo without damage to the workers' health'; yet the report sent alongside would also include one last request to employ the natives in the manufacture of the dye.[171] There is still something unexplained in the relentless pursuit of this particular industry – when the lucrative, and equally hazardous collection of salt, for example, as Farriss suggests, 'figured so minimally in the usual litany of grievances that the Indians and their local spokesmen intoned against the Colonial regime.'[172] The intensification of cultivation coincided almost exactly with the plague of 1576, and it would have been natural to connect the two; Juan de Urrutia described the industry much as one might an aggressive virus, a 'sweeping net' that would 'forgive' no Indian.[173]

Perhaps, as Palomino, even Pedro de Ledesma would suggest, it was the particular zeal and ambition with which the encomenderos had rushed to the trade, and its violent repercussions. In his own response to the decree of 1581, Ledesma wrote to the Crown: 'and

---

169 'Los que usan desta grangería estan pobrísimos y adeudados, porque son mas las costas que la ganancia.' *Relación de Tenum y Temoçon*, p.134

170 In the words of Juan de Urrutia: 'faltando el indio falta todo.' *Relación de Chuaca y Chechimila*, p.70

171 AGI, México, 3018, n.183; and the design in AGI, MP-Ingenios, 42: 'Plano, perfil y elevación de una nueva máquina para facilitar el añil a menos costo y travajo que hasta ahora, se va a experimentar en al provincia de Yucatán,' (28.04.1776); also cited, with one of the designs, in Maria Justina Sarabia Viejo, 'Evolución de los Colorantes Mesoamericanos en el Siglo XVIII,' lecture presented at *IX Congreso Internacional de Historia de América* (Sevilla, 1992), kindly facilitated by the author. The image may also be found in Balfour-Paul, *Indigo*, p.63

172 Farriss, *Maya Society*, p.53

173 'Mas la grangería del añir que en esta tierra se a inventado no creo perdonara a los unos ni a los otros, sino que a de ser red barredera.' *Relación de Chuaca y Chechimila*, pp.75-6

to say that (making indigo) is laborious and harmful for the Indians is only because of the burdens the encomenderos impose upon them, which is why it was prohibited in Yucatán.'[174]

Quality, moreover, would have been hard to maintain – as José Molina has argued, it was the Guatemalan *poquiteros*, the small-scale peasant producers, who could cultivate and process the plant with the dedication required for a high-quality product, elevating the region's broader reputation among consumers.[175] In this light, Ledesma and Landa's suggestion for the Indians to grow their own indigo seems rather more promising than authorities would have had the Crown believe, but of course, still depended on the will of the natives. For all this, the Yucatecan encomenderos showed an interest in, and seem to have actively pursued the improvement of their product, to a much greater extent than observed for the Central American manufacturers; if, in the *Audiencia de Guatemala*, 'Spaniards showed little curiosity about the plant and the techniques used to extract indigo,'[176] this was hardly the case in Yucatán or New Spain.

In the examination of colonial processing methods, it is easy to overlook the pioneering spirit (and determination) with which these developments were undertaken. Indigo required a substantial initial investment, while harvests, yields, and profits remained exceedingly irregular. The activities and experiments of a few, energetic entrepreneurs were key to the development of production methods, as manufacturers continued to search for alternatives that might lower costs and improve quality. They would do so, however, by observing and collaborating with the Indigenous population – well acquainted with the dye's cultivation and manufacture, developing a variety of practices and technologies that

[174] 'Y que el decir es gran vejacion y travajo el que tienen los Yndios es por el q sus encomenderos les dan por lo qual se proibio en Yucatan, mas que haciendose como dice y ello a hecho cesa,' 'Carta sobre el beneficio del añil,' Pedro de Ledesma (México, 20.03.1584), AHN, Diversos-Colecciones 26, n.3
[175] Molina, *Colouring the World*, p.125
[176] MacLeod, *Spanish Central America*, p. 178

coexisted, in many ways distinct from emerging methods in Guatemala. Knowledge, in turn, was actively transferred throughout the region, more often through informal exchanges, but also in writing.

The records suggest, further, just how systematic authorities could be in the collection of information concerning these new products, as in testing them for quality, involving their own 'experts' in the discussion. At every step, finally, as noted by Kumar: 'claims regarding knowledge of improvement had to be validated in the marketplace,'[177] traders and dyers had to accept and appropriate the new, unfamiliar product, embark upon their own quest to improve the methods used in its application, the brightness and fastness attained – a process that sparked and gained momentum with the appearance of New World indigo in Seville.

[177] Kumar, *Indigo Plantations*, p.8

Appendix 1

Memoria de cómo se a de beneficiar el añil, y tres maneras de beneficiarlo[1]

Primeramente se a de buscar para sembrarlo la tierra mas caliente que hubiere y ade aver agua para regarse y quanto mas abrigada estuviere del yelo es major

La tierra para sembrarlo a de estar bien arada y ase de sembrar hechando los granos de quatro en quatro a trecho de dos palmos haziendo un oyuelo y hechandolos dentro y tornar a cubrillos. Y ase de sembrar al principio de las aguas y adonde huviere riego se puede sembrar a principio de mayo y regarlo cada dia hasta que este nacido, que si no le falta el agua será a siete o ocho dias. Y despues que este fuera de la tierra darle sus riegos a tercer dia o conforme a la necesidad que la tierra mostrase de agua, y ase de yr siempre deserbando de manera que quede limpio de hierba.

Verna [sic] aestar sazonado para cogerse a los quatro mese o poco mas y conocerse a que lo está quando fuere hechando la semilla.

Entonce se a de cortar la rama de suerte que le quede donde pueda tornar brotar no muy baxo ni muy alto y como en tiempo q le faltare agua del cielo ay [illegible] en quenta con regarlo y deserbarlo durará dos y tres años al cabo de los quales se a de arrancar aquella raiz y tornando a arar muy bien la tierra se puede tornar a sembrar por la orden dicha. En esta tierra da cada año quatro cosechas porque cada vez que hecha semilla se coge; en Espana no se save cómo acudirá ni ay más razon que dar sino que ni mas ni menos se coja quando la hechare y si por ventura se elare no ay beneficio que hazelle que ello mismo torna a brotar.

Despues de cortado para hacer el añil ay tres maneras de beneficio: la una es que el mismo dia que se corta o otro a mas tardar se echa en un basso [sic] y se pone al fuego y alli dara un herbor pequeno y en biendo que hierbe quitarle luego la lumbre y sacar el agua de aquel baso y echarlo en otro donde se enfríe, y mientras se ba enfriando batila [sic] muy a menudo hasta que este fría. Y despues de fría se ade echar colada en otra basija, en la qual estará haciendo asiento hasta otro dia. Y quando aya echo asiento ase de vaciar el agua poco a poco de manera que quede solo el assiento. Ase de echar este asiento en unos moldes de barro a manera de escudillas grandes y ponello al sol que alli se enxuga el agua que tiene y quedan hechos panecillos.

La ottra manera de hazer el añir es ynchir muchos vasos de la oja que se acortado y tener al fuego otros basos con agua y en estando el agua vien caliente que quiera hervir hecharla en los bassos que tienen la oja y dexar estar la oja hasta que muesrte estar coçida que es quando paresce que pierde la color. Y entonces se ade echar el agua en otras vasijas y batirla muy a menudo y en estando fría y bien batida hacer los mismos beneficios que atras se dizen, hasta hazer los panecillos.

---

1 AGI, Indiferente 1530, n.17, s/f. This and the following appendices have been transcribed from the original, but have also been published in Sarabia Viejo, Intentos de Aclimatar Productos Americanos en Andalucia en el siglo XVI, as in the *Enciclopedia Yucatanense.*

La ottra [sic] manera es hechar en basos la oja y enchirlos de agua fria y alli este una noche o más hasta que parezca que la oja pierde la color y entonces sacar la oja y quede el agua sola y esta se bata mucho hasta que parezca que se buelbe negra y luego colarla por un çedaço de çerdas y dexar hazer asiento. Y después que le ahecho sacarse el agua poco a poco y queda solo el asiente y este asiento se hecha encima de un lienzo cañamazo el qual este puesto en hueco y de manera que le escurra el agua hasta que este para hazer panecillos. Y entonces se muda a otros paños de cañamazo que esta sobre una messa [sic] en parte que le da sol y alli como se ban enxugando se ban puliendo y de manera que los panecillos quedan lisos, y estense alli hasta que estén enxugos.

Destas tres maneras de beneficiar el añil esta postrera se tiene por mejor porque está seguro de quemarse y asi es la más ordinaria.

Appendix 2
De la Planta y Grangería del Añir[2]

Desta planta del Anir se tiene mas noticia porque hasta aora lo an sembrado espaõles de doze anos a esta parte. Aunque de quatro aca parece que asido la fuerza desta granjeria. Siembrase la semilla que es casi como semilla de coles en tierra que an primero limpiado. Y el orden que tienen en sembrarla es como la que se tiene en el sembrar el maiz – salvo que no la meten devaxo de tierra sino quanto se cubre.

Ase de sembrar antes de las aguas o al principio dellas – y algunos mojan la semilla el dia antes y lo tienen por mejor – y estando nacido de quatro dedos de alto es menester deservarlo y sino se desyerva tarda mucho en crecer. Y estando nacido de quatro dedos de alto es menester deservarlo y sino se desyerva tarda mucho en crecer. Y assi estando limpio, que esto se suele hazer dos vezes en algunas partes conforme a las muchas o pocas aguas y vicio de la tierra. Tarda en sazonarse la hoja seis y siete messes segun los temporales. Y sino llueve no nace si no es para perderse porque lo seca el sol.

Duran estos arboles que son del alto de un hombre poco más o menos tres o quatro años el que más y algunos en el primer año o segundo se pierden. Y assi ay mucha necessidad de ressembrar cada ano y de chapodarlo, que quede dos palmos del suelo. Y el chapodar ade ser despues de entradas las aguas porque no lo seque el sol antes que eche la hoja.

Sembrando este añir se da en todas estas provincias por ser calientes y un poco humidas. Y en partes como Tavasco que como esta refferido en la relacion del palo negro es todo agua y muy humida no se da bueno porque se va todo en vicio. Tambien se entienda que no quiere montes sino çavanas y que no nace ello de suyo sino se siembra, porque si algun arbol nace en los montes que son muy poco no son de provecho por no sembrarse y beneficiarse como se requiere segun esta refferido.

Hasta aora no lo han sembrado los yndios sino solo los españoles por la mucha costa que tiene y grandisimo cuidado que es menester.

[2] AGI, Indiferente 1530, N.4, 'Del arbol del hec y del añil,' (1577)

En estando la hoja de sazon la cogen los yndios que se alquilan para ello cortándola con unos cuchillos o podaderas por las ramas que son muy tiernas y de el largo de un palmo poco más a menos. Y la echan en unos cestos y estos llevan en carretas donde pueden andar y sino en cavallos, hasta la casa del yngenio, donde esta hecho un corredor grande con sombra para tender la hoja de un día para el otro porque no se sufre esperar más con ella, por ser tan caliente que se cueze en tres y se pierde. Y assi se a de menear algunas vezes entre dia y noche por este respecto.

Y antes de pasar adelante a el beneficio desta hoja conbiene entender la forma de la cassa e yngenio el qual es en esta manera: hazesse una noria muy alta pegada a la cassa del añir de la qual sacandose el agua con mulas se lleva por sus conductos a una pila la mas alta de todas que esta dentro de la cassa, y en ella asentadas dos calderas grandes que hazen ciento y cincuenta arrobas de agua poco mas o menos.

Dase fuego a estas calderas por de fuera de la cassa y estando muy caliente el agua que no se pueda sufrir la mano, se suelta y va por dos caños grandes a otra pila, que esta junto a ella, de cozer. Adonde primero an echado la hoja, que estava en el corredor, y alli se cueze cubriendo la pila con tablas porque no salga el baho, una ora o poco menos conforme al calor que el agua tubiere. Y en el interin que se cueze es menester rebolber la hoja tres o quatro veces con horcones a fin de que no se queme y se cueza por parejo.

Y assi como el agua este ya en el punto necessario, que este conbiene que se mire con mucho cuidado, se suelta con la virtud del añir, queda [illegible] la hoja sin xugo en la pila, y va por otros dos caños gruessos porque salga presto a otra pila de vatir que esta junto a ella en la qual ay una rueda de madera que esta puesta en un exe largo que sale por una bentana fuera de la cassa adonde ay dos ruedas en un yngenio de madera que le mueben una o dos mulas a toda prissa de suerte que la rueda de dentro anda con gran velocidad y bate esta agua en media ora, y en menos, hasta que se entiende estar batido el anir, porque va a dezir ynfinicto no aver llegado o aver pasado del punto necesario.

De esta pila se suelta el añir y agua por dos conductos adonde estan dos coladores que van a dar en dos pilas que llaman de asentar. Y alli reposa un día y algunas veces menos; y como este asentado por otros caños va el agua fuera de las pilas, y de la casa a sumideros que para esto ay y queda el anir asentado en el suelo de las dos pilas de donde se saca y echa en un colador de manta que tienen sobre unas tinas adonde cae colado otra vez. Y desta tina se saca y se echa en unos capirotes de manta y alli lo tienen un día hasta que el agua se acava de destilar y queda el añir en perfición. Y luego lo sacan y baten con una paleta y lo echan sobre unos lienços que estan sobre tablas adonde lo tienden y ponen al sol y sino le ay al oreo, en un apossento alto que se haze para este efeto que sirve de lo dicho y de guardar el añir.

Y despues que esta a medio secar lo cortan con cuchillos y hazen panecillos de de quatro dedos en quadra y un dedo de gruesso, y como este seco lo guardan. Y es bien que sea muy seco porque pessa menos, y el sol lo purifica, y assi lo tienen por mejor en España, y piden que sea azul sobre morado y liviano como lo es el desta tierra.

Esta es la orden que ay en esta grangeria del añir, tan travajossa a los Españoles y costosa. Y assi ay muchos que an gastado en sus yngenios y adereços de dos a tres mill pesos, a cuya caussa hasta aora no vemos que ninguno de los que an tratado en esta grangería, con aver en

esta tierra mas de quarenta y ocho yngenios de añir, este aprovechado e aya ganado, sino que todos los más están pobres y cada año tienen que gastar de nuevo. Y assi estan enpeñados, y lo que mas sienten es la grandisima contradición que ponen el obispo y frailes y el defensos en su nombre para que los yndios no ayuden, siéndoles el travajo a ellos tan facil como arriba se refiere, pues el que tienen es solo sembrar y deserbas y cortar la hoja y no otro pues lo demás se hace con cavallos y mulas. Y el principal travajo llevan los españoles.

El año passado se hizieron al pie de seiscientos arrobas, y muy estimado todo, que va en esta flota de don Antonio Manrrique. Y los años atras no se hizieron tantas, y este presente se hara muy poco, aunque si ubiera ayuda de yndios se pudieran hazer mill arrobas. Pero la contradición obstinada del obispo y frailes es de tanta fuerça que se entiende no llegaran a trescientas arrobas. Y paresce no es de ningun provecho para el aumento desta grangería. Una cedula que [illegible] su magestad enbió al governador destas provincias, en que manda ayude y favoresca este negocio para que vaya adelante y se engruesse, de lo qual se ve manifiesto el daño que a la Real hazienda vendra por lo que toca al diezmo pues se cumple de su caxa a las 500 000 mrs. que manda dar al obispo. Y assi mesmo para sus derechos y alcavalas que tiene en esta tierra y en España, que monta gran fama, y por el consiguiente a la Sancta Cruzada, por ser esta tierra tan pobre, y sin ninguna grangeria, sino sola esta del añir. Y si los yndios sirviessen en ella con los jornales tendrían con que sustentarsse y para la limosna de la bula.

El precio que a tenido a sido dos pesos de tipuzque de contado cada libra, un tomín mas a menos conforme a la vondad del añir. Y esta razón y orden es la mas cierta y verdadera que podemos enbiar. De Mérida, provincias de Yucatán, a 26 de Mayo de 1577 años,

Pedro Gómez

Francisco Pacheco

Fernando de Castro Polanco

Appendix 3[3]

Marginalia - A la Real Audiencia de Guatemala avisando la de la forma que acá se entiende que se beneficia el añir para que ynformen de lo que se les ofrece

Presidente y oydores de mi Real Audiencia de la provincia de Guatemala haviendose conferido y platicado en mi Consejo de las Yndias del beneficio que convendra hazerse para sembrar con aumento en essa provincia y otras circunvecinas el añir y sacar del algún aprovechamiento considerable, ha parecido que esta semilla se ha de sembrar en tierras llanas en que no aya ciénagas, ni demassiada humidad, sin ara ni labrar la tierra ni cultibarla de ninguna manera mas que haviendola primero quemado y en sembrandola se ha de echar sobre ella ganado bacuno [illegible] para que se esconda la semilla que esto es de algun beneficio aunque sino hubiere comodidad de ganado para hacerlo no se pierde porque

[3] AGI, Guatemala 386, L.2, fols.557R-559R, 'A la Real Audiencia de Guatimala,' (01.11.1610)

ningun animal ni have la come. La qual se ha de sembrar por febrero y março que son messes en que no llueve y despues con las agoas de los siguientes crece la yerva. Y a los primeros de octubre se ha de coger la semilla.

Más para hacer el añir se ha de cortar la yerva en fin de Jullio porque engranando que lo haze passado este mes no es bueno para añir y solo sirbe para semilla. Y en el primer año que se siembra no se ha de cortar porque creze poco y no grana y assi se ha de dejar hasta otro año en que se corta por el tiempo que esta dicho, dejando sólo lo que ha de servir para [semilla?] y en los demás años se ha de yr sembrando y cogiendo por Julio la yerba que ha ssalido que se ha de cortar por la mañana y echarse luego en remojo en canoas o en pilas donde toda la cubra el agoa, ponendola ençima palo y piedras que lo apriesen con su peso, y hagan que este siempre cubierta y debajo del agoa, que ha de ser de corriente de algun río o arroyo y no de ciénada. Y se a de estar assi hasta las diez horas del día siguiente.

Passado este tiempo se an de yr quitando los palos y piedras que esta sobre la yerva y secando y echando a mal la oja y rrama della sin apretarla ni sprimirla porque no a de servir más. Y el agoa quedare en la pila o canoa se a de echar en otra pila o albarca limpia donde esta una anoria u otro yngenio que mueba unos palos que an de batir y golpear esta agua por espacio de dos horas más o menos, lo que pareciere ser menester hasta que la tinta quede coajada y se baya a fondo y el agoa por encima quede clara, la qual dentro de media ora que se aya asentado la tinta se a de echar fuera. Y luego se a de sacar la tinta que a de estar a manera de lana y se a de echar en unos coladores de angeo donde se a de escurrir el agoa que quedare en ella en tres o quatro oras. Y despues que este bien echo esto, se pondrá en unas tablas al sol para que se enjugue y quede echo el añir en la forma que se trae a estos Reynos.

Y que en este beneficio enferma y muere mucha genre por ser tan fuerte esta yerva que de solo entrar las manos o los pies en el agoa donde esta la oja, quando se han de sacar los palos o piedras con que esta debajo del agoa y la misma yerva se les comen y canceran las carnes. Y despues estando golpeando el agoa levantan un umo tan malo que penetra los sessos y causa otros daños con que se han consumido muchos yndios en las partes donde se beneficia este añir. Y por que quiero saver si esto se haze en essa provincia en la forma dicha y lo que acerca de todo ello se os ofrece os mando que en la primera ocassion me ynformeys dello muy particularmente,

Fecha en San Lorenzo el Real a primero de noviembre de mil y seyscientos y diez años = yo, el Rey,

[Enviado a los gobernadores y oficiales reales de Guatemala, Onduras y Nicaragua]

Appendix 4

Relación de la siembra y calidad del jiquilite y de las tierras y tiempos de beneficio que se le a de hacer para sembrarlo como se coje, y beneficia hasta hacerse tinta, que trabaxos padecen los yndios, y los daños que dello se les pueden seguir[4]

Las tierras a propósito para sembrar en ellas la simiente de la tinta añir, que llaman xiquilite, son tierras calientes y cuando menos templadas, barriales, arenales, y tierras negras y pedregales, como esten las piedras asi das en la tierra que estando sueltas, encima no es buena, ni en donde ay peñas grandes, ni pantanos, ni menos donde la tierra es muy seca y tiessa, sino que por lo menos a de ser algo humeda como es en abiertas y laderas de montes arroyos y ríos y ciénagas y en oyas y lo mas en sabánas, que son campos llanos sin árboles.

La semilla del jiquilite es una baynilla pequeña que tiene dentro a tres y quatro granos como de mostaça, y la baynilla de la misma suerte eceto que asi la baynilla como los granos son más duros. Cogese esta semilla desde mediado de noviembre en tierras altas y calientes y en tierras templadas desde ocho a doçe se diziembre. Dura la cosecha mes y medio y dos, y siendo los tiempos bentosos se abren las bainillas y se cae con brebedad.

Para sembrar esta semilla se trilla primero, no de manera que salgan todos los granos de las baynillas, sino la mitad, para que no nazca toda la semilla de una vez sino que quede para uno y dos años la que queda en las bainillas; y con esto no nace tan espesa y es mejor la yerba. Las tierras en que se ade senbrar se han de guardar de un año para otro y si las guardaren dos será mejor el jiquilital, guardándolas de fuego desde fin de otubre, porque si se queman no se pueden senbrar hasta otro año.

El tiempo en que se ade pegar fuego y sembrar es el mes de abril o mayo, en llobiendo dos o tres aguaceros. En un día que haga buen sol y esteya la tierra caliente, pegar fuego a la sabana o campo que se ubiere de senbrar a 40 dias y no más porque si lluebe antes que siembren las semilla de jiquilite se enfria la [tunca?] y no nace tan presto, y echándola estando la tierra caliente nace luego. Y el quemar y sembrar a de ser desde que la luna tenga veynte y dos dias hasta que la siguiente tenga seys y ocho.

El modo de sembrar es como quien siembra trigo, eçeto que se a de senbrar mas apartado por ser los granos más pequeños y aber menester mas campo. Las tierras bajas se an de senbrar primero que las altas, y en llobiendo dos o tres aguaceros en los meses de abril, mayo, junio y julio y las altas en agosto hasta mediados de setiembre. También se da muy bien el jiquilite en los montes, roçandolos de berano, y quemándolos y sembrándolos dos o tres dias antes que llueba, y si ubiere llovido, haziendo dos dias de sol dales fuego y sembrarlos en un mismo día.

Dase muy bien sembrando en los comederos de ganado después de dos o tres aguaceros. También se da en los sacamiles, que son unos pajonales que quedan en los campos y sabanas sin que los queme el fuego, quemando los de propósito y arándolos de un [illegible]. Y después abiendo llovido encima un aguacero o dos, sembrando el jiquilite que si se siembra

[4] AGI, Guatemala 13, R.4, n.41: 'Carta de Juan Maldonado de Paz, fiscal de la Audiencia de Guatemala,' (31.05.1612)

antes de llober, lo entierra el agua. Y si aran dos beces la tierra la dejan blanda, y al coger el jiquilite se arranca y asi es menos costoso y más probechoso estar de un [aguacero?] las tierras.

Es mui probechosos despues del sembrado echar ganado encima para que pise la tierra y los aguaceros recios no lleben la semilla, y para que coman la yerba ordinaria de manera que no crezca y ahogue el jiquilite.

Esta semilla sembrada por esta orden nace dentro de ocho días quando son las tierras buenas, que si no naciese bien aquel año se a de aguardar el que biene que llueba dos o tres aguaceros y luego quemar las sabanas o sacamiles, con lo qual nacerá lo que quedo del otro año. Y el ganado mas provechoso para criar este jiquilite es caballos y mulas que no lo come, que el ganado bacuno lo suele comer y hace mucho daño con los cuernos, quebrando las mejores y mayores matas. Si el obrajero puede deserbar el jiquilite quando esta de media bara en alto crece mui bien, porque no lo acosa la yerba. Y si no ay ganado que la coma conbiene este beneficio y no es mui costoso.

El jiquilite que quedase corto como de una quarta no se a de quemar de un ano para otro quese pierde mucho el que fuere mayor sino. Donde no se puede hacer roças ni sacamiles ni arado, se a de sembrar la semilla en quemando las sabanas y procurar que el ganado ande en ellas para lo que está dicho.

El modo de quemar los jiquilitales siendo biejos ade ser en coziendo la semilla desde la menguante de noviembre en tierras bajas, y donde de berano ay aguaceros, porque si se deja para tarde que este muy seco el jiquilite se queman hasta las raices y asi se quema mucho [illegible] y no naçe tan espeso. También recibe daño si después de aber estado el ynbierno sucede una seca, coziendo el jiquilite chico y de poca fuerça. Y abiendose quemado temprano, esta ya grande y se puede sustetar con la seca por aber echado más raíces, y llega más temprano para poderse cortar.

La yerba de jiquilite se corta para hacer tinta añil desde Santiago poco más o menos que tenga cinco quartas de alto y algunos más. Y para dar tinta ade tener cinco y seis meses la yerba, y si tiene más no se pierde nada hasta que cepe la semilla, que suele ser principio de Octubre, y entonces da poca tinta y no tan buena, y hace tanto costo como tiene de provecho. La flor y hoja de la yerba es casi como trebo eceto q mayor el tronco y rama, y mucho más grueso y apanado [?]

Marginalia: Cómo se haçe la tinta

La fábrica de la tinta es que cogiendo la yerba la echan en las pylas de cal y canto que tienen los obrajes para remojar la yerba, y que se cueça en ellas. Y el agua más a propósito para que acuda bien la tinta es de ciénagas o manantiales, por ser caliente, que saca más jugo y quece mejor la yerba.

Echan esta yerba como esta dicho en las pilas donde la dejan estar al principio diez y ocho horas de remojo y más. Después se ban dando [menos?] oras para el remojo hasta que las aguas hace unas bejigas y toma color açul. Acabado este tiempo se desagua el agua destas pilas del remojo en las pilas de batán donde con unos palos que estan en una rueda que

muebe el agua, se bate la [illegible] en la pila por espacio de tres, quatro y cinco oras en que el agua hace diferente espumas. Y acabadas de desacer las espumas biene a quedar el agua batida en su punto y se echa de ber quando sacada una poca de agua en un plato se baja la tinta abajo, quedando el agua encima. Y queda el agua muy açul quando esta batido lo que es menester. Y si le dejan pasar del punto que se le a de dar en el cocer y batir, no sale la tinta tan buena. Algunos obrajes que tienen agua baten con rueda della otros con rueda que trae caballo.

El modo de coger esta yerba es lo más ordinario cogerla los negros mulatos y mestizos y los yndios que tienen caballos, concertándose por cada carga con el obrajero que les da ordinariamente de comer y despues de aber almorçado ban en los caballos adonde esta el juquilite y cargan en ellos y lo traen al obraje y en descargando los caballos les dan en la casa del obrajero de beber su chilate,[5] tamales o tortillas, queso o carne y luego buelbe a la tarde por otras cargas de yerba por el [modo?] de la mañana.

Algunas bezes estan tan cerca las tierras que a medio dia tiene hecho dos biajes el yndio, en que trae quatro cargas de jiquilite, por que le dan seis reales u ocho conforme al concierto, si son los caballos suyos, y de comer, y si echa más le pagan al respeto. Y si son las mulas o caballos del obrajero por cada quatro cargas le dan a real y medio o a dos y de comer y beber. Y quando esta lejos el jiquilite no trae más de dos cargas, y estando cerca quatro y si trae mas se las pagan como esta dicho aunque sean las mulas del obrajero. Y los yndios cargueros en solo esto se ocupan.

Ay otros Yndios que sirben de pileros de echar la yerba del jiqiulite en la pila de remojo, y después que esta desaguada la yerba en la pila de batir, mientras esta batiendo, sacan la yerba del jiquilite que [illegible] remojado de la pila del remojo y lo echan en el campo, aguardando a que las aguas de la pila del batir se asienten. Y en asentándose quitan dellos dos bitoques o tornos que tiene la pila, el más alto y sale aquella agua que pareze lejia y queda abajo la tinta. Luego quitan el torno más bajo que está a quatro o seis dedos del suelo de la pilas que sale alguna lejía, y queda la tierra en el suelo la qual ban sacando con botijas y echándola en unos lienços que sirben de coladores de los quales cae el agua y queda la tinta en los lienços, donde la sacan y la echan al sol en unas tablas.

A estos yndios pileros sullen pagar a dos y tres reales cada dia y si son maestros de tinta a más, con que sacan probecho y salen más gordos porque comen mejor que en sus casas. Estos Yndios pileros son los que pueden recivir daño en la salud mayormente los que sirben en pilones y canoas, que por no aber más de un baso en que remojar las yerbas baten el agua y para sacar la yerba remojada entran en esta agua que es muy cealida y tiene un tuffo y olor esta yerba de que reciben daño los pileros de pilones y canoas, y mucho mayor en batir el agua, que por ser en tierra caliente y estar batiendo el agua tanto tiempo suelen refriarse y morir. Y también reciben daño los pileros de obraje en sacar la yerba remojada por el olor y calor della, aunque menos que el de las canoas y pilones. Y por esto la audiencia lo proybe y castiga a los que haçen tinta con yndios.

Firma: Lcdo. Juan Maldonado de Paz

[5] A beverage prepared with cacao, maize, and chile.

Chapter 3

Across the Atlantic: A Story of Acceptance and Rejection

In the study of the commercial life of Spain during the second half of the sixteenth century, one is invariably drawn to the figure of Simon Ruiz, that 'most famous of all Castilian merchants,'[1] and his vast collection of papers. He was well established in Medina del Campo, with a recently engaged representative in Seville,[2] when the appearance of New World indigo on the markets of Spain and Europe in the first months of 1561, disrupted both the widespread European woad industries, and the more limited, but growing trade in Asian indigo.

It was, as described in Chapter 1, a propitious time for the arrival of a new source of blue in Spain: demand was high – indicated by massive imports of French and Azorean woad – while the textile industry, stagnant and strained, would manage a final boom before decline. As indigo obrajes multiplied along the Pacific Coast of Central America, Simon Ruiz emerged unscathed (and a banker to the Crown) from the royal bankruptcy of 1575, in time to witness the last prosperous years of the great international fairs of Medina del Rioseco, Villalón, and Medina del Campo, the final chapter in Castile's golden age of commerce.[3]

Setting aside the complex, chaotic world of the firm's financial operations, a broad overview of that fraction of commercial activities relevant to this discussion, as described by Henri Lapeyre, may be cited at length:

---

[1] John H. Elliott, *Imperial Spain*, p. 197

[2] Jerónimo de Valladolid; See Henri Lapeyre, *Una familia de mercaderes, los Ruiz*, trans. Carlos Martinez Shaw (2008), p.43

[3] Lapeyre, *Una familia,* p.48; Óscar Lucas Villanueva, 'Las Relaciones Financieras entre España y Portugal, 1563-1580,' *Studia Historica: Historia Moderna*, 23 (2001), pp.180-182.

> But what constituted the strength of a commercial house was above all the web of relations it had managed to establish with the main plazas. In these, the firm was represented by salaried factors or agents working on commission. Both, according to the traditional formula, do the business of the principal house, following instructions received by correspondence…[4]

Instructions that demanded continual and thorough replies from agents in Bruges, Antwerp, and Rouen, Lisbon, Florence – all the commercial centres of Europe and Spain. The resulting 56,721 letters, housed in Valladolid's *Archivo Histórico Provincial*, have suffered no want for scholarly activity, with notable contributions by Henri Lapeyre, Felipe Ruiz Martin, José Gentil da Silva, Valentin Vázquez de Prada, and Bartholomé Bennassar.[5] But as the last of these has observed: '*cette correspondance surabondante defie tout examen general…de nombreuses lettres venues de presque toutes les grandes villes d'Espagne sont encore inconnues et risquent de le rester longtemps*.'[6] The discussion that follows has been informed by a collection of these, 'still unknown' documents: the letters of Juan de Amarita, an agent on commission in one of the great textile centers of Habsburg Spain, dispatched from Segovia between 1572 and 1594.

I approached the Ruiz Archive with the intention of concentrating on what promised, at first, to be the most fruitful alternative in the search for evidence of a nascent trade in New World indigo: the letters of Francisco de Morovelli, Luis Pérez, and Francisco de Mariaca, factors for Ruiz in Seville. Overshadowed by a burgeoning trade in cochineal, however, indigo was of minor relevance at the port, and seldom-discussed in writing.

---

[4] Lapeyre, *Una familia,* p.129

[5] The list is long. From H. Lapeyre, among other works: '*Simón Ruiz et les "asientos" de Philippe II*, (Paris. 1953); *Une famille de marchands: les Ruiz: Contribution à l'étude du commerce entre la France et l'Espagne au temps de Philippe II*, (Paris, 1955); "El Archivo Ruiz: veinte años después', *Revista de Occidente*, n.107 (Madrid, 1972), pp. 160-179. From F. Ruiz Martin: 'Simón Ruiz Embito, mercader banquero en las ferias de Medina del Campo,' *Historia de Medina del Campo y su comarca* (Medina del Campo, 1986), t. II, pp. 288-299; *Pequeño capitalismo, gran capitalismo. Simón Ruiz y sus negocios en Florencia*, (Barcelona, 1990); '*Lettres marchandes échangées entre Florence et Medina del Campo*, (Paris, 1965). From V. Vázque de Prada: '*Lettres marchandes d'Anvers,'* 4 vols. (Paris, 1971); 'La economía española en la época de Felipe II vista a través de una firma comercial', in *Revista de Archivos, Bibliotecas y Museos*, vol. LXII, 1965.

[6] Bartolome Bennassar, 'Facteurs Sévillans au XVI^{eme} siècle, d'après des lettres marchandes,' *Annales: Èconomies, Sociétés, Civilisations*, 12:1 (1957), p.60

Likewise, a survey of correspondence with the textile centres of Toledo, Cuenca, and Brihuega, still largely unstudied, did not yield any relevant material. A brief comment by Lapeyre finally encouraged an examination of communications with the 'city of the aqueduct': Ruiz, it seemed, 'bought indigo in Seville for the dyers of Segovia.'[7] The letters of Juan de Amarita thus proved a welcome surprise: from the central house in Medina, he received regular shipments of New and Old World indigo to be sold in Segovia, the neighbouring towns of Riaza, el Espinar, Pedraza, and Aldeavieja.

For over a decade, Amarita's activities were mostly concerned with the sale of indigo and textiles, assiduously reported back to Ruiz, in letters that could be mined for evidence of the dye's reception and early commercialization, the competition with woad and Asian indigo. Of their regular, at times weekly correspondence, some 392 letters have survived, discussing the particulars of commerce with the usual detail that has attracted so many scholars to these documents. It is tempting to paraphrase Bennasar, when he suggests: '*leur merite est de nous introduire, d'un maniére desordonnée sans doute, mais spontanée, immediate, vivante au coeur complexe de Seville,*'[8] in the present case, of the textile industry and indigo trade in Segovia.

A day's ride from Medina del Campo, Segovia would begin to feel the aches of an impending crisis by the opening years of the seventeenth century; yet the bulk of Amarita's letters coincided with the city's 'epoch of greatest splendour, from 1575 to 1585,'[9] in the words of Jean-Paul le Flem: '*l'apotheose du textile Segovien, ou bien... l'éclat trop éphémère et retrouvé d'un passé glorieux*.'[10] Between 1579 and 1594, the city fared well in relation to her more celebrated counterparts, producing an average 12,500 to 13,000 pieces of cloth per year – in

[7] Lapeyre, *Una familia,* p.50
[8] Bennassar, *Facteurs Sevillans*, p.60
[9] E. Lorenzo, 'Relaciones económicas de Segovia con Sevilla y America en el Reinado de Felipe II,' in *Actas del Congreso Proyección y Presencia de Segovia en América*, Ed. Mariano Cuesta Domingo (1992), p. 177
[10] Jean-Paul Le Flem, 'Vraies et Fausses Splendeurs de L'industrie Textile Segovienne (c.1460 – c.1650)', in *Produzione, commercio dei panni di Lana (nei secoli XII-XVIII)*, ed. Marco Spallanzani (1976), p.526

the same period, Florence had an output 13,750, Venice 19,183, and Hondschoot 12,413.[11] Locally produced textiles ranged from the more ordinary *estameñas* and *estameñetes*, to luxury *venticuatrenos* and *treintenos*, specializing in high quality wool, with a preference for darker colours (*pardos*, *berbíes*, v*elartes*), all of which would be commonly achieved using a base of woad.[12] In the mid-sixteenth century, the sizeable trade in French *pastel* was controlled by the Burgalese merchant Diego de Bernuy, whose imports reached Segovia from Toulousse by way of Bilbao, Vitoria, and Burgos.

It was in Segovia, finally, that some of the earliest samples of woad – and later indigo from New Spain, received their first, official evaluations, tested for quality by local dyers (a total of 64 in 1561).[13] An initial venture in the production of woad in the Mexican Valley by the Germans Eynger and Cuon, described in chapter one, did not survive a succession of negative reviews from the Segovian master dyers, while positive appraisals no doubt encouraged the rapid rise in indigo production two decades later. In 1566, an eager report from M. de Fourquevaux to Charles IX praised a newly discovered logwood (and its recently found qualities), giving us a sense of the weight these early, successful trials would have:

> Lord, they have sent the said Lord King [of Spain] a wood that covers the land of Guatemala, which is used to dye woolens, silks, and everything that may be desired, in diverse colours, without woad; and examinations of this wood in Toledo and Segovia have shown that more can be made with a pound... than with thirty of brazilwood, and more than with ten pounds of woad; and in relation to the colour black, it dyes without mordants or other mixtures. I am sending a small sample…[14]

---

[11] Le Flem, op. cit., p.532; E. Lorenzo, 'Relaciones económicas,' p. 177

[12] Anastasio Rojo Vega, *Guía de Mercaderes y mercaderías en las ferias de Medina del Campo: Siglo XVI* (2004), pp. 253-255; et al.

[13] Bartolome Bennasar, 'Economie et Société a Seogovie au milieu du XVI[eme] siecle,' Anuario de Historia Economica y Social, 1:1 (1968), p.199

[14] "Señor, han enviado al dicho Señor Rey [de España] una madera de la cual la tierra de Guatemala está cubierta, la cual sirve para teñir paños, sedas y lo que se quiera, de diversos colores, sin pastel; y por el ensayo que del dicho palo ha sido hecho en Toledo y en Segovia se hace más con una libra...que con treinta de brasil, y más que con diez libras de pastel; y tocante al color negro tiñe sin alumbre ni otra mezcla," (18.02.1566), Raimond Beccarie de Pavie, Baron de Fourquevaux*, Dépêches De M. De Fourquevaux: Ambassadeur Du Roi Chares IX En Espagne, 1565-1572,* vol. 1 (repr. 2010), p.56

Fourquevaux's sample, we may assume, was sent for similar purposes, to be tested by experts in France.[15]

In Segovia, a new alternative irrupted into an industry dedicated to dark coloured textiles (where the importance of blue as a raw material really cannot be overestimated), and the city became one of the earliest stages for the encounter between woad, Asian and American indigo, a revealing setting for the examination of *xiuhquilitl's* introduction to the Castilian textile markets. A recent lecture, finally, brought to my attention records from Segovia's municipal archive that further illuminated the practical implications and wider repercussions of the transition from woad to indigo, incorporated into the final section of this chapter.[16]

The letters of Juan de Amarita

Amarita's letters lack the political commentary and international scope that can enliven routine reports from the Italian, and northern European *plazas*. References to Saint Bartholomew or the sack of Antwerp, even the Portuguese succession, are altogether absent; at most, we hear news of a local fire, the fortunes and misfortunes of fellow merchants. Personal details are seldom introduced; Amarita's wife, Doña Lucia, is mentioned occasionally, if in passing, but there is nothing to suggest the couple had children. Unlike Francisco de Morovelli, who would describe even the bleeding treatments he was being

[15] Historians citing this text have assumed it refers to indigo most likely from the references to blue and Guatemala; see, for example, Modesto Ulloa, 'Unas notas sobre el Comercio y la Navegación Españoles en el siglo XVI,' *Anuario de Historia Económica y Social*, vol.2 (1969), pp.197-19, and Francisco Javier Vela Santamaría, 'Protoindustria y fábrica difusa: el distrito industrial Segoviano en el Siglo de Oro,' lecture presented at the *XI Congreso Internacional de la Asociación Española de Historia Económica* (Madrid, 4- 5.09.2014). Coinciding with the earliest exports of logwood from Yucatán (alternately under the jurisdiction of New Spain and the Captaincy General of Guatemala), the description of the plant and product – *'l'arbre ressemble (sic) au brezil. Son escorsse e blanche, espoisse de deux doigts et les branches en sont les meilleurs'*– suggest it was more likely logwood Fourquevaux was writing about.

[16] Vela Santamaría, 'Protoindustria y fábrica difusa,' pp.13-18

subjected to, Amarita spared Ruiz the details when he was ill or indisposed, even close to death in September 1580. But he was not altogether immune to gossip: in November 1575, an acquaintance was rumoured to have died 'of anger' towards a squandering son;[17] a few years later, Antonio Gallego, an occassional client, was stabbed, 'once in the neck and twice in the arms,' (but survived) forcing Amarita to postpone a trip to give account of his latest transactions in indigo.[18]

In the absence of letters from Ruiz, however, we are left with a fractured narrative, guessing at the nature and tone of his replies. The reader is always 'in the position,' to borrow Violet Barbour's analogy, 'of one who overhears half... of a long, long conversation by telephone.'[19] A conversation that rarely strays from the routine, at times tediously repetitive account of individual sales, the state of the market, and prices of goods. Yet reasonably so; Ruiz could expect no less from his own, careful instructions, as described by Lapeyre:

> …that can leave a great margin to the agent's initiative, but more often mark their limits closely, and fix prices which cannot be exceeded under any circumstances. It is the method followed by Simon Ruiz, that makes life difficult for his agents.[20]

Amarita was among those with set boundaries and limited independence; authorized to conclude business on his own, he might subtly suggest a discount of a real per pound of indigo, but sought regular confirmation of prices, and in the negotiation (or re-negotiation) of payment. Ruiz went so far as to indicate buyers, in particular when the dye was exchanged

---

[17] 'Dicen que murio de enogo porque un hijo suyo que tenia ay en medina le abia gugado y bellaqueado mas de mill ducados y deste enoxo dizen que murio;' Juan de Amarita to Simón Ruiz, Segovia, 22.11.1575, Archivo Histórico Provincial de Valladolid (AHPV), Archivo Ruiz (AR), Caja 26, no.110. Henceforth, letters will be referenced by date, box, and number. Unless otherwise noted, all correspondence is archived at the AHPV, AR.
[18] JA to SR, 01.02.1583, c.82-121
[19] Violet Barbour, 'Review: Lettres Marchandes d'Anvers by Valentin Vazquez de Prada,' *The Journal of Economic History*, 22:3 (1962), p.399
[20] Lapeyre, p.129

for textiles.[21] The cumbersome task of relating everything in writing aside, agents were ensured a measure of agitation, if not adventure, by the uncertainties and volatile prices of the market. These merchants had to be '*aussi bien informé qu'un bon journaliste, posséder la meme flair qu'un bon inspecteur de police*,'[22] even, at times, the cunning of a smuggler. In June 1575, Amarita requested a new shipment of indigo should be sent 'during the night', or delivered secretely at the house of Gerónimo de Carrión, 'because I do not want them to know I have more than a barrel, so the price won't fall…'[23]

For all its complications, being an agent for Simon Ruiz was a profitable occupation and sought after position, one that Amarita is likely to have acquired through the auspices of his older brother, Luis Pérez, one of Ruiz's more reputable factors in Seville, 'a sane man, and the only one who can be trusted in this land.'[24] The letters indicate he was in contact, and on occasion dealt directly with the Burgalese merchants Juan de Cuéllar and Antonio de Quintanadueñas, several members of the Portuguese Gómez d'Elvas family, and the firm's agents in Seville, including Morovelli and Mariaca, both of whom worked closely with Pérez.[25]

The private letters of all these merchants hold essential similarities in structure and tone; Amarita used a standard opening – 'I received y.h.'s last letter on (this date)' – and ended on the formula: 'Our Lord guard the illustrious person of y.h. many years. In Segovia, at (date).'[26] Amarita's letters were usually between two and three pages long; with fairly large,

---

[21] JA to SR, 9.11.1575, c.26-105 and 106; 16.11.1575, 26-108 and 109
[22] Bennassar, *Facteurs Sevillans*, p.70
[23] '…que benga de noche… porque no quiero yo que sepan que tengo mas de un barril porque no se aga mal prezio...' JA to SR, 24.06.1575, c.26-99
[24] Francisco de la Presa to Simon Ruiz, 12. 06.1572: 'Es hombre cuerdo, y con el único que se puede tener quenta en esta tierra.' Cited in Manuel Basas Fernandez, 'Mercaderes Burgaleses en la Sevilla del siglo XVI' (1965), p.488
[25] On the Gómez d'Elvas family, see Óscar Lucas Villanueva, 'Las Relaciones Financieras Entre España y Portugal, 1563-1580,' in *Studia Histórica: Historia Moderna*, 23 (2001), pp.173-198
[26] 'Nuestro Señor la Illustre persona de v.m guarde muchos años. En Segovia, a (fecha).'

reasonably clear handwriting, in a style that oscillated between joined-up and script. The entire text might read as one long parragraph, but a space or cross on the margin would occassionally be used to mark the start of a new topic. It would be hard to disagree with Lapeyre, when he proposes: the 'most maddening problem presented by the sixteenth century letters, is that of punctuation: one must be imposed'[27] – an exercise that will often demand beginning sentences with the 'regretable coordinating conjunction: "and".'[28] By way of an example, the tone is neither as warm nor as amicable as in letters from the Lisboetan Gómez d'Elvas family, and more deferential, even in comparison to that of the Seville agents.

Assembling Amarita's numerous, if scattered comments on the indigo trade into an organized narrative, isolating individual issues from the long, drawn-out sentences that characterize these letters has, by force, imposed my own concerns on the 'conversation.' A chronological account was set aside in view of the repetitive nature of the letters, encouraging a thematic approach that could also emphasize the topics Amarita himself found most relevant. Insofar as possible, the narrative follows indigo through the broader web of agents and networks with ties to Simon Ruiz. Yet this particular trade, evidently not of great importance to the family's commercial investments, has received little attention in published studies of the Ruiz firm: Lapeyre's otherwise superbly detailed work on the merchant family dedicated no more than a short (and somewhat vague) paragraph to the trade (in contrast, for example, to several pages on cochineal),[29] while studies included in the various published collections of correspondence – with Lisbon, Florence, and Antwerp – had little to add.

[27] Lapeyre, p.135
[28] Ibid, p.135
[29] Ibid, pp.532-533

The letters themselves proved somewhat more revealing: the Portuguese Gomes d'Elvas family in particular (also New Christians), were routinely involved in sales of Indian but also American indigo, and occassionally refer to Amarita's doings in Segovia. Sales were mentioned in letters to Baltasar Suárez, an agent in Florence with operations in Venice, run in partnership with the Bonvisi family from Lucca (known for its silk and skilled dyers),[30] while Antwerp was often cited as a large market for *añil*. The discussion that follows incorporates these isolated remarks, brief comments, often just ordinary accounts of sales, drawing out evidence of indigo's broader reception and accommodation in Europe.

This chapter begins with an overview of the nature and particulars of trade, the experience of commercializing *añil*, highlighting the importance (real and perceived) of timing, quality, and a solvent clientelle. A second and third section turn to the competition with Asian indigo and woad, moving into the world of Castilian dyers to explore the impact of American imports on the dyeing sector. This is a story, on the one hand, of success – as a new product made its way into a competitive sector – but it is also an account of resistance, rejection, even commercial failure: Simon Ruiz was ultimately dissatisfied with his incursion into the indigo trade, a source of constant complications and few profits.

I. *For Better or For Worse: Selling indigo in Segovia*

The earliest reference to the sale of American indigo in the extant letters appears in April 1572, a decade after reports of a new blue dye had reached the European markets.[31] Yet even the Portuguese trade with Asia was still in its infancy: in 1573, Antonio Gomes suggested Indian imports that year would be distributed amongst a small group of Lisbon

[30] Felipe Ruiz Martín, *Lettres Marchandes Echangées Entre Florence et Medina del Campo* (Paris, 1965). On silk in Lucca, see Amy Butler Greenfield, *A Perfect Red*, pp.17-32
[31] JA to SR, 10.04.1572, c.16-200

merchants, for unlike other spices, 'this one is only brought by those who send for it to Cambay.'[32] Gomes and Ruiz were only beginning to market the product, and it was important, the Portuguese merchant concluded, to 'understand what can be spent each year in Castile,' ending on the encouraging: 'time will teach us' (*el tiempo nos enseñara*).[33] Over the next few years, Juan de Amarita would indeed learn the trade (through various fortunes and misfortunes), dedicating most of his writing to the method and practice of selling *añil*.

To begin with a few general observations: an important share of the dye commercialized by Amarita was sold in partnership with the Gómez d'Elvas family, who dealt principally in Asian, but would also invest in American imports. From Lisbon, the dye made its way to Castile through Abrantes or Mérida, but Antonio Gómez often found it more profitable to ship his indigo South by sea, to Ayamonte, from where it could be sent back North.[34] Stored in the warehouses of Ruiz in Medina, the dye was dispatched to Segovia, packed in crates of an aproximate 100 pounds, or barrels with a net weight that oscillated between 150 and 180 pounds.[35] While it can, at times, be difficult to discern whether Amarita was referring to the Old, or New World varieties, he would often specify which he meant, and kept strictly separate accounts for each.

Demand in Castile coincided with the availability of wool, indicating most sales were destined for the local textile industry – indigo never failed to sell well from June to July,

---

[32] '...pues el biene repartido de la India, bien que no puede ser en tantas manos como las otras drogas porque esta no la traen sino quien inbia por ella a Canbaya,' Antonio Gómez to SR, 23.04.1573, in Gentil da Silva, *Lettres de Lisbonne*, p.44

[33] Antonio Gomes to SR, 22.11.1573, in Gentil da Silva, *op. cit.*, p.46

[34] For shipments dispatched through Ayamonte, see Antonio Gómes to SR, 27.10.1574 and 4.11.1574, in Gentil da Silva, *Lettres de Lisbonne,* pp.64-66; accounts also suggest it was the route of choice for indigo sent by the Gomes d'Elvas family, AR, c.250: 'Cuentas/Relaciones de mercaderias y fletes, 1557-15777'

[35] As indicated in receipts and accounts; see, for example, AR, c.250-329 (cuenta de los 18 barriles de añir vendidos el año de 1575 con el Sr. Luis Gomes), and c.250-367 (cuenta de 9 barriles de añir del Sr. Luis Gomes)

between Saint John and Saint James, after the 'new wools' (*nuevas lanas*) reached the market.[36] By contrast, during periods of water shortages, a *sine qua non* for the sector, Amarita found it almost impossible to sell his merchandise.[37] Over time, the agent developed his own views of the indigo trade: securing a good sale, he insisted variously, was largely dependant on a delicate balance of timing, quality, and a solvent clientelle.

Timing sales appropriately required skill, and an element of luck: the best moment to sell was when demand rose (with the availability of wool), which would ideally coincide with a decline in the supply of indigo, before the arrival of the coming fleet, and Amarita did his best to prepare for the yearly window of opportunity. In varying degrees, this is what he (and fellow merchants) termed *buena coyuntura* (good juncture). Circumstances were especially favourable in November 1575:

> There isn't a pound of indigo in Segovia, and if some came now, it would all sell for reales; so if the two barrels have arrived, send them without delay, for in all the world there could not be a better juncture...and this because of the scarcity there is in the town, and the need they have (for indigo).[38]

An exact month later, the situation had been reversed: 'I have sold another barrel in exchange for cloths,' Amarita wrote on December 20th, 'because in reales not a real is sold, and the cause of this are the many people that are selling (indigo).'[39] A delay in the arrival of fresh supplies from the Indies could thus prove favourable, giving merchants additional time (during a period of high demand), in which to dispose of any remaining dye from the

---

[36] JA to SR, 28.02.1578, c.42-94; other examples are cited in the text

[37] JA to SR, 10.08.1578, c.42-124; 17.08.1578, c.42-126; water was also essential to the washing of wools; see, for eample, Enriqueta Vila Vilar and Antonio Vidal Ortega, 'El Comercio Lanero y el Comercio Transatlántico: Ecija en la Encrucijada,' in *Actas del VI Congreso de Historia: 'Ecija y el Nuevo Mundo*,' (2002).

[38] 'No avra quien tenga en segovia una libra de anir si biniese agora bendersia en reales todo por eso si los dos barriles an llegado mande vm enbiarlos lluego por que en todo el mundo no podrian benir a mexor coyuntura por que se podrian bender en reales y despues comprar los panos en reales y el que nos trocase los panos a ello podria azer la persona lo que quisiese y esto por la falta que ay en el pueblo y tener la nezesidad q tienen,' JA to SR, 20.11.1575, c.26-110

[39] JA to SR, 26.11.1575, c.26-111

previous year. Writing to Duarte Furtado, in December 1594, Simon Ruiz described a case in point (as summarised by Gentil da Silva):

> *Nouvelles arrivées d'indigo de Lisbonne. Il n'abonde pas sur la place, mais se vend difficilement, parce que trop cher. En tous cas, le retard des flottes forcera les acheteurs à le prendre, surtout à partir d'avril, à la saison des nouvelles laines, durant laquelle la demand d'indigo est toujours plus forte.*[40]

Time and again, Amarita tried to rush shipments from Medina only to find opportune conditions had passed – yet such were the routine tribulations of agents in an environment of continual uncertainty. The corollary, as Lapeyre has insisted, was an 'insatiable thirst for news,' and above all, the much anticipated 'news of the Indies fleet, which alone mobilized all the European markets.'[41]

At times, the letters suggest Amarita could receive reports from Seville before Ruiz or, at least, that he had sources of his own. Information concerning how much or how little indigo was set to come on any given year could reach the fairs as early as March or April, with the arrival of the *caravela de aviso*, and trickled in as other light vessels made their way to Seville ahead of the fleet. Piracy, shipwrecks, and so many other delays in the course of the Atlantic passage, however, meant news travelled in irregular, unexpected intervals – any advance on information was vital in the eternal struggle 'to be the first to buy or sell,'[42] to do so for a good price, and at *buenas ditas,* that is, on credit with a high probability of payment.[43]

Amarita (and Ruiz) made every effort to find the right customers, and reasonably so given extensions on payment, the 'fearsome... problem of bad payers,' and the 'extraordinary

---

[40] Gentil da Silva, *Lettres de Lisbonne,* p.34
[41] Lapeyre, p.90
[42] Lapeyre, p.89
[43] The term 'dita' was broadly used in reference to a debt, while the expression 'a buenas' or 'a malas ditas,' referred more specifically to the debtor's 'commercial credit.' To sell 'a buenas ditas' meant, therefore, to engage in a sale, payable in the future, to a client who could be expected to be solvent. See: Rufino José Cuervo, 'Algunas antiguallas del habla Hispano-americana,' *Bulletin Hispanique*, 11:3 (1909), pp.287-294; the expression was used routinely in correspondence between Ruiz, his Spanish and Portuguese correspondents.

frequency of bakruptcies."[44] Ideally, the dye would be sold for currency, in *reales*, although the exchange for cloth (usually Castilian *ventidosenos* and *venticuatrenos*) appears to have occurred in equal measure. Occassionally, Ruiz might urge his agent to exchange any remaining, uncertain debts for textiles, but it was always best to sell *a buenas ditas* from the start, and the pursuant search for solvent, reliable clients would further complicate the agent's task. In September 1580, Ruiz urged Amarita to sell, but his agent wavered before unreliable clients, low prices and too much supply, summing up his woes that October:

> Y.h. writes that I am a man of words, that I comply only with words. I honestly... cannot do more. I would have sold (indigo) these days, but do not dare give it to those who ask for it on credit, and I have been negotiating with others many times, but they want it at such extended deadlines that I have not dared... On the other hand, there are so many traders in Segovia, with indigo from Seville and Portugal, and they are selling it pitifully cheap... I will do what I can, and until I sell this (load) I do not want y.h. to send me any more indigo.[45]

He may have been incompetent or merely hesitant, but a concern for the standing of prospective clients was evidently justified, and shared. Still, these misunderstandings, small conflicts, daily frictions did not interrupt the narrative; Amarita would treat his employer's displeasure in the middle of a letter, and lightly move on to a new topic. Insofar as possible, he attempted to shift the blame onto someone else, delay or avoid a direct answer. But he could only veil the truth so far; Ruiz was evidently well acquainted with most of the indigo buyers discussed in the letters, an impressive number of merchants, cloth traders, even artisans. These would exceptionally include French and Portuguese agents, but most appear

[44] Lapeyre, p.89

[45] 'Escriveme vm soy palabrero y cumplo con palabras, en verdad que no se de mi condicion mas no puedo mas que la uviera bendido estos dias mas no me atrevo a quien me pide fiarsela y e estado en benta con otros muchas veces (pero) quieren por tanto tiempo que no me atrevo por no azer mala pusizion y por otra parte no ay en segovia mas de corredores a bender anir asi de sevilla como de portugal y lo dan tan barato que es lastima vm. (?) que yo are todo lo que pudiere y asta bender todo esto que aqui tengo no quiero que me enbie vm añil,' JA to SR, 22.10.1580, c.59-169

to have been lesser merchants from the surrounding area and artisans in the local textile industry.

An itemized account of the sale of 10 cases of New World indigo, marketed by Amarita in the first half of 1581 (summarized below), may provide an illustrative example. A total 1061 pounds were sold, in relatively small loads, to thirteen buyers from Segovia, Riaza, El Espinar, and Aldeavieja, at least four of whom – Diego de Centeno, Hernando de Ribero, Manuel de la Peña, and Andrés Serrano Tapia – may be identified as merchants. Female buyers were not altogether uncommon; in December 1575, Amarita complained: 'Catalina de Orduña has not taken any indigo yet for the other two *picotes* (a shiny silk employed for dressmaking), and has been haggling with me to take a real off, and I do not want to, so she has not taken it.'[46] Like María de Cerezo, the only woman listed below, women usually bought small quantities of the dye, in most cases exchanged for textiles, suggesting they were occupied as artisans in the cloth industry, or related trades.

Table 1: *Account of the sale of 10 cases of indigo belonging to Simón Ruiz, vecino and regidor of Medina del Campo, and to whom they were sold:*[47]

BUYER	**AMOUNT PURCHASED** (in pounds)	**PRICE PER lb.** (in reales)	**PAYMENT DEADLINE**
Juan Barroso and Juan Texero	32.5	24	½ San Juan 1581 & ½ Santiago 1581
Hernando de Ribero	105.5	23	½ End of May 1582 & ½ October 1582
Juan Ruyz	101.5	23	½ October 1581 & ½ April 1582
Manuel de la Peña	22	22	Fairs of October 1581
Miguel García	11	20	½ End of November 1581 & ½ End of May 1582
Juan Bernaldo	3	22	
Pedro de Larrea	25	21	½ December 1581 & ½ August 5th, 1582
Manuel de la Peña	60	20	½ November 1581 & ½ July 25th 1582
Andres Serrao Tapia	198		½ March 1582 & ½ November 1582
Juan de Minano	86	20	½ January 1582 & ½ August 1582
Diego Zenteno	91	20	½ Mid-December 1581 & ½ July 1582

[46] 'Catalia de Orduna asta aora no a llevado el anir de otros dos picotes y anda regateando conmigo que la quite un real y yo no quiero y por esto no lo a llevado,' JA to SR, 20.12.1575, c.26-114

[47] 'Memoria de las diez caxas de añir del Señor Simon Ruyz vecino y regidor de Medina del Campo y a quien se bendieron,' AR, c.247-178

Maria de Cerezo	12	20	½ November 1581 & ½ May 1582
Diego de Santiago	104	20	½ End of December 1581 & ½ June 1582
Juan Ruyz	46	19	½ April 1582 & ½ November 1582
Antonio Osorio	97	20	November 1582
Blas García	20	19	½ End of May 1582 & ½ December 82
Juan Ruyz	16	18	½ May 18th 1582 & ½ December 18th 1582
Juan de Amarita	29.5	19	
TOTAL	**1060**lbs.		

Individual purchases ranged broadly, from a slight three to 198 pounds, while two categories of buyers appear discernible: a first, including those who purchased no more than thirty pounds, and a more numerous second that took slightly more or less than a hundred. It is likely these distinguished artisans (with more limited means and needs) from merchants; a local artisan with 'a lot of wool,' for example, might only need 28 to 30 pounds of indigo.[48] Yet the presence of these minor purchases is in other ways revealing of the broader changes brought about by the introduction of indigo. As discussed further in the last section of this chapter, dyeing with woad demanded much larger quanitites of the dye (and larger receptacles) – the introduction of *añil* thus meant unskilled professionals (and artisans with more limited means) could enter a trade once dominated by master dyers.

Prices could vary significantly with each sale, and subject to a variety of factors: timing, supply, quality, whether it was a transaction between merchants, or sold at retail. Payment was ordinarily divided into two disbursements, more often set to the begginning or end of a month, rather than a specific date, and occasionally for the fairs at Medina, in May and October. Extended deadlines, in turn – at times exceeding eighteen months – forced Amarita, like his counterparts elsewhere, into 'continual financial acrobatics,'[49] recounted, excused, and lamented as a matter of course. Missing from this document, finally, are the drawn-out negotiations that could precede these sales, and the complications that would invariably follow in the collection of payment.

[48] JA to SR, 03.07.1578, c.42-114
[49] Bennassar, *Facteurs Sevillans*, p.64

Amarita's association with one client in particular, Francisco de Bracamonte – conquistador, *encomendero*, and indigo producer in Yucatán[50] – and the source of a somewhat disagreeable sale for the agent, may illustrate the routine ordeals of trade. Carrying samples of indigo from his younger brother's *encomienda,* Bracamonte returned to Medina del Campo in 1572 and tried his hand at the merchant profession, incursions that eventually found their way into Ruiz's voluminous correspondence.[51]

Francisco de Bracamonte

Not unlike Bernal Díaz del Castillo, another native of the city, Bracamonte had crossed the Atlantic as a young nobleman with few alternatives, survived and prospered enough to return.[52] But while the elder conquistador spent the later part of his life in Guatemala,[53] Bracamonte seemed determined to remain in Spain. Over the years, he requested repeated prorogations on a licence to reside in Medina, while preserving custody of his *encomiendas* in Yucatán, presenting various witnesses and medical reports to this effect, claiming gout and the ailments of old age precluded him (and his wife) from travel, or worse, life in the tropics.[54] All in all, Bracamonte had done well; by returning alone, he fulfilled a

[50] Discussed at length in Chapter 2

[51] Lapeyre includes the curious story of one Francisco de Bracamonte, who presented himself at the home of Andrés Ruiz, in Nantes, as a relative of María Ruiz de Belorado, proceeded to stay at his home 'and in a show of gratitude devoured a barrel of lampreys destined for the supposed cousin, in the course of his voyage from Nantes to Bilbao,' AR to SR, 11.04.1570, c. Cited in Lapeyre, X. It is unlikely this is the same man, because Bracamonte appears to have been in Yucatán at the time, but by no means impossible, and possibly even a relative.

[52] AGI, Patronato 72, R.1: 'Información de los méritos y servicios de Francisco de Bracamonte, uno de los descubridores y conquistadores de Nueva España y en particular de Yucatán,' (1572)

[53] Here too, del Castillo came into conflict with a nascent indigo industry. See Lesley Byrd Simpson, 'Bernal Diaz Del Castillo, Encomendero,' *The Hispanic American Historical Review*, 17: 1 (1937), pp. 100-6.

[54] AGI, Indiferente General 2056, N.91: Expediente de concesión de licencia en el que se prorroga un año la licencia dada para venir y permanecer en Castilla a favor de Francisco de Bracamonte...' (1575)

near universal aspiration, one that only ten percent of those who crossed the Atlantic in the sixteenth century would realize.[55]

A few, scattered references indicate Bracamonte sold indigo in Medina but also Seville, possibly through an agent, between 1572 and 1582. On at least one occasion, however, and after several months of hesitation, he finally purchased some indigo from Ruiz, to be delivered in Segovia by Amarita. An illustrative example of the negotiations that might precede a sale, with singular ties to the initial stages of indigo production in the New World, it also provides the rare opportunity to follow indigo past the warehouse of Amarita, to the storerooms of one last merchant, and through a related case, into the hands of a master dyer.

Negotiations began in February 1578, when Bracamonte approached Ruiz with the intention of buying several barrels of indigo. Puzzled by his initial, and exceedingly high offer of 35 reales the pound, Ruiz wrote to Segovia for advice. But Amarita was still awaiting the arrival of the *caravela de aviso*, that great herald of news, and had nothing new to relate. Still, he was of the opinion that 'little indigo will come with this armada, because, as is the case most years, when one year a lot of indigo comes, little comes the next, and if Bracamonte has spoken to y.h. he must have some news about it.'[56]

A week later, Amarita reconsidered, suggesting Bracamonte might, in fact, stand to profit from the sale, as 'it is already known in Segovia how the *caravela* does not carry indigo, and little will come this year… so it cannot fail to sell very well, and upon the arrival of the new wools I understand it will sell at the price y.m should want.'[57] As usual, speculation was paramount, and in his next letter Amarita returned to the problem: 'if Bracamonte came to

---

[55] Ida Altman, *Emigrants and Society: Extremadura and Spanish America in the Sixteenth Century* (1989), p.248

[56] '…tengo entendido bendra poco anir con esta armada... por causa que siempre aconteze los mas años que quando un año biene mucho añir otro año no biene tanto y si el Bracamonte ablo a v.m. alguna cosa sobre ella, digo, alguna nueba deve de saver,' JA to SR, 20.02.1578, c.42-92

[57] 'Ya se a sabido en Segovia como la caravela no trae anir y trae por nueba bendra poco este año...,' JA to SR, 28.02.1578, c.42-94

Segovia today he would not sell it for 30 reales… and I do not understand this secret of his… but he must be so married to this indigo that he wants it more than reales, or it must be as y.m says, that he has news from the Indies.'[58] Amarita had his own suspicions of what this news might be, and was well informed: 'many of the natives died last year in Mexico and in many provinces, so many that the towns were depopulated and so perhaps little (indigo) will come…'[59]

The 'great pestilence' of 1576-77, as discussed in Chapter 2, struck at the poor and undernourished, displaying a 'marked selectivity for the Indian population,' with mortality rates highest in the densely populated valleys of Central Mexico.[60] Fray Juan de Torquemada estimated 'more than two millions' had died from the 'murderous epidemic,' leaving 'the place we know as New Spain... almost empty.'[61] By mid April, Amarita viewed the entire business with apprehension: 'in what concerns Bracamonte's indigo…do as you see fit, but I understand he will not keep his word.'[62] His prediction seemed to come true as the conquistador continued to vacillate over the coming weeks:

> In what y.h. writes to me about the indigo he was determined to give to Bracamonte, and that he responded he would not accept it until he had received certain news from the Indies, I always knew this would come to nothing, for even if Bracamonte put all his craft into this (deal), he would not salvage it.[63]

---

[58] '…si el bracamonte biniese a la ora de agora a segovia no lo benderia en reales a 30 reales por amor a el poco gasto que ay agora que yo no entiendo este secreto del bracamonte sino que el deve de estar tan casado con este anir que lo quiere tener mas que reales o deve de ser como dize v.m. tener nueba de las yndias,' JA to SR, 04.03.1578, c.42-97

[59] 'El año pasado murieron en Mexico y en muchas provincias muchos de los naturales, tanto que se despoblaron los pueblos y a este efeto quiza bendra poco (añil),' Ibid.

[60] Rodolfo Acuna-Soto, Leticia Calderon Romero, and James H. Maguire, 'Large Epidemics of Hemorrhagic Fevers in Mexico: 1545-1815,' *The American Journal of Tropical Medicine and Hygiene*, 62:6 (2000), p.734

[61] Fray Juan de Torquemada, *Monarquía Indiana*, cited in Acuna-Soto, 'Large epidemics,' p. 735.

[62] 'Aga v.m. alla lo que a v.m. fuere servido, mas tengo entendido no a de cumplir palabra el Bracamonte,' JA to SR, 20.04.1578, c.42-103

[63] 'En lo que me escrive v.m. sobre el anir que estava determinado de darselo al Bracamonte, y que respondio que no lo queria azetar asta entanto que tuviese dicho Bracamonte zierta respuesta de Yndias, bien tuve entendido yo siempre que no avia de benir a efeto por causa que el Bracamonte aunque mas astuzia pusiera no lo saneara,' JA to SR, 01.05.78, c.42-105

Nonetheless, Amarita had made the most of the situation; after showing the letters to 'some friends, (they) suspected little indigo would come this year, and… some have taken indigo who would not have bought a pound.'[64] In the next few weeks, Amarita did his best to convince Ruiz that the five cases left in Medina should 'not be given to Bracamonte.' Above all, he cautioned against accepting anything less than 36 reales the pound, as he now had certain news that:

> …little will come this year from the Indies and it will sell hereafter as y.h. should desire… I always wrote to y.h. that this indigo should not be sold before the new wools, because more money could be made then, and it would sell for better terms.[65]

Ignoring this advice, the cases were sold on May 22nd and dispatched to Segovia, where Amarita waited for further instructions. On a Wednesday night in June, the dye was finally delivered to Domingo del Campo (on behalf of Bracamonte), who brought his father and the merchant Francisco de Avila to aid in a final examination of the goods.[66] But Amarita refused to let the matter go; he was sceptical of del Campo's claims to have already sold a crate of indigo at a high 37 reales, and even more unlikely, in exchange for reales. 'I do not believe him,' Amarita declared (having failed to sell his own merchandise at this price) 'for *I* will sell (the indigo) with more strength, it being yours, than he on his own.'[67] There was something of the defensive to his tone, but Amarita seemed to be writing in earnest when he insisted: 'I do not understand the profit he (del Campo) makes from this.'[68] For his

---

[64] '…sospechavan no avia de venir ogaño anir y a ese efeto an tomado algunos anir que no tomaran honzas...,' Ibid.
[65] '… se tiene entendido bendra poco de yndias este año y se bendera de aqui en adelante como v.m. lo quisiere… que siempre escribi a v.m. que no se diese ni bendiese este anir asta las lanas nuebas porque se ganarian mas dineros y se venderia por más,' JA to SR, 15.05.1578, c.42-107
[66] JA to SR, 01.06.1578, c.42-111
[67] '…y yo no lo creo porque con más fuerza la bendere yo siendo de v.m. que no el siendo suyo,' Ibid.
[68] '…mas no le entiendo la ganancia de lo que gana en ello,' Ibid.

part, Ruiz remained unconcerned, suggesting it might be 'best to keep silent in these matters'; there was no reason to prevent others from accepting a bad offer.[69]

Within months, Bracamonte had formed a company with del Campo for the sale of 1458 pounds of indigo, presumably including the five crates (some 500 pounds) purchased from Ruiz.[70] It was an unlikely partnership; Domingo del Campo was a young merchant of 25, the son of a merchant and artisan in the textile industry, and Bracamonte a nobleman in his 60s. But it was a fairly standard contract: with a loan of 29,371 reales from Gabriel de Vega, and another of 19,191 reales from Sebastian Texada – the debt shared evenly between Bracamonte and Del Campo – 1,458 pounds of indigo in '*bolluelos*' from New Spain had been purchased, to be resold in Segovia and its surroundings by the younger partner.

Bracamonte assumed two thirds of the risk, and stood to gain in equal measure. In turn, del Campo promised to keep a faithful record of accounts, a 'book' indicating 'how much, and to whom, and at what price,' he had sold the dye. Bracamonte would also market the dye, keeping 7 barrels at his home. If either should exchange the dye for textiles, they had license to resell under the condition that payment should be received in time to settle the initial debt of 48,562 mrs. They would also contract the services, finally, of one Pedro Gonzalez de Espinosa, in a somewhat vague capacity, to 'understand' in the business until the merchandise had been sold.

That same year, Del Campo formed a similar company with Gabriel de Vega, this time in partnership with his father, Agustin del Campo, for the sale of an unspecified amount of indigo in Vega's possession.[71] Bracamonte himself had ties to Vega: in 1582, a brief letter to Simón Ruiz requested a loan of 600 *escudos* (6,000 *reales*) that Bracamonte

[69] '(y en lo que me escribe v.m.) que es bueno callar en estas cosas,' Ibid.
[70] AHPV, Protocolos, Caja 7.702, fols. 574R-578R: 'Compañia de Francisco de Bracamonte con Domingo del Campo, de Segovia (1579)
[71] AHPV, Protocolos, Caja 7.701, fols. 1944R-1946R

wished to take in concert with Vega.[72] There is some evidence, finally, that Bracamonte continued to receive indigo from his own and his brother's estate in Yucatán: Ruiz's *Libro Mayor* for 1579/80 records the purchase of an unspecified amount of añil from New Spain (valued at 78,676 mrs.), from Francisco de Bracamonte, in partnership with the Burgalese woad merchant, Francisco de Lerma. A third, lesser partner in the sale, Juan de Amarita would commercialize the dye in Segovia.

Almost a decade later, Domingo del Campo was still involved with indigo, establishing a company 'for dyes and the dyeing of cloths' with master dyer Juan Martinez and three minor partners: his wife, María Alvarez, Domingo Delgado, and Delgado's wife Maria de Soto.[73] Del Campo was charged with the provision of materials: 'indigo, madder, and woad', to be employed by the remaining partners in the dyeing of 'cloths, wools, and *balletas* (a rough, woollen cloth),' most likely to be coloured black, achieved with a combination of these three dyes. The artisans were bound to work exclusively on the task at hand for the duration of the company, unless they received consent to assume another commission. A dye house was rented from Alonso de Ávila, and Martinez would contract the services of other tradesmen as needed, ensuring the cloths were 'well finished.'[74] Yet the venture ended at court after what appear to have been irregularities in del Campo's account books. This, at least, was one of the paths indigo might take to the dyer's vat.

Francisco de Bracamonte led an extraordinary life, no doubt, yet his story will ring familiar to students of this age, not unlike that of so many other young, impoverished Castilian hidalgos seeking their fortunes across the Atlantic. Still, he was among the lucky few to receive large, prosperous *encomiendas* in Yucatán, as fortunate to survive the Maya

[72] AHPV, AR, Francisco de Bracamonte to SR, Medina del Campo, 16.07.1582, c.74-68
[73] ARCV, Registro de Ejecutorias, Caja 1897, 2: 'Ejecutoria del pleito litigado por Domingo del Campo con Juan Martínez, tintorero, vecinos de Segovia, sobre una compañía de tintes y tinturas de paños,' (30.03.1600)
[74] 'asta poner los dichos panos vien acabados,' ARCV, Registro de Ejecutorias, c.1897-2, s/f.

Revolt of 1548 and several Atlantic crossings, and finally took a relatively unexpected turn into trade. Here was one man's experience of the Columbian exchange: from an initial encounter with indigo among the natives anywhere between Honduras and Yucatán, Bracamonte would experiment, produce, and finally commercialize the new commodity in Spain with relative success, activities that were altogether new to him. In 1587, a letter from Gerónimo de Castro, notary in Yucatán, revealed in passing: 'it has been many years since Captain Francisco de Bracamonte left for Spain, and there they say he is deceased.'[75] He was buried at the Church of Santo Tomás, in a pantheon to Medina's more notable returnees, including Bracamonte's wife, Doña Leonor de Garibay, and her better known cousin, Admiral Don Juan Gutierrez de Garibay.

Returning to the letters of Amarita, while the complications of Bracamonte's purchase were no doubt exceptional, the example may illustrate some of the themes – the importance of timing, the arrival and diffusion of news from the Indies – discussed earlier. What this particular case does not convey, is the importance of quality.

II. *Building a Reputation*

Various grades of indigo were sold in the markets of sixteenth century Europe; production techniques, climatic and geological factors, the diversity of *indigofera* species employed, not to mention the pervasive, intentional and unintentional contamination of the dye, made a significant range of qualities available. There were several common methods of adulteration, 'sand, oil, wood shavings,'[76] or dirt might be added for increased weight, but

[75] Cited in Jorge Ignacio Rucio Mañe, *La Casa de Montejo en Mérida de Yucatán, con un Estudio de Manuel Toussaint (*1941), p.18
[76] Balfour-Paul, *Indigo*, p. 46

purity could also be corrupted inadvertently during production.[77] From Pliny, who warned against pigeon's dung stained with indigo, to Postlethwayt, who noted: 'we have no sort of commodity liable to more various ways of being sophisticated or counterfeited, than indico,' merchants were advised to deal with caution when it came to indigo.

One marker of quality was origin; in the fourteenth century, Francesco Balducci Pegolotti cited *Indaco del Golfo*, *di Cipri*, *Rifanti*, and the famed Baghdad indigo, '*detto Buccadeo*', among the merchandise traded by the Florentines. In the sixteenth century, Pedro de Ledesma referred to the luxury *nadador*, from Barbary,[78] while the finest in India was reputedly produced along the Gujarati coast, in the vicinities of Cambay, and at Sarkhej.[79] Of the newer additions to the market, *añil* produced on the Pacific coast of Nicaragua, in the area surrounding the Gulf of Fonseca, received some early, positive appraisals, just as exports from Yucatán appear to have suffered from an increasingly poor reputation. Indigo from the Captaincy General of Guatemala in particular, would enjoy a lasting, high standing amongst its global competitors, that I will return to in more detail.

Amarita himself was never too specific about the differences between qualities, broadly classifying the dye as either Indian or from the Indies, using such general terms as 'good' and 'bad', 'rich' or 'poor'. On occasion, he would refer to añil in '*bolillas*',[80] 'white'

---

[77] Robert S. Smith, 'Indigo Production and Trade in Colonial Guatemala', *Hispanic American Historical Review*, 2:39 (1959), p. 185

[78] 'Pedro de Ledesma al Rey' (1563), AGI, Mexico 168; published in DIU, vol. 1, pp. 377-385. The trade in indigo from Barbary, altogether absent from the historiography and rarely mentioned in the sources, may have been more significant than has been assumed; in 1573, for example, Antonio Gomes wrote to Simon Ruiz, on the topic of indigo: 'we will be more content with (indigo) than with other merchandise, because even if a lot comes, and from Barbary, it seems to us the price will not drop below 18 reales' (*olgaríamos más con el que con otra mercadería porque aunque venga mucho y de Berbería, nos parece que no baxara de 18 reales*), Antonio Gomes to SR, 29.12.1573, in Gentil da Silva, Lettres de Lisbonne, p.49

[79] Dauril Alden, 'The Growth and Decline of Indigo Production in Colonial Brazil: A Study in Comparative Economic History,' *The Journal of Economic History* 25:1 (1965), p.39, n.15; Gentil da Silva, *Lettres de Lisbonne*, p. 34; Macleod, pp.180-181. On indigo in Sarkhej see Balkrishna Govind Gokhale, *Surat in the Seventeenth Century: A Study in Urban History of pre-Modern India* (1979), pp. 104-105; on Ledesma: AGI, Mexico 168: 'Cartas escritas a S.M. por particulares,' Pedro de Ledesma al Rey, 22.05.1563, published in DIU, vol. 1, pp. 377-385

[80] Possibly what Jenny Balfour-Paul has referred to as 'coarse granulated' indigo, in *Indigo*, p.112

(possibly mold?), 'overcooked', or having '*mucha pelotilla*'[81] as an indication of inferior quality, but more precise descriptions are lacking. It was a highly variable commodity, however, and quality was ultimately judged by individual load.[82] In March 1575, as an example, Luis Gomes d'Elvas sent two barrels of 'the richest indigo seen,' and two of a 'reasonable' grade, with some small lumps (*terronszillos, sic.*).[83] Amarita usually took personal charge of the appraisal, by way of a simple inspection, and was clearly knowledgeable on the subject; as a rule, he avoided entering a sale before confirming the grade and purity of his merchandise.[84] The historiography suggests basic means of evaluation evolved little between the thirteenth and seventeenth centuries, and we may assume Amarita availed himself of some of these: the best varieties 'adhered to the tongue when licked, appeared coppery when scratched (or 'pinched between the fingers'[85]), and 'swam' in water.[86] Other markers were colour – 'purplish hues' associated with the finer varieties – and texture.

Shipments reaching Segovia, however, would have already been checked for quality, and more overt indications of fraud by a factor in Seville or Lisbon. Merchants at the port were acutely aware of the risks (perhaps even the dye's reputation): 'regarding indigo,' Morovelli wrote from Seville in 1578:

> …there is such deceit in this commodity, as I have been told, that I have not dared trust anyone, although at 22 and a half *reales* I could have bought more than 300 pounds that a merchant has here… it is a matter that must be well understood, and if you should have the intention to buy some amount when the fleet arrives, it would be worthwhile for someone from Segovia or elsewhere to come here, if only to certify it's quality.[87]

---

[81] JA to SR, 07.09.1578, c.42-137; 27.09.1578, c.42-139; 06.01.1580, c.59-147; 14.12.1580, c.59-177
[82] Smith, 'Indigo', p. 185; MacLeod, *Spanish Central America*, pp.180-181
[83] Antonio Gomes to SR, 24.3.1575, in Gentil da Silva, *Lettres de Lisbonne*, vol2, pp.99-100
[84] For example, JA to SR, 9.11.1575, c.26-105; 30.11.1580, c.59-174
[85] W.A. Vetterli, 'The History of Indigo', *Ciba Review* (1951), p.3074
[86] Balfour-Paul, *Indigo*, p.112
[87] '…ay tanto engaño en esat mercaderia segun me an ynformado que no me e atrevido de fiarme de nadie aunque a los veinte e dos y medio pudiera aver comprado obra de 300 libras que aqui tiene un cargador – materia es que pide entenderla bien, y si v.m. tiene intención de emplear alguna cantidad quando lleguen las naos baldria la pena que biniese aqui alguna persona de Segovia o otra parte y sólo para satisfacerse de la vondad (sic)...,' Francisco Morovelli to SR, 17.01.1578, c.42-199

Consulting with experts was common practice: in October 1575, Antonio Gomes reassured Ruiz his indigo had been examined by the 'best masters' in Lisbon, and judged highly (*'lo allaron coza (sic) riquisima'*). That same year, Amarita had taken a 'great friend of his' on an excursion to barter indigo for textiles 'because he knows them very well, and buys great quantities of cloth each year for Toledo.'[88] There is no indication a 'specialist' came to Morovelli's aid in 1578, and he hesitated to buy; a substantial volume of indigo reached Seville from New Spain that August, and even more came with the fleet from Tierra Firme, but Morovelli does not appear to have invested in the dye at all. In any case, he had a propensity towards indecision; in January 1581, discussing the trade in cochineal with Baltasar Suárez, Simon Ruiz sourly noted:

> I understand Morovelli was slightly irresolute in wanting to buy, and that if he had resolved to do so, with his cards, could have bought from 46 to 47 ds.; but it is indeterminable. I do not know if he or Luis Perez are to blame.[89]

And again, that October:

> Morovelli... tells me he has not bought any cochineal... (He) is very inexperienced,[90] or I do not know what to say of him, for he had commission to buy up to 50 ds, two more or less, and the sale was cancelled... It has displeased me deeply, and I do not know if hereafter, having to buy some (cochineal), I will give the commission to another.[91]

But Morovelli continued to deal in cochineal for several years. He did not, however, pursue the trade in indigo after (the problematic) 1578, and it is likely Ruiz found another agent to take up the commission. If we are to trust Amarita, however, agents at the port

---

[88] '(yo tengo un grande amigo mio corredor y yo le llevare conmigo) para que los escoxamos mexor porque los conoze muy bien y compra por ano mucha cantidad de paños para toledo y para madrid,' JA to SR, 9.11.1575, c.26-106

[89] SR to Baltasar Suárez, 10.01.1581, in Felipe Ruiz Martin, *Lettres Marchandes Echangées Entre Florence et Medina del Campo* (1965), p.73

[90] Or incompetent: '*es muy corto*'

[91] SR to Baltasar Suárez, 31.10.1581, in Ruiz Martin, *Lettres marchandes*, p.131

could be less than assiduous; he was regularly charged with (what was clearly, in his view) inferior quality merchandise. Ruiz may have transmitted Amarita's complaints to Antonio Gomes in March, 1576, claiming some dirt had been found and the dye was different 'at the bottom,' (presumably of the barrel), prompting a somewhat feeble excuse from his associate.[92]

Although the lower qualities could be identified by sight, further tests were occasionally conducted, a practice Amarita would unfortunately describe in vague terms: 'I have used it here and it came out good.' References of this kind, comments such as: 'I began a barrel this afternoon, and it came out good,'[93] or 'I will begin (a barrel) tonight,'[94] suggest Amarita may have gone through the laborious process of grinding the insoluble bricks of dye, reducing them to liquid form in an alkaline vat, perhaps even dyeing a sample piece of cloth (an equally time consuming activity).[95] These and other comments seem to indicate, further, that indigo may have occasionally been sold in powdered form.

Lengthier trials were usually left to the buyer, and advancing a sample[96] in the course of negotiations over a sale was standard practice. Ideally, the client would return for more, but this was rarely the case when quality was poor. In one of many examples, the brothers Pedro and Diego Hernández took no more than 30 pounds and an *arroba* in 1583, after claiming 'it did not come out good.'[97] In most cases, clients appear to have been content with a simple inspection, carried out at Amarita's warehouse in the presence of the buyer or a qualified agent, usually a dyer. The letters indicate precautions of this kind were justifiable; Amarita engaged in somewhat fraudulent behaviours of his own, mixing the good and the

[92] Antonio Gomes to SR, 29.03.1576, in Gentil da Silva, *Lettres de Lisbonne*, p.43
[93] '…esta tarde le dezente y sale bueno,' JA to SR, 09.11.1575, c.26-105
[94] '…oy dezentare un barril,' JA to SR, 20.12.1575, c.26-114
[95] See Balfour Paul, *Indigo*, p.113
[96] A '*muestra*', or small amount '*para ensayar*'
[97] '…porque dixeron no les salio bueno,' JA to SR, 12.10.1583, c.84-42

bad in varying proportions, a practice he would turn to when a lower grade batch failed to sell. In an early attempt, he 'began mixing the dye, but it started to look like the devil, and dared not mix it further.'[98]

Amarita was also in the habit of visiting the warehouses of fellow indigo merchants, as of meeting foreign traders at the market to inspect the quality of their dye and compare it with his own, all of which was minutely reported back to Ruiz, at times with surprising candour. In 1578, to mention a single example, Portuguese merchants brought 'the best indigo I have seen in my days, and they are selling it for a ducat and a half in reales, without false (illegible), but all good.'[99] Likewise, whenever he did have good indigo to sell, Amarita welcomed as many customers as he could find to view his merchandise.

Prices varied considerably between grades: in October 1583, indigo merchants in Segovia were selling the higher quality indigo from New Spain at 30 reales the pound, and poorer loads for 18 to 20 R/lb.[100] Amarita had a natural preference for dealing in higher quality merchandise; the finer indigo fetched a better price, but more importantly, could usually be exchanged for reales (and more substantial commissions), often with short, or at least reasonable payment deadlines (*a buenas ditas*). A better dye, Amarita was fond of

---

[98] '…empecé a rebolber y parece al diablo, y no oso rebolberlo más,' JA to SR, 29.07.1575, c.26-100. He would refer to the practice again, on 22.11.1575; that same year, along similar lines, Antonio Gomes asked Simon Ruiz, if possible, to combine an earlier, lower grade shipment of indigo with new, higher quality merchandise: 'Y bueno sera darle salida a huno y otro [cargamento de añil] como he escrito, y este postrero hes lo mejor; y se se pudiese, mesturar,' Antonio Gomes to SR, 12.04.1575, cited in Gentil da Silva, *Lettres de Lisbonne*, t.II, p.102. The practice may have been inherited from woad merchants; the *Ordenanzas de Paños* (regulations on the making of cloth) decreed in 1528 and recompiled in 1567, included the following: 'We are informed... that there is woad worth a ducat the arroba, and another arroba of aother woad is not worth a real, and that the people who collect the said dyes, or make them, or sell them, mix the bad with the good, and when they sell it show the good kind, and after the price is decided deliver the bad...' ('*Nos somos informados... que ay pastel que una arroba vale un ducado, y otra arroba de otro pastel no vale un real, y que las personas que cogen las dichas tintas, o las hazen, o venden, buelben lo malo con lo bueno y que al tiempo que lo venden muestra de lo bueno, y hecho el precio de aquello da de lo otro, y que por no lo conocer los compradores, y tintoreros, reciben mucho daño, y engaño*'), *Nueva Recopilación* (repr. facs. Madrid ed., 1640), vol.2, t.XIV, ley.xxiii: 'Que los que vendieren las tintas que se han de dar a los paños las vendan sin fraude, no mezcladas, y que sean conforme a la muestra, so la pena desta ley.'

[99] '…traen anir lo mejor que e bisto en mis dias y lo dan a ducado y medio en reales sin (illegible) falsas sino todo rico.' JA to SR, 02.10.1578, c.42-140

[100] JA to SR, 05.10.1583, c.84-41

repeating, was worth the higher cost, for it gave him 'the confidence to sell it to whom and however he wished;'[101] good indigo was always a 'pleasure' to sell. [102]

Over the years, Amarita insisted on the concept of 'strength' in a sale, determined in large measure by the quality of his merchandise. In May 1578, he pleaded with Ruiz to request the finer varieties from his Lisboetan agents, 'because with good merchandise I have strength, and if it is bad I cannot do what I would want to do.'[103] With 'bad merchandise' he continued a week later, 'a person has no strength, even if he will sell (the indigo) on extended credit.'[104] Another element of 'strength' was provided by the Ruiz name itself, which could usually ensure: 'everyone here will be eager to favour us'[105]– the merchant's reputation, as much as that of his wares, were fundamental elements of a sale.

In 1572, Luis Pérez described Mexican cochineal in a letter to Simon Ruiz as a 'living commodity, for the more that comes the greater its value.'[106] This was hardly the case with indigo (nor was it usually the case with cochineal): prices fell as supply rose, and buyers turned to the lower grades, for 'being cheap, they end up taking it.'[107] Despite some irregularity in demand for the finer varieties of indigo, Amarita was always confident good indigo would 'sell at last, even if it is expensive.'[108] Simon Ruiz expressed himself in similar terms a decade later:

> At present, although there is little (indigo), it sells poorly, as there is always some left when it is expensive. But it is true that when the Indies fleet arrives, and the vessels

[101] '…que siendo bueno tiene la persona fuerça con ello para benderlo como quisiere y a quien quisiere,' JA to SR, 10.04.1572, c.16-200; See also: 12.11.1575, c.26-107; 08.05.1578, c.42-106; 15.05.1578, c.42-107; 02.10.1578, c.42-140
[102] 'bende con mas gusto,' JA to SR, 12.11.1575, c.26-107
[103] JA to SR, 15.05.1578, c.42-107; other examples in 02.10.1578, c.42-140; 08.05.1578, c.42-106
[104] 'Que la persona con ruin mercaderia no tiene fuerza aunque lo fie por mucho tiempo,' JA to SR, 8.05.1578, c.42-106
[105] 'todos olgaran de azernos más favor que a otros,' Francisco Morovelli to Simon Ruiz, 17.01.1578
[106] Luis Pérez to Simon Ruiz, 29.02.1572: 'mercaderia biba es, pues quanta mas biene tanto mas balor tiene balia en florencia a 218 y en aflandes a 21 y la poca que antes aqui abia se a comprado para francia a 64 ds'
[107] JA to SR, 05.12.1575, c.26-112
[108] JA to SR, 05.10.1583, c.84-41

> from India, what little is left will not fail to sell, especially after the month of April, with the new wools, when purchases are made.[109]

Year after year, however, the inconveniences of dealing in lower grade shipments were wearily relived. More than once, Amarita requested to be sent 'good indigo or nothing at all,'[110] and complained to the last whenever he received a lower quality shipment. In November 1575 he could not – after several months of trying, cutting the price, seeking anything in exchange – find someone willing to take a barrel of wet indigo.[111] Earlier that year, on the morning of July 29th, Blas González came to retrieve some indigo, in what appeared to be a finalized sale, but finally refused to do so after seeing it, 'claiming the (dyes) were not good.'[112] Likewise, in October 1578 Amarita advised a 'gentleman' buyer to take a sample of 25 to 37 pounds, and see if he could sell it 'to the foreigners at the market.' Amarita was sure he would return for more, but the indigo was of poor quality, and some weeks later a letter to Ruiz explained:

> …being bad ('*bellaco*'), nobody wants it for any price. So, to sell it will be necessary to send the good (indigo), and this way it will sell, or not at all. And the gentleman has not taken but 64 pounds and cannot sell it for any price.[113]

Under these circumstances, Amarita would usually renegotiate the price,[114] which had probably already been low, and finally increase the number of payments and/or extend payment periods. If a higher grade were available, finally, he might attempt mixing it in, or agree to a more transparent deal combining the good and bad indigo at an intermediate price. As a last alternative, the dye would be exchanged for minor debts.

---

[109] 'De presente aunque hay poco tiene ruin despacho porque de lo caro siempre sobra. Bien es verdad que de aqui a que bengan las flotas de Indias y las naos de la India que lo poco que ay no se puede dejar de gastar, especialmente del mes de abril en adelante, con las lanas nuebas que entonces es el tiempo del gasto,' SR to Duarte Furtado, 18.12.1594, in Gentil da Silva, *Lettres de Lisbonne*, t.II, p.34

[110] '…si an de ynbiar anil que sea bueno o que no lo enbien...,' JA to SR, 22.05.1578, c.42-109

[111] JA to SR, 09.11.1575, c.26-105 & 106; 12.11.1575, c.26-107

[112] '… y no las queria llevar diziendo que no eran buenas...,' JA to SR, 29.07.1575, c.26-100

[113] '…como es bellaco no lo quiere nadie por ningun prezio... y para bender sera necesario que enbien de lo rico y ansi se bendera bien y sino no se vendera. Y aun el cavallero no a llevado sino es 64 libras porque no lo puede bender por ningun prezio,' JA to SR, 09.10.1578, c.42-141

[114] Often starting at a discount of a real per pound, for example: JA to SR, 02.10.1578, c.42-140

Providing standards for the product's evaluation (if no less subject to fraud), more specific categories for the dye – different grades for indigo from various origins – gradually came into use. By 1620, exports from the Audiencia de Guatemala were classified into three grades: the cheapest, *corte*, 'tended to be opaque and would not float in water', the more valuable *sobresaliente* was 'slightly less compact,'[115] and the highest quality, *flor*, described by Claude Louis Berthollet in the late eighteenth century, was 'a light variety… of a beautiful blue,' that 'floats on water.'[116] These classifications evolved from the needs of merchants and producers, from exchanges at the port and through correspondence; in their rawest form, they began taking shape as early as 1574. Describing a shipment of eight barrels of indigo sent to Simon Ruiz, Antonio Gómes wrote: 'the four first are the best, especially numbers 1 to 3; nº 4 is poorer, but the difference is slight. Of the last four, nº 5 and 6 are very good, and nº 7 and 8 are regular.'[117]

By the late 18th century, 26 regional varieties were sold in Oaxaca, while a nineteenth-century treatise listed three types of American indigo: Guatemala (sub-classified in the three qualities described above), Caragua indigo (sub-classified into six grades), and Mexican indigo. But who to depend upon for the dye's evaluation and classification? The problematic of quality and the importance of regional reputations pursued indigo throughout.[118] As late as 1863, the author of a 'practical treatise on the fabrication of every commercial product derived from indigo' would insist:

---

[115] Smith, 'Indigo', p.184

[116] Claude Louis Berthollet, *Elements of the Art of Dyeing* (2nd ed. London, 1824), p. 36

[117] 'Los quoatro primeros son mejores, espicial los tres de nº 1 asta nº 3, y el nº 4 tiene alguna diferencia pero hes poca. Y los quoatro postreros, los dos de nº 5, y 6, hes bonisimo y los dos de nº 7, 8, hes somenos,' AG to SR, 25.11.1574, in Gentil da Silva, *Lettres de Lisbonne*, p.73

[118] The question of reputation in particular has been examined most extensively by S. Max Edelson in: 'The Characters of Commodities: The Reputations of South Carolina Rice and Indigo in the Atlantic World,' in Peter A. Coclanis, Ed., *The Atlantic Economy During the Seventeenth and Eighteenth Centuries: Organization, Operation, Practice, and Personnel*, (2005).

> Indigo is a merchandise very difficult to classify, and the different kinds are separated by so delicate shades that it requires much judgement, habit, and practice to distinguish them and place each of them in the rank to which it belongs.[119]

The Portuguese Presence

From the start, American indigo competed well against its Asian rival, in Spain as elsewhere. The advantage has usually been attributed to a lower price, although comparative series are lacking, and the conclusion is based largely on loose figures from merchant correspondence.[120] Amarita's letters indicate that between 1572 and 1580, both varieties sold at similar prices for like qualities – the final price in the Castilian markets was determined by supply and demand, ultimately fixing a common price for the product regardless of origin (the costs of transport, customs and taxes). That is to say, the price of indigo in Medina oscillated between 25 and 30 reales per pound, independently of the cost of production in Asia or America.[121]

In terms of quality, there seems to have been an almost immediate preference among Castilian buyers for the New World varieties (as indicated in some of the excerpts included above), although the inclination, at times, seems faintly mercantilist in spirit. During the first weeks of 1578, Amarita found it impossible to sell anything, 'because these days have all been *fiestas* in Segovia.' Still, he clarified: 'while there is (indigo) from New Spain, the

---

[119] Felicien Capron de Dole, *Blues and Carmines of Indigo* (1863), p.35

[120] José Ignacio Fortea, for example, contrasts the sale of Indian and Honduran indigo in 1597 and 1599, at 40 and 24 reales the pound (*op. cit.*, p.297), but the variability of prices makes this a somewhat mute comparison; Lorenzo Sanz make the broad, exaggerated claim: 'Al final, el añil americano, más barato y de superior calidad al de la India, se impuso en Europa y acabó con la prosperidad del pastel Tolosano,' *Comercio de España con América*, t.I, p.596

[121] James Boyajian has indicated that in the last decades of the XVI century indigo could be purchased in India for less than 5 *reales* the pound (*Portuguese Trade in Asia*, pp.45-46), whereas Lorenzo Sanz has calculated the price in America at 12 to 18 *reales* after 1579 (*Comercio de España con América*, t.I, p.594), but on the basis of Morovelli's predictions, which were eventually proven quite low, as described earlier in this chapter; my own investigation suggests it had decreased to an average 10,5 *reales* by 1600.

Portuguese (dye) will sell poorly, unless we give it... for less.'[122] Ruiz may have insisted on the quality of the Indian variety at this point, to which Amarita replied: 'I have written many times how, even if the Portuguese indigo is very good, it will not sell well while there is (indigo) from Seville.'[123] He reiterated the principle throughout February and March; New World indigo was available and the Portuguese trade had 'quieted down' or 'ceased' altogether. He did not, in fact, manage to sell the dye before April. Commissioned with another load of Indian indigo that September, Amarita protested:

> I have told y.h. how no one wants this indigo because it is mean (*bellaco*)…nobody will take it for any money first because it is bad, and second because these days some merchants have come from Toledo... with many crates of indigo, which they are selling for 1,000 mrs. or 30 reales the pound, and it is very good.[124]

The timely, continual participation of the Portuguese in the Atlantic indigo trade, discussed further in chapter five, did not go unnoticed by the Ruiz agents; in July 1576, Morovelli notified his employer:

> With these ships from New Spain…500 *arrobas* (12,500 pounds) of indigo have arrived, which they say is much better than what comes from India… and many people have sent samples, who write that if it were good business, they could send much more, as the land is good for it…

'As I understand,' he continued, the pound will cost 16 to 18 reales, and being as good as they say it is, the Indian (indigo) will sell for much less…'[125] That September, however, Morovelli confirmed the sale of the recently arrived dye at a much higher 30 reales

---

[122] JA to SR, 11.08.1578, c.42-125

[123] 'Y ya tengo escrito a vm. muchas veces como aunque sea el anir de portugal muy bueno abiendo esto de sebilla abra mal despacho de lo de portugal…,' JA to SR, 30.01.1578, c.42-87

[124] 'Ya tengo abisado a v.m. no quiere ninguno este anir por ser bellaco y … no lo tomaran por ningun dinero la causa lo uno por ser malo lo otro por aber estos dias benido mucho de Sebilla y lo dan unos de Toledo a 1000 mds en reales por la libra (or 30 reales) y es muy bueno,' JA to SR, 11.08.1578, c.42-124

[125] 'Con estas naos llegas de Nueva España an venido… 500 arrobas de anir y segun la experiencia que dello ay es mucho mejor que la que viene de la Yndia. Y viene repartido por muchas manos que lo enbian por muestra porque escriven que siendo negocio podran enbiar mucha cantidad por ser tierra apropiada para ello – segun e entendido la cuesta de prima compra de 16 a 18 reales la libra piden aqui a mill mrvs. que siendo tan bueno como dizen sera parte para que lo de la Yndia venga a mucho menos…' Francisco Morovelli to SR, 23.07.1576, c.31-252

the pound. 'Most of it', he explained, had been sold 'to Portuguese (merchants) who came from Lisbon for this purpose: 'they say it is very good, and much better than that of India…and they say the land (in the Indies) is very propitious for it.'[126] Letters from the Gomes d'Elvas family suggest the Portuguese had other reasons to buy their dye in Seville that year: 'a pittance of indigo' (*una miseria de añil*) had come from India, no more than 434 *quintales* (some 56,200 pounds), and the dye was expected to be 'in great demand everywhere.'[127]

For all the limitations in communication, news travelled swiftly: that same September of 1576, the merchant Luis Alvares Caldeira, writing from Antwerp to Simon Ruiz, was anxious to sell what indigo he had left from Lisbon, despite reports that little had come that year in the *naos da India*, because he was 'no friend of keeping merchandise for long,' but more importantly, had 'seen how much has come from the Indies, and how good, and if it should be sailed here, as soon as it can be had, no other will sell.'[128] Much as Amarita had complained from Segovia, buyers in Antwerp had a preference for the American varieties.

As the dye was gradually introduced into Europe, the Portuguese emerge as something of ambassadors for the broader indigo trade: as noted in Chapter one, the earliest reports of indigo to the Spanish Crown involved a Portuguese merchant, possibly the first to identify New World indigo for what it was. Three years later, in 1561, just as the first samples of American indigo reached Castile, a royal provision cited the recent discovery, by one Pedro Vaez (Portuguese), of *yndiovagadel* (from Baghdad) or *añir yndio, con el cual se podrían*

---

[126] '...dicen ser muy bueno y que lleba mucha bentaja a lo de la Yndia... todos an escrito sobre elllo y dizen ser la tierra muy a proposito...,' Francisco Morovelli to SR, 17.09.1576, c.31-256

[127] Antonio Gomes to SR, 01.08.1576; Manuel Gomes to SR, 01.08.1576, in Gentil da Silva, *Lettres de Lisbonne*, pp.187-188

[128] '...pues veo la cantidad que vino de Indias, y la bondad del, que si se navegare para aqui, en cuanto lo hubiere, no se venderá otro,' Luis Alvares Caldeira to SR, Antwerp, 9.09.1576, in Vázquez de Prada, *Lettres Marchandes*, p.217.

teñir de azul los paños que se labrasen en nuestros reynos muy mas perfectamente y a menos costa que no con el pastel."[129] He had hardly 'discovered' the dye, but the trade was evidently quite new to Spain.

There are other, scattered reports of Portuguese involvement in the diffusion of expertise: in 1577, Pero Vaz Devora travelled to London, where he informed and instructed representatives of the merchants and dyers of the city in the art of using *aneel*, leading to an official request for permission to use the new dye in England. The request would also sum up indigo's advantages over woad: at 40 shillings, 4 pounds of indigo made as much dye as 100 pounds, or 50 shillings worth of woad.[130] But it wasn't just stronger and cheaper: indigo also gave a more attractive, 'oryent' blue. A year later, highlighting the official channels through which knowledge and practices might travel, Dutch officials 'allowed an envoy of the King of Portugal to teach the Leiden textile dyers to dye with *añil de indigo*.'[131] We might also expect to find the Italians in these early reports – Florentine and Venetian dyers were far more familiar with the use and application of 'indaco' – yet they left little trace of an inclination to disseminate their expertise, an expression, perhaps, of a culture of secrecy that characterized the Medieval craft.

Unlike their Spanish counterparts, Portuguese merchants showed little interest in the sphere of production, even as they succeeded in generating a growing enthusiasm for *añil*. This sudden spike in interest, further, evidenced by indigo's swelling presence in commercial correspondence,[132] coincided with an increase in the volume of Central American exports – the formation of new markets for indigo, then, appears closely tied to the introduction of the

---

[129] Cited in Jose Ignacio Fortea Pérez, Córdoba en el s.XVI: las bases demográficas y económicas de una expansión urbana (1981),p.297

[130] Cited in John Edmonds, *The History of Woad and the Medieval Woad Vat* (1998), pp.38-39. The memorandum sent 'by the merchants and dyers of the ity of London to the Privy Council' is transcribed. Just how these efforts may have conflicted with Portuguese investments in Azorian woad is unclear.

[131] Cited in M.F. Van Eikema Hommes, 'Discoloration in Renaissance and Baroque Oil Paintings: Instructions for Painters, theoretical Concepts, and Scientific Data,' PhD. diss., University of Amsterdam (2002), p.113

[132] Ramón Carande, 'La Navegación y el Comercio Mediterráneo durante el Siglo XVI,' p.272, cited in Fortea, op. cit., p.297, n.106

American varieties. Early enthusiasts for the New World product would include the silk dyers of Tours and Lyon, Venice and Florence, while Antwerp and Rouen were mentioned often (in the Ruiz correspondence) as important markets.[133]

It was at this time as well that attitudes towards the dye changed, and indigo was fully incorporated into the Spanish dyeing sector. As Jan de Vries argued in his most celebrated work, the growth of European demand for novel, Asian and American goods was a complex process that cannot be explained simply by the appeal of certain products, or their increasingly affordable prices. Rather, these 'new goods' had to become '"recognizable" to the consumer and, hence, combinable with other elements of consumption practices in order to become widely and continually consumed.'[134] Indigo from the Spanish Americas, we may finally conclude, appears to have played an important role in this process of recognition that gained momentum in the last quarter of the sixteenth century.

III. *Tinas y Tinacos: Indigo, Woad, and the Spanish Dyeing Sector*

As indigo's popularity surged after 1580, a rush of protectionist legislation soon exposed the fears of woad producers in France and Germany. Upon the formal complaints of the estates of Languedoc in 1598, Henry IV issued a first edict prohibiting the use of indigo, followed by a second, harsher decree in 1609 that would sentence anyone found to have used the dye, to death.[135] This may have prompted François Bassompierre, that gallant favourite of the French king, to include the following recollection in his *memoirs*, from a ball

[133] André Ruiz to SR, Nantes, 24.11.1575 and 18.1.1576, in Lapeyre, op. cit., p. 535; Gentil da Silva, *Lettres de Lisbonne*, t.1, pp.129-130 (indigo to Rouen through Nantes); p.172 (demand in Flanders); p.140 and 144 (indigo to Antwerp)

[134] Jan de Vries, *The Industrious Revolution: Consumer Behaviour and the Household Economy, 1600 to the present*, (2008 ed.), p.155; also cited in Noor F.K. Iqbal, 'Ambivalent Blues: Woad and Indigo in tension in Early Modern Europe,' Constellations 4:1 (2013), p.284

[135] M. de Puymarin, *Notice Sur Les Pastels (isatis Tinctorum) Sa Culture Et Les Moyens D'en Retirer L'indigo* (Paris, 1810), p. 12

held in March 1610: "*il se fit un bal cheux la reine Margueritte, ou madame la nouvelle princesse parut; j'y eus bien des embarras pour un habillement bleu que j'y portay*."[136] In Germany, state ordinances passed in 1577 and 1594 prohibited the use of this 'recently discovered, injurious and fraudulent, devouring and corrosive colour,'[137] restrictions that would remain in place until the last decades of the eighteenth century.[138] A smaller producer of woad, England had less at stake, but showed no less antipathy for the dye: after an early prohibition in 1532, the use of 'anele, alias blew inde' was allowed – if only in combination with woad, by 1581, only to be declared 'poisonous' and banned shortly thereafter, until 1660.[139] None of these measures seem to have had much effect: English merchants were investing in the indigo trade well before the late seventeenth century, just as dyers in Southern France continued to employ the dye clandestinely after 1598 – when it could even be purchased locally in Leipzig and Erfurt.[140]

The 'war with woad' has received some attention from French and German scholars, and a passing review in most studies concerned with the history of indigo (much as I have just done), yet the interaction and competition of these two blue dyes on the Spanish front remains unexplored.[141] The Ruiz letters allow for a few considerations on the topic, while sources from the dyeing sector may illuminate a different set of reactions, attitudes, and

---

[136] 'Queen Margueritte hosted a fancy ball where madame the new princess appeared; I had a great deal of embarrassment due to a blue robe I wore.' François de Bassompierre, *Journal de ma vie*, Chantérac, ed., (Paris, 1870-77). The reference was kindly provided by a colleague.

[137] Cited in Vetterli, 'History of Indigo', p. 3067

[138] For restrictions in Germany, see Jamieson B. Hurry, *The Woad Plant and its Dye, 1857-1930* (1930), p.268

[139] A.D. 1581 STATUTE 23 ELIZ. C.9, cited in Hurry, *The Woad Plant,* pp.259-262; the prohibitions were possibly re-established as a result of failed attempts to imitate Indian dyeing methods involving 'arsenic sulphide.' Balfour Paul, *Indigo*, p. 129; Hurry, *The Woad Plant,* pp. 250-260

[140] Hurry, *The Woad Plant*, p.273

[141] On the war with woad, see: Gilles Caster, 'Types Économiques et Sociaux du XVIe Siècle: Le Pastelier Toulousain', *Annales: Économies, Sociétés, Civilisations,* 9:1 (1954), pp. 63-74; Hurry, *The Woad Plant*; C. Badet, 'Marseille et le Commerce de l'Indigo,' and Madeleine Pinault, 'Pastel et Indigo,' in *Sublime Indigo* (Paris, 1987), pp. 213-218 and pp.59-75; Fritz Lauterbach, *Der Kampf des Waides mit dem Indigo* (1905); on the use of *pastel* in Spain: Hilario Casado Alonso, 'El Comercio del Pastel: Datos para una Geografía de la Industria Pañera Española en el Siglo XVI', *Revista de Historia Económica*, 8:3 (1990), pp. 523-545

concerns. Circumstances in Spain, of course, were reversed: indigo became the domestically produced good, nor were there any relevant producers' interests to consider – Spanish dependence on foreign woad was, in fact (as described in earlier chapters), a domestic source of grievance. Nonetheless, the introduction of indigo into the Castilian textile industry had larger consequences that generated their own measure of resistance and discontent.

Records suggest indigo was only gradually accommodated into the Spanish dyeing sector – even the small quantities of the dye reaching Iberia from the Barbary Coast in the early sixteenth century incited a measure of resistance, and indigo was condemned as 'false' in 1511. There is some evidence, as mentioned earlier, of its use by dyers in Medieval Granada and Valencia, but indigo is not even listed in inventories of materials used by Castilian dyers before 1550. A decade later, the dyers of Córdoba decried this 'evil and false' dye, suggesting the man who introduced it – the Portuguese Pedro Vaez – [142] should be 'banished from the kingdom.'[143] Two years later, the *Cortes de Madrid* solicited an official prohibition from the King.[144]

Towards the end of the 1560s, and especially over the course of the following decade, as the volume of imports increased and purchases became more regular, the nature of complaints changed; it was no longer a question of whether or not to use indigo, but rather of how and by whom it should be applied. By way of an introduction, the dyeing of wool could be performed in any of three stages: on the raw wool, the spun yarn (*hilado*), or the finished cloth (*paño*). The first and last of these were most common, as there appears to have been some prejudice against the dyeing of yarn. As mentioned earlier in this thesis, the

---

[142] See Chapter 1, n.125

[143] José Ignacio Fortea Pérez, *Córdoba en el s.XVI: las bases demográficas y económicas de una expansión urbana* (1981), Fortea, *Córdoba en el s.XVI,* p.298

[144] 'Petición de las Corts de Madrid' (Alcalá de Henares, 1563), cap. LXXVIII: 'Que no se tiñan los paños con añir,' (f.29V); in Silvia Saladrigas Cheng, Joan Soler i Jiménez., eds., *El Arte Real de Perseguir a los Sombreros: Textos y Documentos para la Historia del Tejido y la Indumentaria en las Monarquías Hispánicas, s.xiv – xviii* (Barcelona, 2009), pp.200-201

Spanish master dyers were broadly divided into two categories: those who specialized in *blao* and *bullón*. Whereas the former dealt in an initial base of blue (a so-called *celeste*), the latter were occupied with a second stage when the cloth or wool was overdyed in other colours and with the use of mordants, employing heated water (and hence the name)[145] – dark greens, for example, required two *celestes*, mordanted with alum and overdyed with yellow weld.[146]

The traditional means to achieve most colours, therefore, required a base of blue, with specific shades demanding one or several *celestes*, regulated most strictly in the case of black. This base, finally, achieved with woad, necessitated very large receptacles (to contain both an important amount of dyestuff and the large *paño*, in the environs of 40 *varas*, or 33.5 metres in length. Significantly, the *Ordenanzas* of 1567 would suggest the cheaper *dieciochenos*, *veintenos*, and *ventidosenos* (classified by thread-count), were dyed directly on the cloth, in the large *tinas*, whereas it was customary to dye the wool blue for the more expensive *venticuatrenos*. Indigo was initially introduced into the larger vats as a complement for woad, and gradually added in higher proportions; but the most immediate and visible, practical repercussions of indigo's introduction involved the possibility of using smaller, more affordable vats (*tinacos*) to achieve these *celestes* on the raw wool, while reducing the costs of other raw materials – a substantive dye, indigo did not require mordants.

Amarita dealt in both commodities over the course of 1578, allowing for a limited comparison of prices: in March, the pound of indigo sold for an approximate (if high) 30 reales, some 1,020 maravedíes, whereas the *carga* (load) of woad, around 179 kilos, went for 12,000 mrs., that is, for less than 31 maravedíes the pound. If we assume the Spanish dyers achieved a similar ratio to the one calculated by London dyers that same year (mentioned

[145] The Spanish term for this overcoat is '*demudar*' el paño/lana.
[146] *Nueva Recopilación* (repr. facs. Madrid ed., 1640), vol.2, t.XIII, ley.lxxix

above), indigo was really only slightly more expensive than woad. Amarita's dye was good (if inferior to a fellow merchant's woad from Toulouse), and more than 300 *cargas* were sold without much difficulty within a short month and a half. Other indigo merchants dealt in woad as well – Francisco de Lerma, Hernando de Ribero, Alonso de Quintanadueñas – probably selling both dyes to the same customers: using a base of woad with an overcoat of indigo was rapidly becoming standard practice.

In January 1566, the Council of Segovia issued a first decree regulating the use of indigo.[147] For the large *tinas* and on the finished cloth (*paños*), the *ordenanzas* mandated a minimum of six *arrobas* of woad per vat, which could be complemented with indigo in any proportion, at the dyer's will. The document also regulated a different type of dyeing, in the smaller *tinacos*, employed for raw wool. These should be placed in public spaces, where they could be visited and examined freely by inspectors or master dyers, and discarded after no more than a week. Clear water should be employed, and the use of urine or other 'filth' was banned, penalized with a fine of 3,000 mrs. A further prohibition on the use of indigo in the smaller *tiñajuelas*, *ollas*, and *calderillas* (little vats, pots, and tubs)[148] suggests lesser artisans, with fewer means, were finding ways to profit from indigo, willing to accommodate the new dye and experiment with its applications.

Complaints ignited more than a decade later, during a momentous 1578, after the Council of Castile issued an *Ordenanza* on 'the dyeing of indigo and in small vats (*tinacos*),' that would effectively reconfirm the Segovian *Ordenanzas* of 1566. An appeal, submitted shortly thereafter by the cities' 'masters and makers of cloth,' (*maestres y hacedores de paños*), suggests the earlier regulations had had little effect. We find, instead, that indigo has

[147] The discussion that follows has drawn significantly from Vela Santamaría, 'Protoindustria y fábrica difusa,' who included references and transcriptions of records from Segovia's municipal archive, as cited, which were later kindly provided in digital form by staff at the archive.
[148] AMS 1, 1002: 'Sesión del 25 de enero de 1566', fols.90R-91V; and cited in Vela Santamaría, op. cit.

revolutionized the sector, 'introducing radical changes in the dyeing process and those qualified to perform it.'[149] The use of indigo in *tinacos* had increased, and 'so much cloth has been made, as to make it cheaper, and anyone can dye, without having to be a master dyer.' Many 'poor people', the appeal continued, could work:

> …who would not be able to if their wools had to be dyed in large vats (tinas), because much capital is needed for them, and to dye with the said *tinacos* in indigo and madder no money at all is needed, because each person can dye what they have little by little, with great benefits for the Republic.[150]

Nor should the use of urine be banned: 'experience has shown that with fresh water (the dyeing) is imperfect, and bleeds, and using urine it comes out perfectly'[151] – all of which was quite accurate: urine is an ideal reduction agent for indigo and particularly well suited for wool.[152] It would cause 'neither diseases nor foul odours,' the appeal finally insisted, because the *tinacos* were kept in the more isolated areas of houses.[153]

In 1581, the hatmakers of Segovia were accused of endangering the population with the use of heated cauldrons for dyeing, and filling the principal *Calle Real* with 'bad odours caused when they pour the contents of their *tinacos*' onto the street. As regulated in the *Ordenanzas* of 1567, all woollen 'hats, bonnets, and caps' in shades of 'purple, tawny, greens,

---

[149] Vela Santamaría, 'Protoindustria y fábrica difusa,' p.16

[150] '…con ellos se benia a labrar tanta cantidad de panos que hera causa de benir a valer mas barato porque con ello cada uno facilmente benia a labrar sin ser neçesario ser maestro de tenir y con ello se sustentaba y aprobechaba del dho obraxe de paños y trauaxo de cada uno mucho numero de gente pobre que no lo podia haçer si se obiesen de tenir sus lanas en tinas por ser neçesario para ello mucho caudal y para tenir en los dhos tinacos con anir y rrubia no hera neceso caudal ninguno porque cada uno yba tiniendo poco a poco lo que tenia de que abia rresultado gran benef[ici]o a la rrepublica...,' AGS, RGS (August, 1578), cited in Vela Santamaría, 'Protoindustria y fábrica difusa,' p.18, n.103

[151] '…porque la espirencia abia mostrado que la tinta con agua linpia no hera perfeta y benia a desdeçir y haciendose con orines hera muy buena y perfeta,' AGS, RGS (August, 1578), cited in Vela Santamaría, 'Protoindustria y fábrica difusa,' p.18, n.104

[152] For a description of the urine vat, see Balfour-Paul, *Indigo*, pp.124-126

[153] '…ningun daño ni ynconbiniente ni mal olor rresultaua… porque de ordinario los dichos tinacos estan en corrales y lugares apartados en las casas,' RGS (August, 1578), cited in Vela Santamaría, 'Protoindustria y fábrica difusa,' p.18, n.104

and blues,' required one or more *celestes*.[154] Indigo, we might conclude, had made it possible for hatmakers and other specialized artisans to incur into a profession that had been reserved for specialists. Yet these last statements concerning the pestilence caused by dyers, and more, on the principal streets of the city, may also be highlighted. Medieval Spanish dye works, like other 'foul-smelling, unhygienic, environmentally unfriendly trades'[155] were kept at a distance from towns and cities, or at the very least on 'thinly populated streets.'[156] In this sense, finally, indigo was also affecting deeply rooted concerns related to urban spaces.

Resistance of the kind seen in Segovia has also been documented for the city of Córdoba, which passed its own *ordenanzas* on 'dyeing in *añil yndiovagadel*' in 1577, limiting authorization for its use to the dyeing of raw wool, and prohibiting its application in any other stage of the process.[157] But here as well, the dye's popularity increased among the humbler artisans, and toward the 1580s the city's Municipal Council issued an increasing number of licenses (*cartas de examen*) for 'dyers in wool with *añil yndiovagadel*,' to residents of the neighbouring town of Estepa.[158] As it was gradually accommodated into the dyeing sector, resistance was greatest from the larger dye works specializing in *paños* (as opposed to wool) – in 1615, the Cordobese *Ordenanzas de tintoreros* would ban the use of *añil* for black *venticuatrenos* dyed as *paños*, because 'it is a false dye for them.'[159] The term was commonly used for bleeding, or a lack of fastness, indicating a lack of familiarity with the dyeing process was likely to blame for some of these initial forms of rejection. With greater speed and less

---

[154] *Nueva Recopilación*, vol.II, L.7, t.XIII, Ley 101

[155] Gabriela Siracusano, *Pigments and Power in the Andes: From the Material to the Symbolic in the Andean Cultural Practices, 1500-1800*, (2012), p.57

[156] Ibid.

[157] The term *yndiobagadel* referred to the famed Baghdad indigo, most likely from the Italian '*indacco di baldacca detto buccadeo*,' as identified by Franceso Balducci Pegolotti, cited in Johann Beckman, *A History of Inventions and Discoveries* (1739), William Johnston trans. (3rd ed., 1817), p.128

[158] Fortea, *Córdoba en el s.XVI*, pp.296-299

[159] Cited in Fortea, p.299; along similar lines the Segovian appeal of 1578 blamed those with interests in the large dye works that used *tinas*, of attempting to restrict the use of *tinacos*.

resistance, indigo found a place in the dyeing of wool, generating new and changing patterns in demand, ultimately contributing to broader transformations within the textile industry.

A more extensive search through the municipal archives of Spain, the evolving *Ordenanzas de tintoreros*, might have much to reveal concerning the repercussions of indigo's introduction to the dyeing sector, especially a comparison between industries to the North (particularly reliant on woad), and South (more familiar with indigo). The present discussion, moreover, has focused on a city specializing in wool; yet indigo was particularly apt for silk, applications that will be examined further in Part III. By the last decade of the sixteenth century, the tide had turned with force in favour of indigo. In 1594, describing the situation in Medina to an agent in Lisbon, Simon Ruiz wrote:

> *Les caraques des Indes Orientales n'arrivent pas, leur retard joint a celui des flottes des Indes Occidentales fait monter le prix de l'indigo a 22 reaux comptant (l'indigo de très bonne qualité vaut encore d'avantage). Il faut le vendre dès qu'il attiendra un bon prix avant que n'arrive la flotte, d'autant que, en raison du prix elevé de l'indigo, certains fabricants de tissus cherchent a obtenir du pastel de France.*[160]

Castilian dyers were buying French woad only when indigo became scarce or prices rose – an altogether different scenario from the 1540s and 50s, when Diego and Jean de Bernuy could sell more than a million and a half pounds of woad each year in Segovia.

Conclusion

Amarita's letters provide a singularly detailed, if chaotic view of the Castilian trade in *añil*, one that seemed well worth exploring in the absence of studies dedicated to the early commercialization of New World indigo (in Spain or elsewhere). The uncertainties of the market, unstable prices and difficult clients were common to all trades, but indigo had other particularities. The issue of quality was especially problematic, more so than it would be in

[160] SR to Duarte Furtado, 26.10.1594, summarized in José Gentil da Silva, *Lettres de Lisbonne,* t.II, p.33

the sale of logwood or cochineal,[161] with a much higher incidence of fraud, contamination, and low quality in general. The number of dissatisfied clients, even Amarita's own admissions concerning the poor, or altogether bad indigo he peddled, are surprisingly numerous. The Portuguese varieties in particular, rarely failed to disappoint. Yet we are forced to wonder if a lack of familiarity with the dye might not have been to blame for some of the many occasions when it did not 'come out good.'

Amarita's misfortunes when it came to bad indigo, moreover, were often quite personalized; there was usually someone at the market with high quality merchandise – and increasingly so: the presence of indigo merchants from outside Segovia in the months following the arrival of the fleet invariably interfered with Amarita's business, in his own words: 'someone never fails to come and hurt me.'[162] These unwelcome visitors became more noticeable around 1578, when Amarita could not sell his indigo because of 'some merchants from Toledo', an incident that recurred later that year, following the arrival of 'many Portuguese merchants.'[163] This particular year, as the discussion above has hopefully highlighted, marked the appearance of indigo in full force on the Castilian and broader European markets; 'there is so much indigo it is pitiful,' Amarita finally complained that December – 'there is nothing in Segovia but indigo.'[164] Profits had drawn investors, and as supplies increased, prices gradually dropped to an approximate 10,5 *reales* the pound in Seville by 1600.[165]

Amarita was always too slow to sell, even more disorganized in the collection of debts and return of revenues, and regularly found himself on the defensive; Ruiz may have

[161] This is not to suggest cochineal and logwood were free of such problems, both incited complaints from merchants and dyers, if to a lesser degree than indigo; on the adulteration of cochineal, see Sarabia Viejo, *La Grana y el Añil*, p.28
[162] '…nunca falta quien biene a hacerme daño,' JA to SR, 28.02.1578, c.42-94
[163] JA to SR, 13.02.1578, c.42-91; 03.08.1578, c.42-123
[164] 'Ay tanto añir que es lastima, que otra cosa en Segovia no hay sino añir,' JA to SR, 17.12.80, c.59-178
[165] See Chapter 4

been excessively strict or demanding, but the letters suggest his agent could be rather ineffectual as a salesman. It seems reasonable for Ruiz to have been displeased, for example, when Amarita made a trip to Medina, but returned home without seeing his employer (who had some indigo debts to discuss) after finding him in a meeting. In 1587, Ruiz went so far as to incarcerate his agent for lack of payment on an unspecified amount of indigo, yet Amarita maintained his position until 1594, when the letters ceased, possibly after his death.

Indigo, however, had faded from their correspondence some time before, just as the Atlantic trade was finally taking off. One of the principal – at times the only – topic in the earlier years, *añil* gradually yielded its place to olive oil after 1584.[166] Ruiz had taken particular interest in this last trade around 1582, purchasing 'some warehouses' in the town of Écija for the storage of its famed oil, in partnership with Francisco de Morovelli.[167] But perhaps Antonio Gomes summarized circumstances best when he wrote: 'this trade has given us little pleasure, and I think it is not for us.'[168] The fairs at Medina had seen their last 'great days'[169] by the time Simon Ruiz passed, in 1597, while the Segovian textile industry entered the following century along 'the sad, long roads of decadence.'[170] This was not, for the time at least, the fate of *añil*; exports from the Central American ports boomed after 1590.

New World indigo reached Seville to a market saturated with (and accustomed to) woad, it had to face the competition of Indian exports at the fairs of Spain, in France and

---

166 Amarita sold at least 16 barrels of indigo in 1583, although further references might have escaped this researcher. Vela Santamaría presents a list of the barrels of indigo commercialized by Amarita between 1571 and 1583, as gathered from surviving accounts in SR, c.250-252, all of which appear to be significantly lower than the totals discussed in correspondence; in 1583, for example, the author claims Amarita sold only 2 barrels (p.16, n.85) when letters indicate he dealt in a first shipment of 14 barrels and a second of only 2, JA to SR, 01.11.1583 and 09.11.1583,c.84-45 & 46

167 Lapeyre, *Una Familia*, pp.529-531

168 '…poco gusto nos ha dado esta mercaderia, y parece que no es para nos.' Antonio Gomes to SR, 04.08.1575, in José Gentil da Silva, *Lettres de Lisbonne*, p.119*;* similarly, in Antonio Gomes to SR, 11.05.1575*:* 'pareceme que no se nos da bien esta mercaderia,' op. cit., p.109

169 John Elliott, *Imperial Spain*, p.287

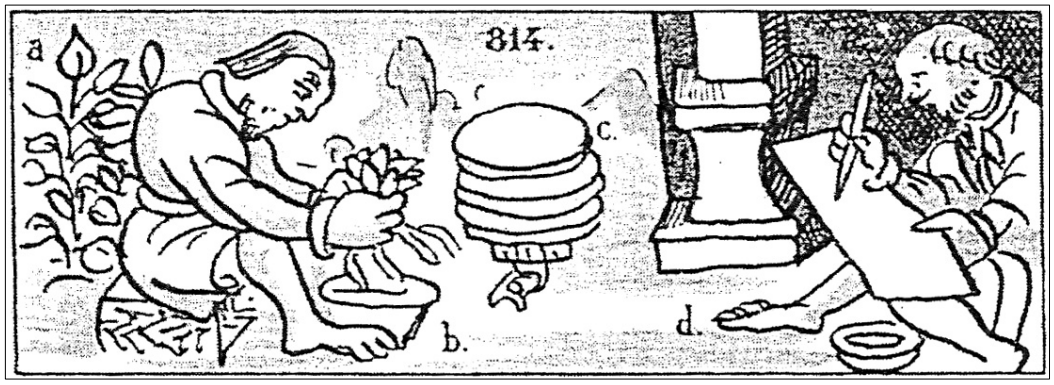
170 '*sur les tristes et longs chemins de la décadence...*' Bennassar, 'Economie et Societe au Segovie,' p. 197

Northern Europe; and it did admirably well. But it was not an easy commodity to deal with, – and one, moreover, that would experience these growing pains on a global level. There was also the thorny issue of reputation, ideas concerning quality and fraud that preceded the introduction of the Mesoamerican varieties, but would follow the product throughout. It was a trajectory that advanced in jolts and starts, with bursts of approval and acceptance interrupted by the problematic of unsatisfying merchandise, poor results, or official policies restricting the dye's application.

For merchants and dyers alike, the introduction of indigo supposed a learning process that involved failures and successes, inspired fears in some and encouraged others to risk experimentation, fuelling the diffusion of new material uses, practices, and expertise, and ultimately fostered organizational changes to the Spanish dyeing sector. Economic, social, and cultural variables thus intervened to shape the path of indigo in this initial period of reception and accommodation, as it gradually prevailed over woad. But while this final triumph may appear altogether foreseeable in view of indigo's higher concentration and adaptability, it is an assumption best set aside. As this Chapter has explored, and Jan de Vries more succinctly expressed: 'the broad acceptance of these new products rarely is 'self-explanatory' – it has a history.'[171]

[171] Jan de Vries, *The Industrious Revolution: Consumer Behaviour and the Household Economy, 1600 to the present*, (2008 ed.), p.155

Enter *Xiuhquilitl*:
Indigo in the Spanish Empire, c.1550-1700



A dissertation submitted in fulfilment of the requirements for the Degree of Doctor of Philosophy at the University of Oxford
HT 2015

by
Adrianna Catena
Balliol College

Vol. II

Chapter 4
Networks and Trade: The Carmona Tamariz Merchant Family

By 1590, the patterns of Atlantic trade in Central American indigo had been established. Once the dye had dried on long tables set out under the sun, it was cut into small, square bricks and wrapped in leather 'skins.' The bundles were packed into one of several containers: wooden crates (*cajones*), leather chests (*petacas*) or bags (*zurrones*), each branded with a mark (often quite intricate insignia), burnt onto the top or side, identifying the owner of the goods (that is, the producer or merchant absorbing the risk on the return leg of the journey).[1] From hundreds of *obrajes* 'spreading up and down the Pacific coast of the Audiencia'[2] mules then carried the dye, a crate at each side, through the narrow, crowded roads of the interior, to the warehouses of merchants in cities and ports across the Indies.

The greater part of production, destined for export to Spain, took one of three routes: large shipments were sent north, to Veracruz, with a regular stop in Puebla de los Angeles, but merchants also risked the long overland journey to the shores of Lake Nicaragua, where infrequent and unreliable frigates carried the goods down the river San Juan to the Caribbean. From here, with some luck, they would catch the departing fleet from Tierra Firme. Despite the irregularity of vessels and the constant threat of piracy, the greater share of indigo exports in this period was sent through the closer, and more convenient Honduran ports of Trujillo and Puerto Caballos, where the final process of registration and loading demanded its own measure of patience. An error, at this point, could prove irredeemable: after an attempt to retrieve 15 crates of indigo in 1616, Diego de Canavate was

[1] Alternatively, the crates could be branded at the port.
[2] Murdo MacLeod, Spanish Central America: A Socioeconomic History, 1520-1720 (1973), p.180

informed that 'it was impossible...because they were among the first to be loaded, and had many crates and (other) merchandise on top of them, and if they were to be removed, the fleet would not leave this year for Castile.'[3]

The Honduran ships sailed first to La Havana, where they would rendezvous with the fleet returning from Veracruz, and transfer the more valuable merchandise onto safer vessels; indigo travelled often on the *Almiranta*, alongside bullion and cochineal, but was always present in bulk on the *Capitana*. Records suggest *añil* was a more versatile commodity than most, present on vessels carrying only luxury items, but also on the smaller ships, laden with nothing but sugar and hides.[4] After another month or so at sea, on an uneventful journey, the worn cases would be unloaded on the banks of the Guadalquivir and transferred to the warehouses of customs, where they could finally be retrieved – usually by a merchant or his agent, to be taken to one more warehouse, to begin yet another journey. This, at least, was a general picture of the legal movement of indigo (see fig. 4.1).

The Central American indigo industry experienced a period of sustained growth between 1590 and 1620, while the Seville merchants, eager to capitalize on a profitable new trade, encouraged a rapid rise in imports. From 1608 to 1614, total values for exports exceeded those of cochineal – an impressive accomplishment for a substantially cheaper good.[5] As for those involved in the trade, Ruth Pike has highlighted a 'growing trend

[3] '...Dixeron que era imposible sacarlos por ser de los primeros que se envarcaron y aver ensima gran cantidad de caxones y hacienda y que si se uviesen de sacar no podrian ir las naos este presente año a Castilla...' in AGI, Contratacion, 2134, 'Registros de Venida de Honduras' (1616), s/f

[4] In the course of research at Mexico's AGN, and Seville's AGI, I found numerous tables outlining total values for the registered merchandise on each ship (often including up to ten products) on the return leg of the crossing, usually with variations of the title: *'Razón del oro plata, grana, añir, y otras mercaderias que van registradas en la Flota...'* Examples in AGN, Indiferente Virreinal 2140, Exp.29: 'Correspondencia del señor Capitán Santifederigui, sobre ventas de mercancías,' (1628) s/f;

[5] Macleod, p.174, 197; Statistics in Chaunu, *Seville et l'Atlantique* and Lorenzo Sanz, *Comercio de España con América en la Época de Felipe II* (1979), vol.1

towards specialization'[6] in late sixteenth century Seville, much as Louisa Hoberman has observed for the Mexico City merchants, particularly in relation to dyestuffs: 'only one third of wholesalers traded in cochineal and indigo', and 'only one-half of the indigo shippers dealt in cochineal too.'[7] Yet Enrique Otte's examination of the earlier trade in dyes would indicate commerce had always been somewhat specialized in this area. Registers of indigo dispatched through the ports of Honduras, finally, suggest investments in the Central American trade were especially monopolistic, controlled by no more than a handfull of merchants in Seville.

Drawing on the experience of an illustrative example from this group, the Carmona Tamariz merchant family, this chapter broadly examines the nature and organization of the Atlantic indigo trade between 1590 and 1620. Over the course of three generations, and coinciding with this initial period of growth for the industry, the firm gradually gained control of a substantial share of exports. Central to this discussion are the networks that would further their investments – the informal mechanisms through which the Carmonas, their various agents and intermediaries, enabled distribution and trade – exploring the interactions between social and commercial ties in the circulation of long-distance products.

The Carmonas first came to my attention through a brief reference in Marcy Norton's *Sacred Gifts, Profane Pleasures: A History of Tobacco and Chocolate in the Atlantic World.* Discussing the beginnings of trade in both her chosen commodities, Norton argued for an early stage when some of the Seville merchants – having acquired '*indiano* habits' – began importing modest quantities of chocolate and tobacco for personal consumption. One example, was the 'cargo arranged in 1612 by the Carmona brothers, prominent merchants,

[6] Ruth Pike, 'The Genoese in Seville and the Opening of the New World', *The Journal of Economic History*, 22:3 (September, 1962), p. 376
[7] Louisa Schell Hoberman, *Mexico's Merchant Elite, 1590-1660* (1991), p.126

who included among a ship full of indigo two chests of tobacco."[8] It was the initial phase of research, and I was still unaware that vessels returning from Honduras in this period would all sail 'full of indigo'; naturally, a shipload of my intended subject seemed well worth pursuing.

In the course of research at the AGI, the *Registros de Venida de Honduras* confirmed Norton's account; of 84,726 pounds[9] of indigo registered on the *Almiranta* in 1612, 19,700 pounds were consigned to the Carmonas, significantly more than the 9,150 pounds destined for Cristóbal de Barrionuevo, second largest importer of the dye. Likewise, of 108,400 pounds loaded onto the *Capitana*, 25,700 had been dispatched to the Carmonas, while only 11,350 went to Barrionuevo. In both vessels combined, the Carmonas received seventy-six separate shipments with a total of 454 crates of indigo, a case of chocolate, and a chest (*petaca)* of tobacco.[10] So the question arose: who were these 'Carmona brothers,' 'precocious purchasers'[11] of chocolate, early tobacco consumers, and (in 1612 at least) foremost importers of Central American indigo? To begin with, they were not brothers; the Carmonas in Norton's *registros de averías* were Juan, his father Bartolomé, and grandfather Hernando.

A fairly conventional family of Atlantic traders, the Carmonas left countless records of *averias*, *registros*, lawsuits, and the more sober notarial protocols, documenting the feverish pace of their routine commercial activity, the particulars and vicissitudes of trade. Following the usual progression for a successful merchant family, the second and third generations bought government offices and became familiars of the Inquisition, leaving several hundred pages of depositions concerning their lives, possessions, and genealogy. Similar, if shorter

[8] Marcy Norton, *Sacred Gifts, Profane Pleasures,* p.148
[9] Calculated from 100-pound crates. For taxation purposes, crates were 100 pounds until c.1620 when they rose to 125.
[10] AGI, Contratación 2129, N.2: 'Registros de venida: de las naos que vinieron de Honduras con cabos o generales. Años de 1591 y 1612.'
[11] Norton, p.145

collections of testimonies were included in various licences for passage to the Indies, while a number of criminal proceedings, finally, furnished a few more suggestive details.

Baptismal records, which might have provided relevant information concerning the family's local ties in Spain and the Americas are, regrettably, absent from this study – owing to the limitations of time rather than the availability of sources. Likewise, while personal correspondence may have survived in the Mexican or Spanish archives, none was found in the course of this investigation. References to the Carmonas in the secondary literature are few and brief; yet even at first glance, their diversity – from studies of the Atlantic book trade to the socio-economic ties between Brihuega, Spain and Puebla, Mexico – highlights the extension of the Carmona family network, with links to New Spain, Guatemala, Seville, and Spanish Granada.

In the examination of the Carmona's participation in the indigo trade, the *registros de carga*, shipping registers for the departing (*registros de ida*) and returning (*registros de venida*) fleets, provided invaluable data concerning their clients, social and commercial associations. Additional sources from Mexico's *Archivo General de la Nación*, Guatemala's *Archivo General de Centroamérica*, Seville's AGI and APS, made it possible to follow the creation and evolution of these ties in surprising detail.

Compiled for each vessel, the *registros* usually consisted of three sections: the first and last concerned the requisite *visitas* made by royal officials before the ship was authorized to sail, while the middle section or *registros de mercancías*, 'le coeur du registre,'[12] contained several hundred individual *partidas* (entries), formulaic documents specifying the destination of the goods, identity of the shipper, consignor, and recipient (one of whom was also specified as the owner of the merchandise), and a final account 'of the payment of taxes ad valorem –

[12] Pierre and Huguette Chaunu, *Seville et l'Atlantique*, vol. 1: the *registros* are discussed at length in Chapter 1, esp. pp.62-84; see also Pierre Chaunu, *Seville et l'Amerique aux XVIe et XVIIe siècles* (1977), p.13

almojarifazgo and *avería*.'[13] Filed in sequence, as each shipment passed the hurried inspection of the purser and notary before being placed below deck, they bring to life the hectic, chaotic loading of the fleet.

Between 1590 and 1620, the *registros* remained substantially the same, with insignificant modifications to a standard format – the single, noticeable change being the handwriting of the notaries for the American ports (always worse than those of their counterparts in Spain), which increased in size to absurd proportions during the first decade of the seventeenth century, ostensibly as a result of legislation fixing the remuneration of notaries at a specified amount *per page*.[14] Although large quantities of indigo were dispatched from the port of Veracruz, a close examination of the vast *registros de venida de Nueva España* – where indigo appears infrequently at best, and on no more than a few vessels – was set aside in view of the immense amount of work it would have demanded, and the meagre results expected. The inverse was true of the *registros de ida* and *venida* for the vessels anchoring in the Honduran ports. Here, the more manageable list of merchants and fewer vessels – packed with indigo on the return voyage to Spain – presented an immediate view of the nature and evolution of trade.[15]

While their substantial role in the Atlantic indigo trade stands out as a particularity, the Carmonas generally conformed to stereotype, employing the usual strategies in the acquisition and management of capital. Like all merchants, they had an intimate knowledge of the textile trade and, like some, an artisan background. Their close, and lasting connections to the silk industry, while unexceptional, were as fundamental to the social and commercial networks they moved in, as to their later specialization in dyestuffs. These ties

[13] Lutgardo García Fuentes, *Los peruleros y el comercio de Sevilla con las Indias, 1580-1630* (1997), p.20
[14] Related in conversation with Dr. Jaime Lacueva Muñoz, Universidad de Sevilla
[15] Records consulted have been outlined in Appendix 1.

preceded the family's transition towards wholesale by at least a generation, and may be traced back to a 'humble man'[16] from Seville.

I. *Origins of a merchant family*

Diego de Carmona was a man of many trades: an apothecary, silk spinner and satin weaver who occasionally sold *agua fuerte* – a solution of nitric acid diluted in water,[17] from the *plazuela* near his home; by all accounts, an ordinary Sevillian artisan of the early sixteenth century.[18] Diego lived with his wife, Isabel, in the neighbourhood of San Ildefonso, not far from the Puerta de Carmona, towards the old Jewish quarter of San Bartolomé, where his father had resided. The couple had seven children: Hernando (born c.1523), Francisco, Pedro, Alonso, and the women: Beatriz, Leonor, and Maria (see fig. 4.2.).

Around 1560, this last daughter married one Gaspar Hernández, who made a fortune ('*tuvo caudal*') in Granada, prompting the relocation of his family in law to the former Moorish capital.[19] Here, the Carmonas joined the swelling ranks of the immigrant population, 'new men, artisans, journeymen, and those in service,' who had been 'poor and ill at ease in their homelands, or (came) driven by an appetite for gain;'[20] yet they seem to have made their way with ease into the silk producing sector. The family's ties to the industry are especially apparent in the various *informaciones* taken in Granada: other than an

[16] AGN, Inquisición 300, Exp. 04, 'Información sobre la Genealogía y Limpieza de linaje de Hernando de Carmona Tamaris y de Juana Rodriguez de Coca, su muger' (1612), testimony of Bartolomé de Carmona, taken on 6.02.1609, fol.208R

[17] Used in decorative woodwork, to create the etchings of the same name, and in some dyeing processes, particularly for certain reds (scarlet, crimson, russet), with madder.

[18] Ida Altman, *Transatlantic Ties in the Spanish Empire: Brihuega, Spain, and Puebla, Mexico, 1560-1620* (2000), p.46

[19] AGN, Inquisición 300-04, fol.208V

[20] Casey, 31

exceptional priest or grocer, the witnesses who claimed to know the Carmonas were silk mercers, weavers, spinners, and throwers.[21]

The eldest of Diego's sons, Francisco, married Isabel de la Peña, daughter of a silk weaver – a suitable match, in the words of Bartolomé de Lara, as they were both 'of the art of silk.'[22] Like his father, Francisco took on several occupations: at least one witness described him as a satin weaver – he may have learned the trade in his youth, as an apprentice for his father – while several others said he 'removed the gum from satins' (*sacava gomas a los rasos*), most likely a reference to the process of degumming, or scouring raw silk to improve its lustre. Yet most witnesses old enough to remember placed Francisco in trade, some as a silk mercer, others as a commission agent (*corredor de lonja*). A second brother, Pedro, was alternately described as a silk weaver and mercer, and probably occupied as both. Hernando, the most relevant of the brothers to this study, married Isabel de Santa Ana, a native of Toledo, with its own 'thriving silk industry,'[23] which remained heavily dependant on raw material from Granada. Although his occupation in this period is unknown, it is likely he was also trained as an artisan and, like his brothers, made a gradual transition towards trade.

Business came to an abrupt halt in the winter of 1568-9, when the rising of the Moriscos dealt a crippling blow to the silk industry. The mulberry trees that had grown well in the Alpujarras were systematically 'cut, burnt, and torn down'[24] by both sides; but it was the dispersal of the Moriscos, in the aftermath of war, that caused the most damage. As one memorial to the Crown lamented: 'it is known that of more than four thousand looms... no

[21] AGN, Inquisición 300-04; AGN, México 227, N.27; AGN, Inquisición 200, Exp.03
[22] Possibly a reference to the guild of the same name
[23] John H. Elliott, *Imperial Spain, 1469-1716* (1970), p.187
[24] Félix García Gamez, 'La seda del Reino de Granada durante el segundo proceso repoblador: 1570-1630,' *Chronica Nova*, 25 (1998), p.254; James Casey, *Family and Community in Early Modern Spain: The Citizens of Granada, 1570-1739* (2007), p.34

more than twenty-five remain, and of more than three hundred merchants who dealt in silk, the wealthiest have gone, and not even forty are left.'[25]

Several decades later, witnesses for the Carmonas dutifully noted the family's vigorous efforts to succour the city during the rebellion.[26] But while Francisco seems to have prospered in its aftermath, the losses proved too great (or the prospects too scarce) for Pedro and Hernando, who returned with their families to Seville around 1578. The elder Pedro re-established himself as a grocer (*especiero*), an occupation his son Melchor would later inherit.[27] Hernando de Carmona was not as cautious, preferring the promise of fabulous profits and endless uncertainties of trade with the Indies. Over the next decade, as a wholesaler or *cargador de Indias* in the heart of the Atlantic world, he became the first of the Carmonas to occupy himself exclusively in trade, the first professional merchant in the family.

A more extensive examination of the Sevillian protocols, or perhaps the registers of *averías* from the AGI, might offer the details of this transition. Yet the evidence suggests Hernando's case was fairly typical; it was not uncommon for artisans and mercers to make small investments in trade with the Indies, presumably turning fully to commerce if these initial ventures were successful. The opportunities were quite real, and 'miracles of social mobility were being performed every day.'[28]

---

[25] García Gamez, p.255

[26] AGN, Mexico 227, N.27; for example, from the testimony of the merchant Esteban López: 'y este testigo vido estando en la dicha ciudad de granada en el tiempo de guerra y alzamiento de los moriscos que los dichos hernando de carmona y el dicho diego de carmona su hijo acudian a la guarda de la ciudad con los demas vecinos dela,' s/f

[27] AGN, Inquisición 300-04, fol. 207

[28] Pike, Ruth, *Aristocrats and Traders: Sevillian Society in the Sixteenth Century* (1972), p.100

'Haciendo las Indias'

Hernando was around fifty years old by the time he returned to Seville, and the father of several grown children. In all, he had five surviving sons: Pedro, Bartolomé, Diego, Tomé, Andrés, and a daughter, Isabel, who married the Sevillian merchant, Pedro de Milán Bravo. In the unpredictable world of Early Modern trade, employing relatives and kin offered a welcome measure of assurance to an enterprise fraught with risk, and Hernando, like so many Seville merchants, made ample use of his family.[29] As the firm expanded, extending its ties across the Atlantic, an agent on the other side could prove invaluable. 'Business with the Indies,' Francisco Morovelli once wrote to Simon Ruiz, 'consists of nothing more than having a good, honest man there.'[30] These intermediaries enjoyed ample independence – forced upon them by the nature of communications – with a corresponding emphasis on trust, and a preference for family members and close relatives.

A decade after his return, having acquired the necessary capital, perhaps, Hernando took the momentous step, sending three of his sons in succession to the Indies as commission agents for the family firm. The first to depart, and by far the most successful, was Diego. He left shortly after the family returned to Seville and settled in Puebla, New Spain, where he bought the office of *regidor* for a substantial 3,350 pesos, most likely paid for by Hernando.[31] His father may also have intervened, and was surely satisfied with Diego's marriage to Maria de Vasconcelos, daughter of the wealthy Juan Gómez de Vasconcelos, a

[29] David Studnicki-Gizbert, 'From Agents to Consulado: Commercial Networks in Colonial Mexico, 1520-1590 and Beyond,' *Anuario de Estudios Américanos*, 57:1 (2000), p.49
[30] ASR, Caja 84: 'Correspondencia desde España,' Francisco Morovelli to Simon Ruiz (14.05.1583) – This merchant is referred to extensively in the preceding chapter.
[31] AGI, Mexico 172, N.65: 'Expediente de Confirmación del oficio de regidor de Los Angeles, en Nueva España a Diego de Carmona,' (23.10.1585), s/f

local landowner and cochineal producer.[32] It was a 'golden age' for Puebla, home to the 'second-largest merchant class'[33] in New Spain, and a prosperous textile sector dedicated largely to the production of woollen broadcloths.

In 1589, the younger Andrés de Carmona left for Tierra Firme, ostensibly to receive his 'initial training' in commerce.[34] This first, introductory trip to the Indies was 'common practice,'[35] allowing younger merchants the opportunity to gain both capital and experience. Travelling on the same fleet as Andrés was Francisco de Torres, the son of a doctor and silk merchant, and brother-in-law to another of Hernando's sons, Tomé.[36] Earlier that year, Tomé had formed a company with Torres for the shipment of various goods (mostly textiles and wine), which the latter would sell in the city of Cartagena.[37] Partnerships of this kind, in which the 'younger man supplied the labour or travel' – Tomé was 30, Torres 21 – were another common mechanism for merchants in the 'formative stages' of their careers to acquire the capital necessary for independent trade.[38] It was a particularly long contract, lasting 6 years, after which Torres would return to render accounts in Spain.[39] But Tomé, the third and last of the brothers to cross the Atlantic, left for Honduras in 1593, entrusting one of his relatives in Seville, perhaps, to conclude business with his partner.[40]

The remaining two sons, Pedro – most likely the eldest, and Bartolomé, became professional merchants, joining their father in trade before 1590. For the next three decades,

---

[32] As James Lockhart has noted of the Mexico city merchants: 'almost all important local merchants married in Mexico as their careers were gaining momentum, almost always to Mexican born women (virtually the only ones present),' in Lockhart, *Of Things of the Indies: Essays Old and New in early Latin American History*, (1999), p.161
[33] Hoberman, 39
[34] Studnicki-Gizbert, 'From Agents to Consulado,' p.49; APS, Leg. 12520 (1589), fols.964R-964V
[35] Ibid, p.49
[36] Garcia Fuentes, 245; APS, Leg. 12520 (1589), fols.964RV
[37] APS, Leg. 12520 (1589), fols.961R-963V
[38] Hoberman, 48
[39] The longest company found by Hoberman lasted six years.
[40] AGI, Indiferente 2067, N.29: 'Expediente de concesión de licencia para pasar a Honduras a favor de Isabel de Torres, vecina de Sevilla...' (3.3.1594), s/f

the Carmonas would conduct most of their business through the notaries at Seville's *Oficio* XIX, located just outside the Cathedral, at the intersection of present-day Avenida de la Constitución and Calle Alemanes.[41] On the busy, iconic corner currently occupied by a *Starbucks* cafe, they formed companies, legalized wills, and signed notes of payment. Above all, however, they made use of that 'marvellously effective legal instrument,'[42] the ever-necessary *poder*, granting, receiving, substituting, revoking, and resigning powers of attorney.

On a busy month, the Carmonas could sign more than thirty *poderes*, evidence of their various roles as intermediaries, their clients and relations, social and commercial ties. To these we may add the numerous powers granted in absentia, dispatched from the Indies with instructions for the sale or distribution of goods remitted on a particular fleet. But it was the purchase of goods destined for export to the Indies that occupied most of their time, manifested in numerous 'specific' *poderes* – to Ginés Garcia from Liétor, for example, for the purchase of twenty-two large, and fifteen small carpets, or to Bartolomé de Zarabata, ordinary of Salamanca, for the purchase of 'twenty dozen' saddle bags – to be dispatched to New Spain, Honduras, and Tierra Firme.[43]

Some sense of the Carmona's progressive standing amongst the Atlantic traders may be gathered from Lutgardo Garcia Fuentes' study of the Sevillian *peruleros*. A series of appendices listing the merchants who loaded more than 4,000 pesos in goods on the fleets departing for New Spain and Tierra Firme for intermittent years between 1580 and 1630, include entries for Hernando, his sons Pedro, Bartolomé, and grandson Alonso de

[41] From an informal discussion with Francisco Fernández López, (Asesor Técnico de Conservación e Investigación, APS).
[42] Henri Lapeyre, Une Famille de Marchands les Ruiz (1955), p.129
[43] APS, Leg. 12646 (1606), fols.138RV; fols.908R-909V

Carmona.[44] In the earliest of these, from 1586, Hernando paid 157,640 maravedíes in *almojarifazgo* on goods destined for Tierra Firme, placing him firmly in the lower ranks of the more prominent *cargadores* to the region, forty-third of fifty-three merchants who paid more than 90,000 mrs. in *almojarifazgo*. Pedro de Mendoza, for example, 'one of the wealthiest traders with the Indies,'[45] paid 671,989 mrs., while the well-known Juan Antonio Corzo Vicentelo, subject of Enriqueta Vila Vilar's seminal study, disbursed the highest sum of 1,762,991 mrs.

The bulk of the Carmona's shipments in this period, however, were to New Spain, where they enjoyed a more prominent position. Although figures are lacking for the 1580s, in 1590 Hernando ranked eleventh of forty-three merchants, loading 27,435 pesos worth of goods (617,306 mrs. in *almojarifazgo*). By comparison, Gerónimo de Valladolid, a factor in Seville for Simon and Andrés Ruiz between 1560 and 1565,[46] loaded less than 10,000 pesos on the same fleet. As of 1593, Pedro had joined Hernando on the list, paying 174,000 mrs. in *almojarifazgo* for some 7,800 pesos in cargo.[47]

Little over a decade after arriving in Seville, Hernando had consolidated his position in the city, and ensured a promising future for his children: Pedro and Bartolomé would preserve the family firm on the peninsula, while Diego, Tomé, and Andrés (who had finally settled in Puebla), spread the family's social and commercial ties across the Atlantic. Even his only daughter, Isabel, had been successfully wed to a prosperous merchant, later a partner, extending the family's ties to the local merchant class through marriage. The firm, which operated from Hernando's home in the neighbourhood of San Miguel, had also expanded to

[44] Garcia Fuentes, *Los Peruleros*, Appendix II: 'Almojarifazgos de pasajeros y comerciantes de Sevilla en los galeones de Tierra Firme y flotas de Nueva España, en maravedís,' pp.287-320
[45] Lorenzo Sanz, p.380
[46] Lapeyre, p.131
[47] Garcia Fuentes, pp. 306-308

include two young *cajeros*: apprentices or 'salaried *criados*,'[48] and young wholesalers-to-be.[49] Just how representative these arrangements were is evident from Louisa Hoberman's outline of merchant families in the period:

> The father, uncle, or older brother was stationed in the most desirable and important locations...while the younger brothers resided for many years in cities of lesser commercial significance, or travelled between Veracruz, Manila, Cartagena, and Seville.[50]

II. *Connecting the Spanish Atlantic: Diego and Tomé*

There was every reason for the Carmonas to invest in indigo. Sevillian merchants had shown increasing interest in the dye as of the late 1570s, Central American producers were enthusiastic, 'land was plentiful and profits seem to have been high'; even the fleet was sailing 'with impressive regularity.'[51] The limited, usually insufficient space available on the returning vessels,[52] in turn, encouraged a preference for goods with a high per unit value: bullion and dyestuffs.[53] These incentives aside, indigo was a natural investment for a merchant with a son in Puebla and another in Guatemala, the more so for one with substantial connections to the silk and textile industries, perhaps even some familiarity with the dye trade – the firm's earliest imports included cochineal, brazilwood, and *achiote*.

The *registros* indicate the Carmonas received their first shipments of indigo from Diego – on his own initiative, or at their specific request – dispatched through Veracruz alongside

---

[48] Hoberman, p.20
[49] AGI, Indiferente 2067, N.29: 'Expediente de concesión de licencia para pasar a Honduras a favor de Isabel de Torres, vecina de Sevilla...' (3.3.1594), s/f; Hoberman, p.45
[50] Hoberman, p.45
[51] Macleod, p.181; 197
[52] Jeremy Baskes, 'Risky Ventures: Reconsidering Mexico's Colonial Trade System,' *Colonial Latin American Review*, 14:1 (2005), p.31
[53] Hoberman, p.118

the more valuable silver and cochineal.[54] The dye was likely of Central American origin, imported on a regular basis by Poblano merchants, as Ida Altman has outlined, destined either for export or resale to the local textile *obrajes*.[55] Shipments of *añil* preceded Tomé de Carmona's departure for Honduras by at least two years, suggesting the choice of location could have been motivated by a desire to increase the family's investments in the dye. By design or not, Tomé did exactly this, creating and developing the connections that would, less than a decade after his arrival, allow the Carmonas primacy over the Central American indigo trade. It was a gradual, revealing process, which may be followed in detail.

Tomé de Carmona Tamariz

After three months or more at sea, Tomé reached the green, Caribbean coast of Honduras, disembarking at the less appealing Puerto Caballos, a 'pesthole' in the words of Murdo Macleod, 'comparable to Nombre de Dios and Veracruz, but without their great wealth.'[56] Before hastily relocating to the capital of the *Audiencia*, Santiago de los Caballeros, he sent for his wife, Isabel de Torres, in letters to his father and brothers in Spain. She joined him within the year, accompanied by her sister Lucía and two servants.[57] The family took up residence in the 'commercial heart'[58] of Santiago, just a few blocks northwest of the central plaza, in a two-story home with a storeroom. The city's defining feature, for historians at least, was a 'large and prosperous merchant elite,' capitalizing on their peripheral, if convenient location between the large markets of Lima and Mexico City, with most of their

[54] AGI, Contratacion, 1798 (1595), s/f
[55] Altman, p.65
[56] Macleod, p.156
[57] AGI, Indiferente 2067, N.29: 'Expediente de concesión de licencia para pasar a Honduras a favor de Isabel de Torres, vecina de Sevilla...' (3.3.1594), s/f
[58] David *Jickling,* 'Los vecinos de Santiago de Guatemala en 1604', *Mesoamérica* 3: 3 (1982), p.151

assets invested in the export trade, initially cacao, but of course, and increasingly after 1580, indigo.

Detailed censuses of Santiago, taken for the purposes of imposing the *alcabala* (sales tax), have survived for the period 1604-1626, compiled in the *Libro Becerro*, archived at Guatemala's AGCA. An attractive source, it has been consulted by a number of scholars, and merited two doctoral dissertations on the topic.[59] While an examination of the complete collection might have proven quite valuable to this study, Dorothy Jane Joba's comprehensive summary of the census data, and a transcription of the first of these surveys, published by David Jickling, have been useful substitutes.

The earliest census lists 762 *vecinos* 'block by block,' each of these *cuadras* identified by the name of a prominent resident. The city's unusually large proportion of merchants, roughly 10% of *vecinos*,[60] were concentrated in the area immediately north and northwest of the central plaza, displacing the old elite, the encomenderos, sons and grandsons of *conquistadores*, who grouped together in the Southeast. The wealthy *peninsulares,* in turn, settled Northeast of the centre, in the neighbourhood of Santo Domingo – the 'best part of the city'[61] – building lavish homes that would later impress Thomas Gage in his travels through the region.[62] Wealthier artisans lived in the central blocks, while their poorer counterparts occupied the peripheral neighbourhoods of San Sebastián and Santa Lucía. Of interest to the present discussion, thirteen *obrajeros* (owners of indigo works) listed in the 1604 census were grouped around the plaza, and wealthy southeast.

---

[59] Dorothy Jane Joba, 'Santiago de los Caballeros, 1604-1626: Society and Economy in Colonial Guatemala,' PhD dissertation, University of Connecticut (1984); Stephen Webre, 'The Social and Economic Bases of Cabildo Membership in Seventeenth-Century Santiago de Guatemala,' PhD dissertation, Tulane University (1980).
[60] Peña, 473
[61] Thomas Gage, *A New Survey of the West Indies* (3rd ed, 1677), p.280
[62] Ibid, pp.280-281; and cited in Jickling, p.154

The published data allowed for the identification of the greater number of the Carmona's commercial relations (including Tomé), their place of residence, occupation, and relative wealth – as judged by the payment of *alcabala*. Pairing this information with client lists generated from the *registros*, figure 4.3 charts the evolution of the Carmona's commercial ties to Santiago between 1593 and 1613. Using progressively lighter shades for later years, the resulting map highlights the physical expansion of their network, departing from the area immediately surrounding Tomé's home and spreading outwards, towards the wealthier areas of the city. Just as evident is the family's gradual entry into the higher ranks of society, incorporating encomenderos and members of the Cabildo to their list of clients, as discussed below.

Records suggest the Carmonas had few, if any ties to Central America before Tomé's arrival. In 1595, a year after settling in Santiago (and like his brother Diego two years earlier), Tomé applied for admission as a *familiar* of the Inquisition. Merchants were not uncommon among these 'lay servants of the Holy Office' (often misperceived as informants): it was an appealing position, boosting honour and reputation, but more significantly provided proof of purity of blood within a group notoriously plagued by individuals of dubious ancestry.[63] The resulting *informaciones* establishing the aspiring candidate's genealogy included an informative collection of testimonies: of six, male witnesses between the ages of 30 and 45, all resident in Puebla de los Angeles, four were natives of Granada, while a fifth had been previously employed in Seville as a *cajero* for Pedro de Carmona.[64]

---

[63] Henry Kamen, *The Spanish Inquisition: A Historical Revision*, pp.145-146; defined as mere informants in Hoberman and Altman, op cit. See also Bartolomé Bennassar, 'Aux origines du caciquisme: les familiers de l'Inquisistion en Andalousie au XVII[e] siècle,' *Cahiers du Monde Hispanique et Luso-Brésilien (Caravelle)*, vol.27 (1976), pp.63-71; and Joba, pp.125-127

[64] AGN, Inquisición 200, Esp. 003, 'Información de genealogia y limpieza de sangre de Thomé de Carmona, vecino de la ciudad de Guatemala, y de doña Isabel de Torres, su muger,' (February, 1595), fols. 23R-34V (witness statements for Tomé de Carmona); fols. 36R-43R (witness statements for Isabel de Torres).

The experience of the Granadinos hints at the broader networks the Carmonas moved in: all four had resided in the vicinity of the Carmonas in Granada and later Seville, finally relocating, like Diego, to Puebla; they included Esteban López, with ties of *compadrazgo* to Hernando de Carmona and Tomé's first cousin, Francisco Tellez de Aguirre. The cousins, both approximately 36 years old, 'had practically been raised together;'[65] Aguirre could even recall how, more than once, their grandmother (Isabel de Carmona), had saved them from a whipping by Francisco's father. Somewhat unusually, neither Tomé's, nor his wife's *informaciones*, taken simultaneously, included witnesses resident in Santiago.[66]

The *registros de ida* for 1595-1599 reinforce the impression that Tomé may have been breaking new ground when he settled in Guatemala. During these first years, his activities were limited to those of a commission agent or *encomendero* for his father and brothers in Seville, receiving merchandise from all three, and separate shipments from each, always at their own risk. From the start, he specialized in indigo; on the second fleet returning to Spain after his arrival, Tomé dispatched 800 pounds of *añil* with a chest of cacao.[67] A year later, he was one of only two residents of Santiago who received merchandise from the Carmonas. Their only other connection to the capital was Gabriel de Guisaval, an earlier acquaintance from Seville (possibly an agent), who had crossed the Atlantic on the same vessel as Tomé, and moved into the densely populated block just north of the plaza.[68] In the event of Tomé's absence – highlighting the Carmonas' lack of connections in Santiago – Pedro Gutierrez

[65] '…casi se criaron juntos (porque nacieron muy cerca el uno del otro),' AGN, Inquisición 200, exp.003, fol.33R
[66] AGN, Inquisición 200, exp. 003, fols.29R-30V (López); 33R-34V (Aguirre).
[67] AGI, Contratacion 1798: 'Registros de venida: de las naos que vinieron de Nueva España con la flota del general Luis Alfonso Flórez – naos de Honduras,' (1595)
[68] Jickling, p.190, no.425

Saravia, a *vecino* of Sonsonate, and Gaspar Rodriguez, resident in Puerto Caballos, were authorized to receive the merchandise.[69]

Four years later, in 1599, the Carmonas dispatched to three Santiago merchants (in addition to Tomé): Pedro de Artavia, who paid the same 24 pesos in *alcabala* as Tomé, but lived closer to the plaza, Alonso de Buenaventura, the owner of a relatively prosperous wheat farm and Alonso de Miranda, one of the wealthier merchants in the city, with a rate of 66 in a*lcabala.*[70] Miranda, who would maintain commercial relations with the Carmonas for the next fifteen years, had been admitted as a *familiar* to the Holy Office in 1598, immediately before joining Tomé on the *registros* as a commission agent for the family. Yet his list of witnesses contrasted starkly with Tomé's three years earlier, including such prominent personalities as Don Diego de Guzmán, *alcalde* in 1590 and 1605, and Don Gregorio de Polanco, *alcalde mayor* in 1602 and 1607, both of whom would later send large, and regular shipments of indigo to the Carmonas.[71]

From the start, and unlike Tomé, Miranda shipped indigo independently to the Carmonas (absorbing the totality or a percentage of the risk), itself an indication of a more secure economic position. A *criollo* born in Nicaraguan Granada, Miranda does not appear to have had any previous connection to the family, and the relationship (with his neighbour), may have meant an important leap forward for Tomé, busy consolidating his own position in the city. Later documents would suggest the men were also close friends, their social and commercial relations interwoven.

---

[69] AGI, Contratacion 1112, N.3: 'Registro del navío 'Santa Margarita' (1595), fols.66R; 48R; Contratación 1112, N.6: 'Registro del navío 'Nuestra Señora del Rosario' (1595), fols. 59R; 61R

[70] Jickling, p.188, no.375

[71] AGN, Inquisición 202, exp. 013: 'Información sobre la genealogia de Alonso de Miranda para familiar,' (1598).

By 1599, the Carmonas had settled into a variety of shipping patterns in their exchanges with Honduras. The bulk of merchandise was shipped independently, with the risk absorbed by Hernando, Bartolomé, or both. These consignments were dispatched to Tomé and Miranda, who remitted the proceeds of the sale (often in kind) after deducting a commission.[72] Increasingly, the Seville Carmonas began receiving shipments directly from Santiago merchants, which they would handle as encomenderos themselves, remitting the proceeds from the sale on the next departing fleet. Both Tomé and his relatives in Seville, finally, acted as intermediaries in a stricter sense, dispatching or delivering goods to third parties. Meagre commissions of 4 to 5 percent on these exchanges may account for the relatively slow pace of Tomé's ascending career;[73] he did not, in any case, make a fortune with his first fleet.

Returns for the Seville merchants, as Atlantic historians have often stressed, were just as slow to materialize: cargo shipped to the Indies had to be sold and its proceeds returned, often in kind, before profits could be calculated, a cycle that – because the fleet wintered in the Indies and was usually delayed in the Spring – could take up to three years. Above all, the *registros* suggest a profound (if justified) preoccupation with risk: shipments sent to each Santiago merchant were systematically distributed among several vessels: all 24 consignees in 1608, for example, had cargo laden on two, of the three vessels departing for Honduras that year, while records from other fleets suggest the third manifest (which has not survived), would have contained a similar number of *partidas* registered by the Carmonas. On the fleet that returned from New Spain in 1606, as an example, the firm received 108 *cajones* and 121 *arrobas* (some 14,000 pounds) of indigo distributed among sixteen vessels.[74]

---

[72] AGI; on commission agents in the period, see Hoberman, pp.48-50
[73] See Hoberman, p.55
[74] AGI, Contratación 4920: 'Relación de oro, plata y efectos,' (1606), s/f

Three itemized bills of sale introduced as evidence in an otherwise ordinary trial concerning some crates of indigo, provide a representative breakdown of shipping costs from Guatemala to Seville.[75] The accounts, belonging to the merchant Francisco de Jerez Serrano, an agent for the Sevillian merchant, Pedro Méndez de Santillán, outlined two shipments of indigo with 19 crates each, registered on the *Almiranta* and *Capitana* returning to Seville in 1613. Of the total, thirty-eight crates, twenty-two were remitted as payment for debts incurred the year before with his employer in Seville, while the remaining 16 crates of indigo were the proceeds of the sale of goods sent by one Miguel de Porras to Serrano through Santillán.

The costs seem to have been listed in the order in which they were incurred, from the purchase of the dye, through 'shipping, handling, taxes, and everything else until it was placed below deck.' At 1,5% of the final cost, packaging (crates, hides, and nails), was evidently inexpensive, while the mules that carried the dye to Granada, at 22 *tostones*[76] each, represented a similarly slight 2,6%. Two encomenderos, charged with the administration of loading and registration, were paid one *tostón* each per crate, while Serrano himself charged a meagre commission of 5 percent on the total value of the dye, purchased at 10 and 10,25 *reales* the pound. Tomé, we may assume, would have conducted his own transactions in similar fashion.

Proceeds from the sale of indigo usually comprised a standard, if varied set of commodities, but specific requests can also de found: a large shipment of textiles remitted to Tomé in 1599, for example, included women's hats, mantles, a velvet skirt, silk in every colour, and copious amounts of black taffeta. The highlight, however, and most expensive

[75] '…fletes y derechos y todo lo demas asta ponerlo debaxo de cubierta,' AGI, Contratación 789, N.20: 'Autos de Francisco de Vergara, vecino de Sevilla, con Bartolomé Juan de Solorzano, maestre, sobre tres cajones de añil,' (1614), s/f

[76] A silver coin worth an approximate 136 maravedíes.

item on the list, was an embroidered silk dress and skirt garnished with a slim, gold and silver cord, which had almost certainly been sent for in advance.[77] On a separate occasion, Doña Gerónima, the wife of Don Carlos Vazquez de Coronado, received a chest of clothes valued at 41,140 mrs, with a dress of Italian wrought velvet, another of Flemish wool, some taffeta sleeves, and a small case of glass toys.[78]

The turn of the century marked a significant transition in the nature and volume of the family's investment in the Central American indigo trade. Hernando and Bartolomé consigned 'modest quantities'[79] on the five vessels that sailed for Honduras in 1600, and Tomé's influence remained markedly localized. New clients that year included two other residents of his *cuadra*: the merchants Baltasar Pinto de Amberes and Gaspar Bernal de Reyna, Tomé's recently acquired brother in law, married in second nuptials to his wife's sister, Lucía de Torres. Reyna entered the registers as an apprentice or junior partner for Tomé, a third, and regular consignee after Miranda. For his part, Miranda was joined by his two sons, Simon and Alonso (the younger), who began appearing as second and third consignees for shipments received at their father's risk.

The situation changed dramatically two years later: *registros de averías* for the two vessels that returned from Honduras in 1602 (see Tables 2 and 3) place the Carmonas at the top of the list of indigo importers, in volumes well above those of other merchants, handling more than twenty-five percent of (legal) imports. Totals disbursed in *averías* further indicate they had surpassed some of the principal exporters to the region from the preceding decade: Pedro de Mendoza, Andres de Solórzano, and Garcia de Escobedo.[80] Although these rankings were highly variable – individual investments could rise or fall significantly with

[77] AGI, Contratacion 1131, N.2: 'Registro del navío San Pedro,' (1599), fol.75R
[78] AGI, Contratacion 1156A, N.1, R.9: 'Registro del navío Nuestra Señora de Aranzazu,' (1609), fol.87R
[79] García Fuentes, 285
[80] AGI, Contratación 4412: 'Cuentas de receptores de averías,' (1602)

each departing fleet, the table leaves little doubt the Carmonas had specialized in *añil*, with relatively insignificant investments in hides, and not a single *tostón* to their name.

Such specialization would have demanded a degree of skill from their buyer in the region, Tomé, who should have been able to evaluate quality and recognize various forms of fraud, as discussed in chapter three. He would also need to guarantee a demand for his goods, with an eye for basic needs, perhaps even fashions (although the nature of communications could render an attempt to fulfil temporary trends unprofitable). And it was at this time that the Carmonas rapidly shifted from an emphasis on textiles, wax, and ironware, to shipping massive quantities of wine from Cazalla de la Sierra (coincidentally, the birth place of Tomé's wife), olive oil, dry fruits, and nuts.[81]

By 1603, the Carmonas were shipping goods to at least 18 residents of Santiago, up from 8 in 1601. The tenor of their clients had evolved at a similar pace, to include some of the city's more prominent figures (and members of the Cabildo): Bartolomé Canal de la Madriz, *fiscal de su Magestad* (prosecutor for the Crown), Cristóbal Davila Monroy, *regidor*, Juan Ruiz Davilés, *depositario general* (public trustee), and the *encomendero* Don Alvaro Perez de Lugo, *alcalde mayor* in 1581 and 1598. Two years later, the Carmonas had recruited Don Francisco Mejía Sandoval, listed as 'without trade' and exempt from the *alcabala* in 1604, and Francisco Díaz del Castillo, eldest son and heir to Bernal Díaz del Castillo, merchant, *regidor*, and *encomendero*. More significant to their commercial endeavours, however, were the lasting ties (built at this time), to the prominent Pedro de Lira.

[81] Between 1590 and 1602, wines from Cazalla de la Sierra accounted for 38% of wines exported through Seville, and sold for a slightly higher price than its competition from the Aljarafe. See Juana Gil-Bermejo García, 'Tráfico de vinos en Sevilla para el comercio Indiano,' in Solano and Pino eds., *América y la España del* Siglo *XVI: homenaje a Gonzalo Fernández de Oviedo, cronista de Indias, en el V centenario de su nacimiento (Madrid 1478),* vol.II, pp.315-326.

The distribution of Lira's assets, his commercial and financial 'modus operandi' have been examined in some detail by José Francisco de la Peña, using inventories of possessions taken in the cities of Santiago, San Salvador, and San Miguel in 1623.[82] One of the more powerful *peninsulares* in the city, a merchant and *regidor*, Lira settled in Santiago just a few years before Tomé, but fared considerably better. By his own account, over the course of 38 years spent in the Indies, the native of Salamanca had amassed an impressive fortune through 'many and excessive labours,' 'risking his estate' in journeys to Spain, Peru, the city of Mexico and Puebla de los Angeles.[83]

More than half of Lira's assets were invested in *juros* and *censos*,[84] a number of which he held over indigo *obrajes*. Proceeds from the rents were paid in kind, as Peña suggests, assuring Lira a generous price over the dye, and higher profits in the Atlantic leg of trade.[85] These were common tactics in the acquisition of *añil*: forwarding capital in exchange for a percentage of the harvest, and using other instruments of credit, as various historians have observed, the Santiago merchants effectively financed indigo production in the area.[86] This may also help explain why, of 13 owners of *obrajes* listed in the 1604 census, only three shipped directly to the Carmonas: Juan Franco, Juan de Paredes, and the merchant *encomendero* Don Diego de Guzmán. Yet the number of *obrajero* consignees increased over time, to include Don Gregorio de Polanco, Sancho Verdugo Barba, and Miranda's wealthy

[82] José Francisco de la Peña y Maria Teresa López Díaz, 'Comercio y Poder, Los mercaderes y el Cabildo de Guatemala, 1592-1623,' *Historia Mexicana*, vol. 30:4 (1981).
[83] Cited in Peña, p.481
[84] A 'long term loan secured by a lien imposed on real property; could be redeemable or perpetual.' Hoberman, p.320
[85] See Peña, p.482
[86] Peña, p.473; A similar observation is made by James Lockhart concerning silver and cochineal: although merchants 'rarely owned silver mines or produced cochineal themselves...through financing and advancing goods they became an indispensable part of the operations of those industries,' in *Of Things of the Indies*, p.162

son in law, Alonso Alvarez de Vega,[87] all of them merchants, suggesting the group may have become increasingly open to the possibility of ownership.

Extending their networks to incorporate the centres and agents involved in production was central to the family's commercial strategy.[88] In 1605, Bartolomé de Carmona financed the purchase of an appointment as *alcalde mayor* for Mateo de Cardón in the city of San Salvador, securing his investment with a clause stipulating the appointment be granted before the following April, in time to be dispatched with the departing fleet.[89] It was a valuable office providing a number of advantages, summarized with characteristic clarity by Murdo Macleod:

> This capturing of the office of alcalde mayor of San Salvador accomplished two main purposes. The post itself was a source of considerable income, and it allowed the powerful interests to engage in illegal activities on the *obrajes* with impunity, since the official inspector was one of them.[90]

These 'powerful interests,' in turn, shipped to Bartolomé, who probably stood to gain in a host of other (legal and illegal) ways from such an important connection to the large, indigo growing jurisdiction of San Salvador.[91]

A year later, most likely with the aid of family funds, Tomé finally made his own way into the Santiago Cabildo, purchasing the office of *regidor* for a thousand ducats.[92] Benefits for the Sevillian firm may be judged from the list of consignees for shipments registered by

---

[87] Property inventories for these last three *obrajeros* in: AGI, Mexico 263, nos. 9 and 10 (Alvarez de Vega); 154 and 155 (Polanco); 210 (Verdugo Barba). On the Alvarez de Vega family: Milagros Ciudad Juárez, 'Poder y religión: la familia Alvarez de Vega y el convento de la Limpia Concepción de Guatemala, siglo XVII,' *Caravelle*, no.64 (1995), pp.31-48

[88] Studnicki-Gizbert, 'From Agents to Consulado,' p.57

[89] The jurisdiction of San Salvador, with more than 200 indigo *obrajes* by 1620, stood 'at the center of the industry,' but this has been discussed at length in Chapter 2. APS, Oficio XIX, Leg, 12637, fols. 253RV, 06.1605

[90] Macleod, p.188

[91] Ibid.

[92] AGI, Guatemala 80, N.15: 'Expediente de Confirmación del oficio de regidor de Santiago de Guatemala a Tomé Carmona Tamariz,' (11.06.1606)

the Carmonas in 1608 (the proceeds of goods sent immediately after Tomé was sworn to office). New names that year included a long list of encomenderos: Alonso Alvarez de Vega, Don Diego de Guzmán, Hernando Avila de Vera, Don García Castellanos, Hernando Méndez Sotomayor, and father and son, Gregorio and Fernando de Polanco.

In addition to the larger, and regular shipments of indigo dispatched by the merchant elite, the Carmonas received lesser quantities of the dye from a variety of Santiago residents. Spanning twenty-two years, Dorothy Jane Joba's assessment of the city's population identified 153 *vecinos* who, at some point or other between 1604 and 1626, 'derived a portion of their income from an *obraje*.'[93] Encomenderos figured prominently on the list of *obrajeros*, but growing indigo was also compatible with cattle grazing (the animals posed no threat to the plant), and both were combined on *estancias*. The investment was also appealing, or secure enough for the religious orders, and the Jesuits in particular held various long-term loans (*censos*) over *obrajes*.[94] A view of those *vecinos* who invested in indigo may also be gathered from the *registros*.

A casual examination suggests Cristóbal de Villalpando, Pedro de Mendoza's former factor in the city, may have managed the greater share of exchanges with the religious orders, but the Carmonas also regularly shipped merchandise (books and foodstuffs) to officials of the Church and various convents in the region, usually in exchange for indigo. Clients remitting indigo to the Carmonas would also include at least nine women, five of whom were listed in the 1604 census: María de la Paz, the wife of Esteban de Echevarria, lived on the block adjacent to Miranda's, not far from Tomé, and probably immediately beside the merchant Pedro de Artavia. She received a substantial shipment of blue, green, and black luxury textiles (*veintidosenos* and *ventiquatrenos* from Baeza) valued at 97,809 *maravedíes* in 1603,

[93] Joba, 'Santiago de los Caballeros,' p.110
[94] Ibid, p.111-112

the proceeds of an unspecified amount of indigo. Examples such as these, however, where women loaded merchandise in their name, but at their husband's risk, were the exception. The greater number of female dealers (*tratantes*) or merchants (*mercaderas*) transacting with the Carmonas were widows.

Diego de Merlo's widow, Doña Juana de Ardon, lived several blocks south of the plaza and paid a meagre 8 *tostones* in *alcabala*. She received merchandise from the Carmonas in 1605 and 1608, the proceeds of three cases of *añil* dispatched with each preceding fleet (in 1604 and 1607). The goods shipped in return suggest a preference for fine linens: *ruan* and *crea*, but knives, stirrups, and candleholders were also added to the list in 1608.[95] As Jickling noted, the 1604 census presents a curiously high proportion of families presided by widows, several prominent enough for their block of residence to be identified with their name. Of these, Maria de Loaysa, one of two women listed as merchants (*mercadera*) by occupation, shipped six cases of indigo to the Carmonas in 1612.[96]

In later years, the widows of several of the Carmona's former clients maintained commercial relations with Seville after the death of their husbands. Doña María, for example, widow of the *obrajero* Don Diego de Guzmán, and a close friend of Alonso de Miranda's wife, sent 11 cases of *tinta añil* in 1613. Isabel Davila, Cristobal Davila Monroy's widow, sent 25 cases from her husband's estate in 1615 (by the time she was already remarried to Don Marcos de Espinar), divided almost evenly between the *Almiranta* and *Capitana*. Another sizeable shipment was dispatched on the same fleet by Francisca de

[95] AGI, Contratación 1153B, N2, R1: 'Registro del navío N.S de la Antigua' (1608); Contratación 1153B, N2, R3: 'Registro del navío N.S de los Remedios,' (1608).
[96] Jickling, 169; AGI, Contratación 2129, no.2: Registros de venida de Honduras,' (1612), fol.50RV

Castilla: 22 crates sent to the *familiar* Captain Francisco de Contreras, or Bartolomé de Carmona in the event of his absence.[97]

The extent to which the female residents of Santiago participated in the export trade is somewhat surprising; at least ten widows were listed separately as '*tratantes*' in the 1604 census,[98] but others surely went unidentified. María Vázquez had already widowed by the time the census was taken, residing on the crowded block just west of the plaza, alongside artisans, merchants (including a widow *tratante*), and tavern keepers. 'With the exception of a single widow,' Jickling remarked of her *cuadra*, 'everyone else was related to commerce';[99] but Vázquez, listed as without trade in 1604, shipped 11 crates of indigo to the Carmonas (at her own risk) in 1611.[100] The nature and volume of goods received by the female merchants, finally, leaves little doubt they were destined for re-sale.

Around 1607, Tomé's fortunes turned, although surviving sources reinforce the impression that his own irascible character might have been to blame for most of his successive troubles. That August, the Genoese Bartolomé de Faya filed criminal charges against Tomé, claiming his honour had been insulted and his person threatened through correspondence. The accusation was centred on a single phrase, in the plaintiff's words: 'he (Tomé) wrote to me that he would chase me without rest until he had me burnt.'[101] Tomé replied with a request to transfer proceedings to the tribunals of the Holy Office in the city of Mexico, his prerogative as a *familiar*, where he might have expected a more favourable

[97] AGI, Contratación 2132: 'Registros de venida de Honduras,' (1615), fol.145RV
[98] The number of widowed women might also suggest the possibilities for remarriage were greater or more advantageous for men, although the question has, so far, remained unexamined.
[99] Jickling, 152
[100] AGI, Contratación 1811, 'Registros de Venida de Nueva España: L.2, Honduras' (1611), fol.29V
[101] AGN, Inquisición 472, exp. 02: 'Autos promovidos por Bartolomé de Falla contra Tomé de Carmona Tamariz, Guatemala,' (1609), s/f

result. Included in the petition was a brief, if labyrinth summary of his own version of events.[102]

The difficulties had begun nine years earlier, when Tomé advanced Faya 8,067 *tostones* for the purchase of an indigo *obraje* from the merchant and doctor, Félix de Arguedas. The debt was to be repaid with the first harvest from Faya's new estate, but when the time came he refused to pay, selling the dye to other merchants. Tomé followed with an offer to purchase half of the *obraje* (minus the debt), and the sale was finalized. Then, adding insult to injury, Faya granted a power of attorney to the previous owner, Arguedas, to contest the sale, alleging the property had been mortgaged. All of which, Carmona decried, was false, and done only to 'disturb and defraud' him.

It was in this admittedly emotional state, the defendant claimed, that he had written the letter, insisting they were no more than 'words of intimidation' which he had never meant to act upon; yet the letter – a violent, angry piece of writing accusing Faya of 'tempting him' like a 'demon', suggests otherwise. It concluded on a final diatribe against the broader Genoese community:

> These Genoese think that speaking behind other people's backs makes them someone, well you (Faya) should know that the best and worthiest of them is garbage, and when they need you they fall to their knees to cry, and then speak behind your back…[103]

[102] Ibid, s/f

[103] '…que deven de pensar los genoveses que por hablar a escondidas que son algo, pues sepa que el mejor y el mas pintado es basura y quando an menester a uno se yncan de rodillas a llorar y luego ablan a escondidas…' AGN, Inquisición 467, exp. 66: 'Cartas relativas al proceso contra Thome Carmona, familiar en Guatemala por injurias' (1609), fol. 303R

The city of Santiago had been home to a large and influential community of Genoese merchants since the latter half of the sixteenth century, one that aspiring officials should have preferred to 'gravitate towards,'[104] rather than make enemies of.

It is unclear whether the trial was resolved in Tomé's favour; it did not, in any case, have a significant effect on his other commercial activities – he sent regular shipments of indigo (30+ crates), in 1607 and 1608, receiving large consignments in return from his brothers in Seville. But success was short lived: in December 1608 Tomé was tried again, this time for 'pronouncing evil sounding words in the presence of the *Oidores* of the Royal Audiencia'[105]and fined a substantial 100 gold pesos. A few months later, he broke relations with his old friend and partner, Alonso de Miranda, who accused Tomé of 'causing serious difficulties with a servant of his.'[106]

The events leading to the accusation had begun with the proclamation of an Edict of the Faith and Letter of Anathema, when Miranda, rather than Tomé – the senior Familiar – was elected *Alguacil Mayor*, and bearer of the staff during the proclamation. In the leading procession, Miranda had paraded 'six black slaves well garnished in livery, and himself, 'very well garnished'[107] as well, further enraging Tomé, who took it all as an affront on his honour. And this was why, Miranda lamented: 'one of the greatest friends I had in this city, is today my greatest enemy, and has gone through the plazas, streets, and cantons proclaiming his honour has been taken by the honour bestowed upon me.'[108]

---

[104] Macleod, p.132

[105] AGN, Indiferente Virreinal 6155, exp.001: Información sobre el pleito criminal del oficio de la Real Justicia, contra Thome de Camona (1608), s/f

[106] AGN, Inquisición 285, Exp. 16: 'Querella del familiar Alonso de Miranda contra Tomé de Carmona,' (18.05.1609), s/f

[107] '…seis negros muy bien aderezados de librea… y mi persona muy bien aderezada.' Ibid, fol. 99R

[108] '…Tomé de Carmona siendo uno de los mayores amigos que yo tenía en esta ciudad es hoy el mayor enemigo que tengo, y anda publicando por las plazas, calles y cantones que le quitaron la honra por la que a mi se me hizo.' Ibid, fol. 99R-100R

In a final act of revenge, Tomé had persuaded one of Miranda's servants to make a formal petition before the ecclesiastic authorities requesting authorization to marry a sixteen year-old girl in Miranda's care, the noble daughter of a Conquistador. The petition seems to have implied the girl's honour had been taken while residing in Miranda's home, but Tomé's plan was ultimately thwarted when Miranda managed a hurried wedding to a more appropriate suitor. Although the falling out between Tomé and Miranda would not affect the latter's commercial relations with the Seville Carmonas, it seems to have had an isolating effect on Tomé: angered by Miranda's appointment, perhaps, he proceeded to break with ceremonial in various ways, resulting in official complaints and an eventual investigation, carried out by Pedro de Bonilla Gil for the Holy Office. The secret *informaciones* did not remain so for long, and in October 1609 Bonilla complained of a bad disposition from the once amicable Tomé.[109]

By the time the next Edict of the Faith was issued, on Sunday, March 7th 1610, Tomé had no friends left in the Holy Office, with the exception of Pedro de Lira, the only familiar who still 'dealt and communicated' with him.[110] So it came as no surprise when two *vecinos* appeared to relieve their consciences, accusing Tomé of blasphemy.[111] The first was the Genoese Francisco Gallardo, owner of an indigo *obraje* on the coast of Guazacapán, one of the principal indigo producing areas in the region.[112] Four years earlier, he had visited Tomé at his home where, upon entering, had found his host 'very angry and choleric;' to Gallardo's pleas for calm and prayer, Tomé had replied: '*bengueme yo y llebeme luego el diablo'* (avenge me,

[109] '...He entendido que Tome de Carmona ha tenido alguna noticia desto (la investigación secreta) por el mal semblante que me muestra de unos dias a esta parte.' AGN, Indiferente Virreinal 6651, Exp. 13: 'Carta remitida por el licenciado Pedro de Bonilla Gil,' (16.10.1609), fol. 1V; AGN, Indiferente Virreinal 5140-048: 'Expediente relativo a la comisión encargada a Don Pedro de Bonilla Gil sobre el modo de proceder de Don Thome de Carmona,' (1609).
[110] '(Tomé de Carmona está enemistado con todos los ministros del Sto. Oficio que aqui hay, sino es con Pedro de Lira) que entiendo le trata y comunica.' AGN, Indiferente Virreinal 6651, Exp. 13, fol.2R
[111] AGN, Inquisición 474, Exp. 8: 'Testificación contra Tomé de Carmona Tamariz' (5.4.1610), fols.337R-339V
[112] Macleod, p.181

and may the devil then take me). What Gallardo altogether failed to mention was the context of this discussion. At the time of the visit, he was heavily indebted to Tomé, having failed to deliver on credit advanced for the harvest from his *obraje*. The accusation had something of a simple revenge: Tomé had eventually foreclosed on the debt, and now found himself on the losing side of yet another conflict with the Genoese.

A second witness, Alonso de Rojas, testified to more recent events: earlier that year he had called upon the accused, but found him resting. He was eventually taken up to the 'heights' of the house, where Tomé demanded his loyalty (as a fellow native of Seville) against various enemies. Rojas refused, wherefore Tomé spoke the condemning words, illegible except for a final: 'and more, may the devil take me.' At this, Rojas accused him of being a less honourable man than his brothers in Spain and the Indies, personal acquaintances of the witness.[113] Here was another 'friend' of the Seville Carmonas turned against Tomé, and here as well, honour (the loss or lack thereof) underlay the arguments and accusations.

There is no evidence the charges were pursued; within a year, however, voluntarily or by force, Tomé left Santiago for Seville, accompanied by his wife and servants. He could have been sentenced to exile, but the social ramifications of one after another disgrace might have amounted to the same – 'a merchant alone was no merchant at all.'[114] Reputation, as various historians have emphasized, was fundamental to the early modern merchant, a 'most precious asset'[115] in a world constructed upon and facilitated by trust, 'communicating

[113] AGN, Inquisición 474, Exp. 8 (1610), s/f
[114] David Studnicki-Gizbert, A Nation Upon the Ocean Sea: Portugal's Atlantic Diaspora and the Crisis of the Spanish Empire, 1492-1640 (2007), p.87
[115] Studnicki Gizbert, *A Nation Upon the Ocean Sea*, p.84; in the same work, Gizbert writes the following in reference to the Portuguese merchant Andrés Rodriguez: 'Because of the missteps of his brother thousands of kilometers away (in the Indies), Andres felt that soon his own reputation would be tarnished to the point that he could no longer walk onLisbon's plaza,' p.85

reliability' within 'larger spheres of contracted debt and interdependence.'[116] The loss of honour – Tomé's snowballing descent in social status, would surely have reached (and affected) the Seville Carmonas, who may have instigated, or at least encouraged a return. His departure also coincided with the arrival of the new President of the *Audiencia*, Don Antonio Peraza de Ayala y Rojas, Conde de la Gomera, and may have been motivated by political factors as well – the prospect of even further exclusion, perhaps, following a change in administration.[117] Yet Isabel died on the return voyage, while Tomé seems to have survived to reach the city, but passed shortly thereafter.

He had time to write and witness a final codicil to his testament, leaving most of his estate to pious works, cancelling debts, and making arrangements for a niece and nephew in his care. Three slaves returning with the couple to Seville (a man, woman, and child) were to be sent back to the Indies and sold; but it was a short document, that specified little about their estate and possessions.[118] Tomé had evidently become more independent, travelling with cargo shipped at his risk: 13 crates and 12 *zurrones* of indigo, owned in partnership with his brother in law, Bernal de Reyna. Yet he was also indebted to all of his brothers: Andrés, Diego (whom he owed an unspecified amount for 'my books'), Bartolomé, even his wife Leonor de Aguilera. In 1613 – once the returns on these last shipments could be assessed – Bartolomé executed his brother's will in Seville. That same year, the firm sent various gifts to the new President of the Audiencia, the first in his office to enjoy a 'special commission for

---

[116] S. Max Edelson, 'The Characters of Commodities: The Reputations of South Carolina Rice and Indigo in the Atlantic World,' in Peter A. Coclanis, Ed., *The Atlantic Economy During the Seventeenth and Eighteenth Centuries: Organization, Operation, Practice, and Personnel*, (2005), pp.345-346

[117] See Macleod, p.320

[118] AGI, Guatemala 63, 'Memorial de Bartolomé de Carmona como albacea y testamentario de Tomé de Carmona Tamariz,' (18.09.1615), s/f; it has come to my attention that Tomé de Carmona's testament has survived at the AGCA, with various related documents that might, in the future, allow for a better assessment of long-term profitability.

the distribution of the indigenous workforce (*repartimientos de indios*),' the provision of judiciary and administrative posts for his district'[119] – a most ideal partner in trade.



In Puebla, Diego made enemies with as much ease as his brother. Over the course of a long life, he was implicated in the attempted murder of Diego Hernández de Morales, the death of Juan de Olivares, and accused of 'instigating some relatives of his' to kill Francisco Granado Mercado.[120] In 1593, Tristan de Luna y Arellano, the son of the *conquistador* Don Carlos de Luna y Arellano, the same *alcalde ordinario* of Yucatan who had been so involved in the production of indigo,[121] attacked Diego, stabbing him in the face and nose. His wealth and offices notwithstanding, Diego was accused, more than once, and like his brother in Santiago, of behaviour unbecoming a familiar of the Inquisition, of 'speaking many liberties before the people' at the feast of Saint Peter Martyr (around the time he was seventy years old)[122] and, in general, of being 'a vengeful man who carries out his passions.'[123] There were rumours he had himself called 'the viceroy' at Isabel de Herrera's tavern.[124]

For all this, Diego – more than any of the Carmona brothers – personified the ideal of a merchant's son. He married into a landowning family, became a member of the Cabildo

---

[119] AGI, Contratación 1159, n.4, fol.22R; Contratación 1160, n.6: fol.119; Carlos Molina Argüello, 'Gobernaciones, Alcaldias mayores y Corregimientos en el Reino de Guatemala,' *Anuario de Estudios Americanos*, 17 (1960), p.110

[120] AGN, Inquisición, vol. 211, Exp. 1-5: Proceso contra Diego de Carmona Tamariz, familiar en Puebla, y contra Pedro Menendez de Llano y Gabriel de Vozmediano, criados del Obispo de Tlaxcala, por ilusos y por querer matar a Diego Hernández de Morales; on the death of Juan de Olivares, see: AGN, Indiferente Virreinal, vols. 5145, Exp. 46; 5486, Exp. 34; 6552, Exp. 69; and AGN, Inquisicion, vol. 301, Exp. 43; on Francisco Granado Mercado: Altman, *Transatlantic Ties*, p.176

[121] See Chapter 2

[122] AGN, Inquisición 318, exp. 008: 'Testificacion de Luis Fernandez de Aro, en contra de Francisco Gimenez y Diego de Carmona, porque el día de San Pedro Mártir dijeron delante de la gente muchas libertades,' (1618)

[123] Cited in Altman, *Transatlantic Ties*, p.176

[124] AGN, Inquisición 261, exp. 007: 'Información de la limpieza de linage de Diego Carmona, acerca de sus riñas y razones por las cuales no debe ser familiar' (1600), s/f

and familiar of the Inquisition. Following a more traditional route, he diversified investments in the Indies while maintaining, but perhaps gradually setting aside, commercial ties with Seville. In 1604, Diego purchased the hacienda 'San José El Mayorazgo' from the heirs of Don Joseph de Sandoval. The property, located southwest of the city centre, comprised an unspecified expanse of farmland, a wheat mill, and two fulling mills on the Atoyac River. Three years later he entailed the estate, valued at 50,000 pesos to his son, Juan de Carmona Tamariz, a bright student (several witnesses testified), at Salamanca.[125]

At the time he entailed his estate, Diego estimated his own fortune at some 90.000 pesos, 'rather more than less,'[126] to which both he and his wife expected to add from their inheritances. Even without the supplemental income, it was a fortune: 'more than 100,000 pesos,' as Hoberman has noted, 'made a person the equivalent of a millionaire.' The witnesses all agreed (and the witnesses were, for the most part, members of the *cabildo*[127]): Diego was a wealthy, well respected man, with a large house and horses, 'Spanish servants', numerous male and female slaves, impressive silverware, and land where wheat and maize were sown.[128]

Further sign of Diego's success was his daughter's marriage to the *regidor*, don Felipe Ramirez de Arellano, with a substantial dowry of 40,000 pesos, 21,000 in *reales*. Diego's acquaintances in this period were local officials, merchants, and owners of *obrajes*; they included several of Altman's Briocense entrepreneurs, amongst them Macario de Anzures, who cultivated woad in the early 1570s. Diego may also have been familiar with Macario's

[125] AGI, Mexico 227, N.27: 'Informaciones de oficio y parte: Diego Carmona Tamariz, regidor de los Angeles de Nueva España, familiar del Santo Oficio, vecino de Los Angeles de Nueva España. Con memorial (fragmento), con parecer de la Audiencia, (1607), s/f
[126] Ibid: '...antes más que menos.' Some witnesses calculated the value of his estate at 150,000 pesos.
[127] Ibid.
[128] Ibid.

brother, Diego de Anzures, who made a brief attempt to profit from an early scarcity of blue dye in the region by importing indigo from Spain in the 1560s.[129]

The extent of Diego's participation in the indigo trade is difficult to establish without a more extensive examination of the pertinent *registros*. Although Tomé sent the bulk of his shipments through the closer, more convenient Honduran ports, he would also ship indigo through Veracruz, dispatched first to Puebla, and handled by his brother. Notarial protocols from Santiago indicate Tomé (and others) hired local muleteers to carry indigo north to Puebla,[130] but Diego would eventually purchase a *recua* of 20 mules, which under his own, or an agent's direction, may have facilitated the exchange.[131] Various other Santiago merchants sent indigo to the Seville Carmonas through Diego, even as they shipped from the Honduran ports (further emphasizing an inclination towards the diversification of risk), and suggesting Diego remained quite involved in the trade.

There is otherwise little evidence of Tomé's relationship to his brother in Puebla, but enough to suggest they corresponded with some regularity (like all commercial associates) and aided each other when necessary. Whereas one brother flourished in his new surroundings, however, the other left still at odds with most of his neighbours. Success, in the former's case, may tentatively be attributed to two factors. First, we may note that Diego married into the *criollo* elite, in contrast to his brother, who eventually succeeded in isolating himself from this group altogether – that he had married without a dowry to a Spanish wife, altogether unconnected to the region they settled in, could not have helped.[132] No less

---

[129] Altman, *Transatlantic Ties*, p.62

[130] Examples in: AGCA, Colonial: Protocolos Notariales, leg.433, exps.10896; 10911; 10919; 10922: 'Fletamentos,' (1605).

[131] In J.F de la Peña, p.178

[132] AGI, Guatemala 63, 'Memorial de Bartolomé de Carmona como albacea y testamentario de Tomé de Carmona Tamariz,' (18.09.1615), s/f

fundamental were the solid, and expansive networks of family and kin, evidently much stronger in Puebla than in Guatemala.

In one of various references to Diego de Carmona and his immediate family in Puebla, Altman speculates on the lasting perception of *peninsulares* (like Carmona) 'as outsiders in the realm of politics and public life.'[133] The impression left by the present investigation, however, is one of inclusion. Alone among his brothers – Andrés returned for a short visit in 1605[134]– Diego chose never to see his native Seville or Granada again. His social and commercial relations were as numerous as they were widespread, and Diego was just as rich in that other 'fundamental feature of commercial success:'[135] family. Various references to relatives not included in this discussion indicate a much broader web of Carmonas had settled in New Spain, while the haphazard distribution of surnames allows for the possibility of many more. Yet the moving force and centre of this sphere remained in Seville, with an ever-growing number of *Carmona Tamarices*.

III. *The Seville Carmonas*

Around 1599, Pedro de Carmona (the eldest of Hernando's sons), vanished abruptly from the *registros* and notarial protocols, a victim, perhaps, of the plague that devastated Seville between 1599 and 1601. As of 1600, therefore, the firm was left in the hands of Hernando, in his seventies, and Bartolomé, soon to be joined by his own sons, Juan and Alonso. Despite the loss of Pedro, the first decade of the seventeenth century was one of sustained growth for the Carmonas; Bartolomé displayed his impressive energy in constant

133 Altman, p.102
134 AGI, Indiferente 2072, N.38: 'Expediente de concesión de licencia para pasar a Los Angeles (Nueva España) a favor de Andrés de Carmona Tamariz, vecino de Los Angeles, marido de Catalina de Rivera (residente en Los Angeles), con su hijo Fernando de Carmona y un criado,' (1606).
135 Hoberman, p.44

activity, a capable merchant with ties to the most important wholesalers of his time and ever more diversified investments – too numerous, perhaps, to be discussed here.

The evidence (or lack thereof) suggests Bartolomé was a more peaceable man than his brothers in the Indies, engaging in surprisingly few litigations – most of which, in any case, had been initiated by the other party. Nor was he unreceptive to the alternative of reconciliation: in 1615, he signed a formal resolution to his proceedings against the silk merchant Martin de Caballos, whom he had sued over 'some 7000 reales' in unspecified merchandise, because 'the said trial is doubtful and neither of us is so sure of his claims.'[136] Overall, Bartolomé maintained a rather low profile, without seeking administrative offices or posts, entry into any of the military or religious orders, nor admission as a familiar. He attended a meeting of the merchant *Consulado* only once, in 1610, an absence which in this case at least, cannot be attributed (as Enriqueta Vila Vilar has suggested for such examples), to a 'circumstantial participation in commerce.'[137]

Nor did his considerable wealth and connections prevent him from initiating both of his sons into the merchant profession. On January 2nd, in a short, sober ceremony at the notary, Bartolomé emancipated his eighteen-year-old son, Juan de Carmona Tamariz, enabling him to 'transact, buy, sell, and engage in any contract... and the rest of the things that as a free and emancipated man he can and must do.'[138] In one of the few, more evocative sources, the scene is briefly described: after taking his son's hand and embracing him, Bartolomé stood aside and confirmed the emancipation, relinquishing his *patria potestad*. Formalities were concluded with a donation amounting to half of Juan's adventitious goods

136 APS, Leg. 12711 (1615), fols.646R-648V
137 Enriqueta Vila Vilar, 'Una amplia nómina de los hombres del comercio Sevillano del s.XVII,' *Minervaeo Baeticae, Boletín de la Real Academia Sevillana de Buenas Letras* (2002), p.141; 151
138 APS, Leg. 12620 (2.1.1603), fol.199RV

(*bienes adventicios*), those he had earned by his own 'art, industry, or fortune'[139] while under his father's tutelage. Within two weeks, in what had become standard practice for the Carmona men, Juan secured a licence to travel to the city of Cartagena, where he would sell the registered merchandise. Like his uncles before him, Juan remained only briefly in the Indies during this first trip, and was back in Seville, working alongside his father, by 1605.[140]

The Carmonas reached the apogee of their success in Central America between 1606 and 1613, regularly handling an important percentage of the export trade, as even a cursory glance at the *registros de venida* reveals, with page after page of 'Carmona' or 'Carmonas' scribbled on the margins (by the functionary of the Casa de la Contratación, for the purposes of taxation), and the word 'añil' not far removed. Lacking figures for merchandise received from New Spain and Tierra Firme, it is difficult to assess the importance of indigo to the sum of the Carmona's Atlantic investments. New Spain was clearly a vital market: in 1613 the Carmonas registered more than 38,000 pesos in goods on the fleet departing for Veracruz, second only to the 'influential'[141] Flemish merchant Juan de Neve. The 454 crates of indigo received by Bartolomé and Alonso from Honduras the year before, however, would have been valued on arrival in Seville at an approximate 75,000 pesos, and sold, of course, for considerably more.[142] As for Tierra Firme, the fact that they continued to send junior agents on short trips to Cartagena suggests their investments in the region may have remained substantial.

---

[139] *Diccionario de la Real Academia Española* (online), entry for 'bienes adventicios': 'En el antiguo derecho, los que el hijo de familia que estaba bajo la patria potestad adquiría por su trabajo en algún oficio, arte o industria o por fortuna.'

[140] 'Copia de un registro hecho por Bartolomé de Carmona en 6 de Enero de 1603,' in AGI, *Contratacion* 5276B, N.77: Expediente de información y licencia de pasajero a indias de Juan de Carmona Tamaris, mercader...' (23.1.1603), fols.3R-4R

[141] Vila Vilar, 'Nómina,' p.41

[142] Calculated from prices listed in Chaunu, *Seville et l'Atlantique.*

As representative as they were of the possibilities of success, the Carmonas also suffered the constant (and as many unforeseeable) risks of Atlantic commerce. In their dealings with indigo, the first of many setbacks came about when a routine error resulted in lengthy, and cumbersome legal proceedings. In 1596, Hernando received 500 pounds of indigo from New Spain, distributed in 4 crates. When he came to collect from customs, however, three crates were delivered correctly, but the mark on the fourth was darkened, and the officials somewhat carelessly handed him a shipment meant for the merchant Garcia de Escobedo.[143] The mistake was discovered when a last crate belonging to Hernando was found remaining, but by then he had paid *averías* for the other. This meant he could not return it, or collect his own, without a tiresome succession of bureaucratic formalities.

That it was necessary to exchange the crates at all may point to significant differences in quality, or a far simpler difference in weight. Although there seems to have been some presumption that each *cajón* held no more than 125 pounds of indigo, the *registros* went only so far as itemizing the number of containers (*cajones*, *zurrones*, *petacas*), leaving the net weight of merchandise undisclosed, and facilitating the most obvious form of fraud. A more imaginative explanation, finally, for the insistence (especially on Escobedo's part) in exchanging the crates, is not implausible; on one occasion at least, the attempt was made to smuggle 'some silver marks' in a crate of indigo.[144]

A second trial some years later was less mundane, but the cause just as common. In 1598, Pedro initiated legal proceedings against Bartolomé Gonzalez, *maestre* or purser[145] of the galleon Santa Catalina, for having failed to deliver 1,500 pounds of cochineal and 500 of

[143] AGI, Contratación 742, N.5: Autos del capitán Juan López de Zubelzu, contra Hernando de Carmona sobre que diese cuenta de un cajón de añil (1596). The testimony declares the officials 'no miraron bien', literally, did not look well.
[144] AGI, Contratación 650, N.7: El fiscal y diputado de la avería contra Nicolás de la Peña, vecino de Sevilla, sobre unos marcos de plata encontrados en un cajón de añil (1635).
[145] Louisa Hoberman employs the more modern term: 'supercargo'.

indigo. The shipment, (significantly larger than earlier consignments) had been registered in Veracruz by Diego de Carmona's factor, Gerónimo Hernández Lucian, and consigned to Pedro, his wife Francisca de la Peña, or anyone with the requisite *poder*. Of the six crates of cochineal and two *petacas* of indigo registered in New Spain, Gonzalez had failed to deliver half. After an initial sentence in his favour, Pedro moved to execute Gonzalez's goods for the missing cargo and legal fees, but it was at this point that the *maestre* appealed with a convincing case for an 'act of God.'[146]

Upon reaching Havana, Gonzalez claimed, the Santa Catalina had been ordered by General Juan Gutierrez de Garibay[147] to transfer some of her cargo onto various other vessels. Among the goods reassigned (*ondeados*) were 80 crates of indigo and cochineal loaded onto the carrack 'La Victoria', 31 barrels of liquidambar transferred to 'La Cinta', and 20 crates of dyes with a cruse of balsam that went to the galleon 'Espiritu Santo.' It was a fateful decision; the Armada was ambushed off the coast of Terceira by an Anglo-Dutch fleet of some 150 vessels under the command of the Earl of Essex. What followed was the Islands Voyage fiasco, and Garibay's somewhat miraculous return to Sanlúcar de Barrameda with most of his fleet and its treasure intact.[148] But in what may have been 'about the only bit of luck the expedition was to have,' Essex captured three ships, one 'great' and 'laden with cochineal,'[149] on the way from St Michael's to Terceira. And this, Gonzalez protested, was how the dyes had been lost, 'stolen by the English' through no fault of his own.

---

[146] AGI, Contratación 745, no.2: Autos de Pedro de Carmona, mercader, vecino de Sevilla contra Bartolomé González, maestre, sobre entrega de una partida de añil que le trajo registrada,' (1598), s/f

[147] In a curious coincidence that may be worth noting, Garibay, one of the great commanders of the Armada, was a native of Medina del Campo where, as luck would have it, he is buried in the chapel of Santo Tomás, next to a relative, Leonor de Garibay, and her husband, Francisco de Bracamonte, indigo producer and conquistador of Yucatán, discussed at length in the previous chapter.

[148] Pablo Emilio Pérez Mallaína, 'Juan Gutierrez de Garibay: Vida y Hacienda de un General de la Carrera de Indias en la segunda miad del siglo XVI,' *Revista de Indias*, vol.70, n.249 (2010), p.331

[149] Richard Bruce Wernham, *The Return of the Armadas: The Last Years of the Elizabethan War Against Spain, (1595-1603)*, p.180

At some point during proceedings, Pedro was joined in litigation by several of the city's more prominent wholesalers. It is unclear whether they had filed separate claims against Gonzalez for their own lost cargo, but the evidence would suggest the *maestre* appealed collectively against all his aspiring creditors. The list included such 'elite' *cargadores* as Pedro de Mendoza, the Florentine Luis Federighi and Nicolas Lambertengo, but also involved other members of the Carmona family: Bartolomé, Hernando, and his son-in-law, Pedro de Milan Bravo. The appeal was finally decided in Gonzalez's favour – Pedro made a brief attempt to re initiate proceedings, but the request was promptly rejected – and a definitive sentence was pronounced in July 1598.

Transferring merchandise onto a presumably safer vessel, usually in La Havana, was common practice. Well before Pedro's goods were lost, it was not uncommon for individual *registros* to include one of several formulaic authorizations, 'so that, it being necessary, the purser may transfer (*ondear*) this cargo on land and sea,' 'from one, to another, and another vessel until it reaches Seville.'[150] Yet trials concerning goods lost or damaged after being 'ondeados' remained surprisingly frequent. In 1614, 524 crates of indigo were lost to a storm after being transferred onto Melchor de Arce's 'Nuestra Señora del Rosario y la Concepción,' when the vessel's main mast cracked and collapsed, smashing a hole into the ship's side through which 'large waves broke in, wetting the crates and *zurrones* of dye, and rotting the hides they were wrapped in.'[151] Much of the indigo, it seems, had simply leaked out. The vessel's captain did not wait for the merchants to initiate legal action, pre-emptively suing the

---

150 '*...dasse commission a los maestre para ondear el dicho anir de una nao en otra y de otra en otra hasta llegar a Sevilla*,' AGI, Contratación 732, N.11: Autos de Alonso de Santillán, vecino de México, con Pedro de Mendoza, vecino de Sevilla, sobre cobranza de una partida de añil (1596); '*y dassele poder al dicho maestre para que siendo necesario pueda ondear esta partida en mar y tierra*,' AGI, Contratación 1811: Registros de Venida de Nueva España, Libro 2: Honduras (1611), fol. 14R

151 '…muchos golpes de mar que moxaron los dichos caxones y zurrones de tinta ...y rompieron y pudrieron los pellejos en que benian envueltos,'AGI, Contratación 789, no.1: 'Autos de Juan de Monasterio Vide, dueño de nao, con los interesados en sus mercaderías, sobre avería gruesa,' (1614).

cargadores involved – including Bartolomé and Alonso de Carmona – for the shipping costs. Francisco de Jerez Serrano (mentioned above), a merchant in Santiago who sent 'large quantities of indigo to Castile,'[152] some consigned to the Carmonas, dated his own 'huge losses' (*hartas pérdidas*) to 1614, most likely to the same 'great gale' (*gran tiempo*).[153] The continual loss of vessels remained a source of official and unofficial complaints from indigo merchants on both sides of the Atlantic throughout this period.

The family's commercial ties in Seville can broadly be traced through the notarial protocols; they suggest, and the *registros* reinforce, that relations among the principal Sevillian merchants investing in the indigo trade were especially close – it was a small group that evidently conducted business with, through, and for each other, as partners and intermediaries. The regularity of their commercial exchanges suggests further investigation might also provide evidence of social and familial ties. There was, however, little evidence of the re-sale of indigo – under normal circumstances, ordinary sales would hardly have required a notary. What happened to the dye after reaching the warehouses of the Seville merchants? The answer, here, must remain somewhat general. Large volumes of indigo were re-exported to Italy and the Netherlands, and clandestinely to France; the Carmonas might have had connections in Florence through their ties to the Fantonis and Federighis, while their Portuguese associations could have given them access to the Dutch markets. Through Diego, the firm had links to Brihuega, and through Hernando's wife, relations in Toledo. More important, however, were the family's lasting ties to Granada and its silk industry, which remained stagnant but very much alive in the early seventeenth century.[154]

---

[152] '…enviando a Castilla cantidad de tinta,' cited in Peña and López Díaz, 'Comercio y Poder', p.484

[153] Jerez Serrano's losses (identified as Xerez Serrano), are mentioned in Peña and López Díaz, 'Comercio y Poder', pp.483-484

[154] See, for example, Manuel Garzón Pareja, *La Industria de la Seda en España: El Arte de la Seda en Granada* (1972).

The Third Generation

In the summer of 1608, the Carmona residence in Seville, recently relocated to the illustrious *barrio del Duque,* would have been quite busy, although it did not seem so at first. In a somewhat confusing coincidence for the researcher, three relatives by the name of 'Juan de Carmona Tamariz', aged 20, 22, and 23, were present in Seville at the same time. Their experience highlights the continuity of relations between family members in the second and third generations, ties that extended across the Atlantic, but still reached Spanish Granada.

The eldest of the *Juanes* was Bartolomé's son, who had returned from the Indies to join his father and brother Alonso in trade. He shared his name with his first cousin, Diego's son from Puebla, awaiting the fleet to return to New Spain after concluding his studies in Salamanca. On May 5th, his uncle Bartolomé and grandfather Hernando, who was rumoured to have a particular liking for this Juan,[155] registered several shipments in his name on vessels scheduled to leave that August.

Departing on the same fleet was the third, and youngest Juan de Carmona Tamariz, Alonso's son from Granada, grandson of Hernando's older brother, Francisco. Around 1604, this last Juan – a tall, robust man, with a pockmarked face, and a missing finger on his left hand – had moved into Bartolomé's home, and joined the Carmona merchants in trade. After an earlier, customary first trip to Tierra Firme, Juan was leaving on his second voyage to the Indies, this time to New Spain. He carried merchandise valued at 430,000 mrs., only slightly less than what had been registered for Diego's son just a few days earlier, but the selection of goods was more specific: with the exception of a large carpet and 12 pairs of

[155] AGI, MEXICO 227, n.27, Testimony of Esteban Lopez de Valseca: 'y se sabe tbien que Juan va a valer mucho porque el abuelo Hernando le favorece e ayuda para que vaya adelante con ellos (sus estudios).'

saddlebags, it was all textiles: black baize, felts, satins, *ruanes*, *angeos*, *veintidocenos*, and other fine cloths, suggesting this side of the family had remained in the silk trade.[156]

Although the goods were registered in Juan's name, identified as a passenger on the fleet, they were entrusted to Diego de Carmona (his father's cousin), in his absence. There are other indications that the Granada and Seville branches of the family remained close; family members who testified as witnesses for the various *informaciones* taken in Seville were clearly familiar with their relatives in the South. Hernando's nephew Melchor, for example, a grocer in Seville, described a childhood visit to Granada, where he stayed with his other uncle, Francisco de Carmona.[157] Whether these relationships were maintained in successive generations, however, is less apparent.

Of the three Juanes, Diego's son was the only one to leave substantial evidence of his life and activities, discussed in some detail by Ida Altman. After returning to Puebla, he arranged a successful marriage to Agustina Gómez, daughter of the 'wealthy obrajero'[158] Juan Gómez and Catalina de Pastrana (herself the daughter and granddaughter of textile manufacturers), with whom he had nine children.[159] Don Juan de Carmona's sons, to use Enriqueta Vila Vilar's expression: 'lost the commercial spirit'[160] altogether, becoming public officials, entering the clergy, and seeking the usual succession of offices and honours. When *informaciones* were taken for their admission as familiars, however, some doubts arose concerning the *converso* background of their maternal grandparents. Inquiries carried out in

[156] AGI, Contratacion 5308, N.2, R.1: Expediente de información y licencia de pasajero a indias de Juan de Carmona Tamariz, mercader, vecino de Granada, hijo de Alonso de Carmona Tamariz y Lucía de Villalta, a Nueva España (22.05.1608), s/f
[157] AGN, Inquisición 300-04, Testimony of Melchor de Carmona, fol.207V
[158] Altman, p.102
[159] Ibid, p.67; Altman mentions only four children, but records suggest the couple had nine.
[160] Vila Vilar, *Los Corzo y los Mañara: Tipos y Arquetipos del Mercader con Indias* (1991), p.205

Spain revealed nothing,[161] yet it was the Carmona side of the family that should have been subject to suspicion.

In his eight-volume study of the Inquisition and Conversos of Seville, Juan Gil dedicated several pages to a list for the surname Carmona, more than 36 men and women condemned, reconciled, or related to someone who had, between 1450 and 1600.[162] Likewise, the Sevilian *padrón* of 1510 included ten 'Carmonas', conversos over whom 'weighed the additional infamy of descending from those burnt or sentenced by the Holy Office,'[163] and had quite sensibly decided to take Ferdinand's offer of a *composición*. Doubtless, the surname suggested a questionable origin. Despite the many Carmonas admitted to the Holy Office, however, *informaciones* for the last Juan de Carmona Tamariz, taken in Seville and Granada after his return from New Spain, were the first to include mention of *judaizantes*.[164]

The accusations, from four witnesses, focused on the Seville Carmonas. Don Iñigo Mejía, a sixty-six year-old *familiar*, considered Hernando de Carmona 'a confessed (member) of the Jewish caste,' an affirmation 'the old men of the city' would no doubt confirm. Some days later, forty-five year-old Hernando Carrillo de Gallegos declared: 'Francisco and Hernando de Carmona and all those with their surname who were born in this city (of Seville), are notorious, confessed descendants of Jews, and have and are held as such in this city.' If anyone doubted him, Gallegos added, they need only visit the Cathedral, where the *sanbenitos* for the many condemned Carmonas were still prominently displayed.[165]

---

[161] Altman, p.94
[162] Juan Gil, *Los Conversos y la Inquisición Sevillana* (2000), vol.III, pp.435-441
[163] Claudio Guillén, 'Un padrón de Conversos Sevillanos (1510),' *Bulletin Hispanique*, vol.65, 1-2 (1963), p.50; for Carmonas see n.102, 259, 361, 382, and 390.
[164] AGN, Inquisición 300-04, fols. 201R-202V
[165] Ibid, fol. 202R.

A more elaborate answer was provided by the *licenciado* Gonzalo Montiel Maldonado, who said he had 'never had a good opinion or thought of (Hernando de Carmona) as an Old Christian,' an impression owed to some gossip: more than a decade earlier, when Pedro de Milan Bravo (Hernando's son-in-law) had applied for admission as a familiar, there had been rumours concerning his wife's ascendancy – how was it, people had asked, that Bravo had been admitted to the office when he was married to a woman who 'did not have the (necessary) qualities of *limpieza*?' A last witness provided an end to this story, claiming the 'murmurings had ceased' when it became known there were familiars of the Inquisition in Granada with this surname. Predictably, neither witness could recall whom they had heard the rumours from.[166]

Doubts had been raised, and the matter was resolved by sending for further testimonies from the town of Carmona, where the elder Diego's father, Juan de Carmona's great, great grandfather, had been born. Witnesses in the town could not remember the family, but several recalled seeing Alonso on a recent visit, welcomed as a relative by the local Tamariz family. This led to the conclusion that the Carmonas were in fact surnamed Tamariz, and had only taken the name 'Carmona' from their native town; they were not, therefore, of the Jewish Carmonas from Seville or elsewhere. It was a feeble excuse, but good enough, it seems, for the Inquisition, who finally admitted Juan to the office. Yet the presence of *sanbenitos* with the surname Carmona in the Cathedral of Seville, the experience of Milán Bravo, rumours that were still recalled several decades later (more damaging, perhaps, than the witnesses brief comments suggested), may explain why this side of the family, and this side alone, never sought admission to the Holy Office.

[166] '…y con esto ceso su murmuracion,' Ibid, fol. 200V-201R

Two years after securing a position as *familiar*, Juan de Carmona Tamariz purchased the office of *administrador de la renta de la seda* (administrator of the tax on the silk industry) for 'all the silk that came from the said New Spain, with the fleet and in other vessels... in skein, twisted, dyed and white, in textiles and in any other form, so that receiving it, he should charge the rights that are owed.'[167] Having a nephew farming taxes for the silk industry could hardly have been disadvantageous for Bartolomé – a percentage of the textiles carried by the Manila Galleons, reaching Spain by way of Acapulco and Veracruz, were evidently undyed.

By 1618, Bartolomé de Carmona no longer figured on the *registros de carga* or *averías* for New Spain and Honduras. His partner and eldest son Alonso received moderate quantities a year later, but faded from the records at this time as well. Some years earlier, one Juan de Carmona became a *vecino*, *obrajero* and *estanciero* in Santiago, and would eventually designate another *vecino*, his brother Alonso Tamariz de Aguilar as executor in his will. Dorothy Jane Joba has suggested these were the sons of Tomé de Carmona, and yet it seems unlikely the couple had children who altogether escaped mention in the sources.[168] The evidence indicates numerous related Carmonas and Carmona Tamarices were residing in the Indies by this time, but I would propose these could also have been the sons of Bartolomé – married to Leonor de Aguilera, easily turned to Aguilar – which might also explain the brothers absence from the Seville records thereafter. A decade later the same Alonso Tamariz de Aguilar shipped a meagre two crates of indigo to his cousin in Seville, Bartolomé Tamariz, but there remained few other traces of the merchant firm.

The close of the family's exchanges with the Indies also coincided with a 'particularly severe series of "plagues" of locusts'[169] that devastated the Central American crops between

[167] APS, Leg.12673 (1610), fols.255R-256V
[168] Joba, p.137
[169] Macleod, pp.183-4

1616 and 1619. It was a period of global decline for the indigo trade: exports from India fell considerably between 1613 and 1618, in the course of altercations between the Estado da India and the Mughals.[170] To digress, in 1620, attempting, perhaps, to profit from the scarcity of blue, the Duke of Lerma, having retired from Court, arranged for the cultivation of woad on his estate. There are other possible explanations for the Carmonas' sudden withdrawal from trade; but as in all else, they had kept to standards, with a fairly average 30 years of activity.[171]

Conclusion

Like their contemporaries, the Carmona merchants moved in fluid, gradually constructed networks with ties to family and kin, building on these connections to further their social and economic position. Some of these ties were more resilient than others, but success also depended on the individual's ability to operate within systems of honour and trust. Included in a collection of correspondence from the Indies was an emotive letter from Doña Maria Capacha Monsalve to her son, Diego Tavira Toledo, resident, at the time, in the city of Mexico. After cautioning him against taking a *criolla* for a wife, being as they were 'very vicious' women, she suggested he make contact with a merchant from Granada, Andres de Carma y Tamaris, 'a man of great honours' in the city of Puebla. María was likely referring to Bartolomé's brother Andrés,[172] and begged her son to send news through him –

[170] James C. Boyajian, Portuguese Trade in Asia under the Hapsburgs (2008), p.130
[171] Hoberman, p.266
[172] See family tree. It is easy to suggest that Carma may have been Carmona, because the surname is often abbreviated in the sources as 'Carm^{a}' allowing for the possibility of a simple transcription error in the published letters.

the extent of these networks, which almost seem to 'jump out from the sources,'[173] has been a welcome surprise for many a historian in the past (and present).

Key to their trajectory and success were the artisanal origins and related ties maintained over the course of generations, the social links and expert knowledge that allowed the family to succeed on the path of specialisation, one that few of the elite Spanish wholesalers were willing to, or capable of taking (as the case of Simon Ruiz may have illustrated). The sources examined would reveal countless connections to the textile sector, friends, relatives, and commercial relations that spread across an Empire. Their marriage practices took an endogamous turn – Diego married the daughter of a cochineal producer, Tomé that of a cloth merchant. The evidence would also point to the intentional, strategic moves that characterized the Carmonas' investments in indigo, keeping trusted agents or securing valuable posts close to the centers of production (and creating new connections through them).

As of 1616, four merchants gradually increased their presence in the *registros de Honduras*, and appear to have finally absorbed the Carmona's share of trade around 1620: Cristóbal de Barrionuevo, the brothers Fernando de Palma and Juan de Sevilla, and Juan Fernández Jurado. Records pertaining to the last of these – who took over as an agent for Pedro de Lira – are surprisingly few, yet they point to a familiar trajectory: after an initial, brief stay in Guatemala, Jurado returned to Seville, specializing in imports from the Central American ports, above all indigo. He was involved in a number of legal proceedings, for the most part concerning the usual loss of merchandise, dealt with most of the Carmonas

[173] From notes kindly shared by Prof. Lyndal Roper, taken during Regina Grafe's lecture: 'Polycentric rule and stakeholder interests: explaining the success of the Spanish Empire,' presented at the *Early Modern World Seminar* (Oxford, MT 2013).

former clients, and sometimes their heirs. The industry would recover by 1620,[174] and the Central American trade experienced some prosperity into the 1640s, yet the indigo boom had ended – aided by the lull in Atlantic trade, the numerous fleets 'shrunk, postponed, and cancelled,'[175] the renewal of hostilities with the Dutch, and the depredations of Piet Heyn.

[174] As indicated in the *Registros de Venida de Honduras*, AGI, Contratación 2135-2139; and in Chaunu, *Seville et L'Atlantique*, vol. VI-2: 'Arrivees de l'Indigo,' pp.988-989
[175] Baskes, p.34

Chapter 5
Notes on the Portuguese Indigo Merchant

In the course of this investigation, the formidable, moving presence of the Portuguese in the Global indigo trade has been felt time and again – their evident familiarity with the product, their centrality to its early diffusion, and dual participation in the commercial circulation of Asian and American exports, especially between 1580 and 1640. It was surprising, therefore, to find the topic resumed in a few paragraphs, or an overarching statement, the more that it should not have encouraged a monograph, especially considering the coinciding, current academic interest in textiles, colour, circulation, and Crypto-Jews.[1]

The brief discussion that follows will not fill this gap; rather, it aims to highlight the degree of Portuguese participation in this particular trade, examining the state of the question, identifying promising sources, and prospects for research. The Portuguese have not been absent from this study; Chapter one turned briefly to their investments in Azorean woad, and later the influence of an anonymous merchant in the discovery of *añil*, while Chapter three examined the commercial activities of the Gomez d'Elvas family somewhat more closely, incorporating a brief examination of competition between Asian and American indigo in the Spanish markets. While I neglected to discuss the presence of Portuguese merchants in commercial exchanges with Central America during the first quarter of the seventeenth century, it was not for lack of source material. The *registros de carga* included numerous shipments of indigo dispatched to Seville and destined for Portuguese merchants, many of which were specified as the returns for slaves, usually from Angola.[2]

---

[1] Ghulam Nadri is currently working on global chains of indigo production in the 16th and 17th centuries, which I understand will incorporate the Portuguese presence.

[2] Examples in: AGI, Contratación, 2132, 'Registros de Venida de Honduras' (1615), fols.46R; 102R and 121R. The *asiento*, or monopoly on the introduction of African slaves into the Spanish territories was in the hands of the Portuguese between 1595 and 1640, as examined in Enriqueta Vila Vilar's seminal study of Transatlantic

It was in the 1630s, however, that the city of Seville was overrun with Portuguese traders. As described by the eminent Antonio Dominguez Ortiz, the decades between 1620 and 1640 – marked on the one side by Phillip IV's ascension to the throne and the rupture of peace with the Netherlands, on the other by the dissolution of the Union of the Crowns – were a 'golden age' for the Portuguese merchant community in the Spanish Empire, when they came 'to constitute the predominant nation among the known lists of foreign merchants.'[3]

Much has been written on the foreign merchant in Seville, and even more on the Portuguese merchant community at large, and these brief words cannot hope to add to this wealth of insightful studies.[4] They may, however, point to an interesting investigative path, raise the question of specialization, the possibilities of approaching social networks and ties through the double lens of a group (in this case, if somewhat controversially, we might say a religious group of 'New Christians'[5]), and a particular trade – the links, for example, between the indigo merchant in Mexico City and his corollary in Cambay, both dispatching their

---

slave trade. For the slave trade in Guatemala, see Paul Lokken, 'From the "Kingdoms of Angola" to Santiago de Guatemala: The Portuguese Asientos and Spanish Central America, 1595-1640,' *Hispanic American Historical Review*, 93:2 (2013), pp.171-203.

[3] José Aguado de los Reyes, 'Lisboa, Sevilla, Amberes, eje financiero y comercial en el sistema atlántico (primera mitad del s.XVIII),' in Carlos Martinez Shaw and JM Oliva Melgar, El Sistema Atlántico Español, siglos XVII-XIX, (2005), p.105; see also Cayetana Alvarez de Toledo, *Juan de Palafox: Obispo y Virrey*, (2011), p.176

[4] See, for example, Antonio Domínguez Ortiz, 'Los extranjeros en la vida española durante el siglo XVII,' in *Estudios de Historia social de España,* IV: 2 (1960), pp. 292 a 426; and by the same author, 'Los Judeoconversos en la España Moderna (1992 ed.), *Orto y Ocaso de Sevilla* (1974), *Los Judeo Conversos en España y América* (1971); Bernardo José López Belinchón, 'Sacar la Sustancia al Reino: Comercio, Contrabando, y Conversos Portugueses, 1621-1640, Hispania, LXI: 3, n.209 (2001); Enriqueta Vila Vilar, 'Colonias extranjeras en Sevilla: tipología de los mercaderes,' in Carlos Alberto Gonzales Sánchez, ed., Sevilla, Felipe II y la Monarquía Hispánica, (1999); and by the same author, Enriqueta Vila Vilar, 'Extranjeros en Cartagena (1593-1630),' in *Anuario de Historia de América Latina*, 16 (1979), pp.147-184; Bernal y García Baquero, 'Tres siglos del comercio sevillano. 1598-1868, Cuestiones y problema' (1979); see also John H. Elliott, *The Count Duke of Olivares: The Statesman in an Age of Decline*, (1989); and other works cited in this and Chapter four, although the exhaustive nature of the literature on this topic leaves many classic works unlisted here.

[5] As Daviken Studnicki-Gizbert has noted: 'the members of the Portguese Nation were geographically dispersed and yet socially conected... the Nation was decentralised and yet coordinated,' in 'Interdependence and the Collective Pursuit of Profits: Portuguese Commercial Networks in the Early Modern Atlantic,' in Diogo Ramada Curto and Anthony Molho, eds., *Commercial Networks in the Early Modern World*, EUI working papers HEC no.2002/2 (2002); he continues to discuss the question of 'membership' in the Portuguese Nation on pp.95-99

wares to a third merchant in Lisbon, with a final stop at Antwerp, all of these most likely with ties to the textile sector. The historiography has somehow neglected to note that during the Union of the Crowns, the Spanish Empire controlled the larger share of the Global indigo trade.



The extent of their investments in the Atlantic indigo trade may be gathered from records pertaining to the 1641 embargo on Portuguese goods reaching Seville with the Spanish fleet, that is, on the first fleet to arrive after the December Revolution. The voluminous *expediente* has been examined in depth by Pedro Collado Villalta, but has not been returned to in the three decades since; just how much work has been done in this particular field is apparent when Villalta writes: 'we still ignore almost everything about the Atlantic wholesalers (*cargadores indianos*), from their names, their families, their mercantile evolution and areas of investment...'[6] Families that have since been listed and scrutinized, their names identified, their patterns of investment, commercial and social ties unravelled.

There were even fewer studies for Villalta to draw upon in his examination of the large volume of indigo confiscated by the Crown, and the historian invariably included a few, incorrect assumptions. Indigo was not, to mention one example, shipped in 'brute' and 'ink' form – the product was never shipped across the Atlantic already ground, and we must assume Villalta did not have in mind the altogether illogical possibility that it should have

[6] Pedro Collado Villalta, 'El Embargo de Bienes de los Portugueses en la Flota de Tierra Firme de 1641,' *Anuario de Estudios Americanos*, 36 (1979), p.169; I consulted the original document at the AGI, in Contratación 179, N.14: 'Contra los bienes y hacienda de los portugueses que no estuviesen naturalizados en España, o que hubiesen venido en cabeza de éstos para los estantes en Portugal, en la armada de galeones, su general Jerónimo Gómez de Sandoval, para su embargo y confiscación, por la rebelión contra el Rey,' (1641-1651).

been circulated in liquid form.[7] The confusion seems to have stemmed from the distinction between *añil* and *tinta añil* in the records, although my own research suggested these terms were used interchangeably, or to indicate a difference in quality, but surely not different products.

The documents seem to confirm this historian's suspicion, that the Portuguese controlled a more substantial share of the Atlantic indigo trade in this period than acknowledged in the historiography. Totals for the confiscated bullion and goods included 271 *barras* of silver, 491 crates of indigo, 895 hides, some sugar, tobacco, and 71,478 pesos in coin.[8] Although figures for the volume of *añil* imported that year are lacking, totals imported from Tierra Firme that year included 1,432 crates of unspecified merchandise, including all the indigo, cacao, and tobacco. However large or small the totals of these last two were, the Portuguese were managing a least a third of imports, and this without exports from Veracruz.

Turning first, and briefly to the silver, we may note a significant share was in the hands of four merchants, a 'quasimonopoly' as Villalta proposes, with the partners Diego Díaz and Francisco Báez importing the largest individual share of 54 *barras* and 1,558 *pesos*. The indigo trade was even more specialized and monopolistic. Of the forty-nine Portuguese merchants who received cargo on the fleet returning from Tierra Firme, only fourteen had investments in commodities (the rest received only bullion).[9] Among this small group, moreover, only ten received indigo, none of whom, moreover, had investments in the other goods (cacao, tobacco, or hides). Authorities, for their part, appear to have been especially

[7] Collado Villalta, 'El Embargo,' p.196
[8] Ibid, p.194
[9] AGI, Contratación 179, n.14, s/f

concerned with the silver and indigo, as indicated in the records and noted by Villalta, the remaining merchandise is altogether neglected in the records.[10]

Three names stand out for their share of indigo: Simón Rodriguez Bueno, Simón Rivero, and Enrique de Andrada (sometimes Andrade), all three of whom may be identified as New Christians (at least 'according to prevailing notions of blood purity').[11] Just how great the Jewish presence in the Global indigo trade really was may yet be explored.[12] The most prominent of these three merchants was Andrada, ranked eighth on a recent list of the most 'central' merchants in Seville, from a reconstruction of the 'general net of mercantile relations' in 1620.[13]

On this particular fleet, Andrada was receiving an exorbitant 236 crates of *añil*, doubtless the highest individual shipment of indigo received by any *cargador* that year. Nine bars of silver, and a substantial 3,572 pesos were also confiscated, and yet his imports of bullion placed him in the middling ranks. If we consider that Andrada was also importing the dye through New Spain, then his share of Atlantic exports was large indeed. Another trial, concerning the loss to a storm of a substantial, 480 crates of indigo just a year later, in 1642, identified Andrada as the owner of 109 of these, again, far exceeding the amount of indigo received by any other single merchant.[14]

---

[10] See AGI, Contratación 179, n.14

[11] Studnicki-Gizbert, 'Interdependence and the Collective Pursuit of Profits,' p.96

[12] In *Pigments and Power*, for example, Gabriela Siracusano notes that Spain's 'royal dye houses were run by Jewish artisans in the fourteenth century,' op. cit., p.57. The historiography for the Armenian Jewish dye-houses is more extensive.

[13] Renate Pieper and Philipp Lesiak, 'Redes Mercantiles Entre el Atlántico y el Mediterráneo en los Inicios de la Guerra de los Treinta Años,' presented at *XIV International Economic History Congress* (Helsinki, 2006), p.5

[14] In AGI, Contratación 4888, 'Remates de víveres, pertrechos, vestuarios y otros efectos, así por cuenta de la Real Hacienda como de particulares, 1554 a 1712,' s/f

The embargo indicates just how important the Portuguese were to the trade in *añil*, most of which was likely making its way to the northern European markets,[15] but also suggests how valuable the dye was to the Crown, at least as an item that might make a profit at auction or resale. All of these merchants, moreover, had important familial, social, and commercial relations across the Atlantic; as an example, we may take the influential Báez family,[16] represented in the embargo by Francisco, mentioned above, and highest on the list of those with confiscated bullion. Although he would not receive indigo on this particular fleet, records from Mexico's AGN indicate he may have imported the dye on a regular basis through Veracruz, by way of his nephew, Simón Báez Sevilla, in Mexico City.



Simon Báez (or Váez) Sevilla is a fascinating character that has only recently, and quite belatedly received the scholarly attention merited by an extraordinary life and experience.[17] 'One of the wealthiest men in New Spain,'[18] the Mexico city merchant, a native of Portuguese Castelo Branco, would also preside (although the formality of his leadership has been difficult to ascertain) over the largest of three groups of crypto-Jews in Mexico.[19] There were rumours that his son, Gaspar Báez, would be the next Messiah, (at a time of

[15] The early reception, accommodation, and evident enthusiasm for *añil* in the Spanish Netherlands and Dutch Republic have yet to be examined closely. As Chapter three indicated, these rapidly became large markets for New World indigo; Guatemala indigo (listed as 'Gatimala') was traded on the Amsterdam exchange by 1609, and regularly after 1625; see Posthumus, N. W., *Inquiry into the History of Prices in Holland*, (1946 ed), vol.2, pp. 333-334. It may also be worth noting that prices for indigo doubled in 1640, from 4.95 gilders the pound in late 1639, to 8.10 in September 1640, when rumours of Revolt were doubtless already circulating. Prices rose again in December 1641 to 6.30 gilders following the loss of the fleet returning from New Spain.

[16] On the family in Seville, see Jesus Aguado de los Reyes, 'El apogeo de los Judios Portugueses en la Sevilla Americanista,' *Cadernos de Estudos Sefarditas*, no.5 (2005), pp.135-157

[17] The truly vast records from the Mexican Inquisition concerning the arrests and interrogations of 1642 are still awaiting a full monograph, it is a fascinating topic and period that has received increasing attention in the past years, and further publications may be expected soon.

[18] Robert J. Ferry, 'Don't Drink the Chocolate; Domestic Slavery and the Exigencies of Fasting for Crypto-Jews in Seventeenth-Century Mexico, *Nuevo Mundo, Mundos Nuevos*, *Débats* (2005), p.7

[19] Seymour B. Liebman, *The Jews in New Spain: Faith, Flame, and the Inquisition*, (1970), pp.226-227

growing apocalyptic tension),[20] while his prominent mother-in-law would later be accused of being 'one of the most perfidious, dogmatic rabbis (*dogmatistas-rabinas*) to step foot on New Spain.'[21] His home, one witness testified before the Inquisition, was 'a meeting centre for all the Portuguese in Mexico City,' while his wife, Juana Enriquez, appears to have been central to the social and religious life of their community.[22]

A large collection of his correspondence, letters remitted to Báez by his various agents, has survived in Mexico City's AGN.[23] Prominent for the volume and regularity of his letters is the *alférez* Pedro Vértiz, an agent at the port in Veracruz. Pausing briefly on twenty-eight letters exchanged between October 1640 and December 1641, the narrative below follows one last actor in the Atlantic indigo trade over the course of a single, but of course significant year. The letters involve another side of Simon Báez, perhaps not the one that has interested historians, the businessman rather than the covert, religious leader. Yet they may still reflect the strains of the age in many ways, at a chaotic port, with ships old and overflowing (in indigo) – they bring us close indeed, to the busy Veracruz of mid century. There is something reminiscent of Juan de Amarita in the eternally struggling Vértiz, even though his writing is more direct, succinct; there was never any time to lose.

I have indulged, therefore, in one last incursion into the workings of the indigo trade, the lives and experiences of those involved. This close reading may also, finally, explore the complex manoeuvrings of actually getting the goods onto the fleet (legally and illegally), just as it highlights the importance of the dyestuff to the overall cargo dispatched across the

[20] Ibid, p.225; for a Global view of apocalyptic tensions in the period, see also Brandon Marriott, 'The birth pangs of the Messiah: Transnational Networks and Cross-Religious Exchange in the Age of Sabbatai Sevi,' DPhil diss. (University of Oxford, 2012).
[21] Eva A. Unchmany, 'Simón Váez Sevilla,' in *Estudios de Historia Novohispana*, 4 (1987), p.307
[22] Ibid, p.308
[23] AGN, Indiferente Vierrinal, 6239-002: 'Correspondencia personal y comercial que se remite a Simón Vaez Sevilla, 1639-1642,' (192 fols).

Atlantic, in a period when the indigo trade is usually assumed to have shrunk preceding the late century boom.

The earliest of these documents are two memorials, signed by Simon Báez within a fortnight of each other – on June 15th and 30th 1640 – with instructions for the dispatch of 72,000 pesos in *reales*, 24 *zurrones* of cochineal, and a substantial 80 crates of indigo on the departing fleet. In the first of these, Báez dealt broadly with the distribution and consignees for the shipment, but was less than optimistic about the fleet's prospect of departure, 'which is considered very uncertain in this *plaza*.' He concluded on a personal note: accompanying the memorial was 'a crate of twelve hams,' a gift for Pedro's wife from his own, Doña Juana, 'because she thought they were good.'[24]

Fifteen years earlier, Fernando Polanco had accused Báez before the Inquisition, on grounds that 'he had never seen him eat bacon.'[25] Aware, perhaps, of the accusations, the family made routine efforts to keep up appearances. Yet it seems unlikely anyone was in fact 'fooled' by these fairly transparent attempts at concealment. There is no indication Vértiz was a New Christian himself, Báez may have preferred the closer networks of family and kin, but regularly dealt with a number of Old Christian agents. The fact that these were specified as gifts between women, however, may be worth highlighting; as discussed by Daviken Studnicki-Gizbert, gift-giving practices 'cultivated a social bond,' or 'interdependence,' creating obligations that gravitated towards the ties of kinship, more than they would the strictly commercial.[26]

---

[24] '(Doña Juana embia a mi sra. doña francisca) un caxón con doce jamones por le parecer son buenos,' AGN, Indiferente Vierrinal, 6239-002, 'Memorial e Instrusion (sic) que da Simon Váez Sevilla al alferez mayor Pedro de Vértiz,' '15.07.1640 and 30.07.1640, s/f

[25] Uchmany, 'Simón Váez', p.308

[26] Studnicki-Gizbert, 'Interdependence and the Collective Pursuit of Profits,' pp.108-111

The second, later memorial, a lengthier document, contains similar, if more detailed instructions, with slight rearrangements to the distribution of *reales* per consignee. Somewhat uncommonly, both documents include shipments marked to be delivered 'in trust' ('en confianza') to the pursers, that is, dispatched unregistered. Evidence of this routine form of fraud, whereby the merchandise (above all bullion) was eventually handed over on board to the consignee in Seville, without passing through the Casa de la Contratación,[27] isn't usually this forthcoming. Of the 80 crates of indigo, seventy-six were consigned to Simon's brother, Francisco, and sent at the latter's risk, the proceeds of merchandise received in 1636 and 38. The remaining four crates of *añil* (with an additional 14 *zurrones* of cochineal) were dispatched to one D. Antonio Fernández Martos, from the town of Marchena, less than 60 km east of Seville.[28]

Letters from the last months of 1640 were mostly concerned with the distribution of wine and vinegar received on the preceding fleet. The merchants do not seem to have corresponded over the course of January, and on February 1st Vértiz wrote a lengthy response to letters received in December. A few pending accounts were discussed, but the conversation now turned to preparations for the departing fleet. Eighty crates of indigo[29] and thirty-eight crates of cochineal, 'white, speckled, and red', had already been weighed, packed, and marked with branding irons made for the occasion, at a cost of 352 pesos.[30] Thirty-eight crates of indigo, in turn, had already been delivered to Diego Rodriguez Arias, purser for the *navio de aviso*, while another ten crates had been handed over separately – in confidence, perhaps – and consigned to Simon's brother, Francisco.

---

[27] AGN, Indiferente Vierrinal, 6239-002, 'Memorial,' s/f
[28] Ibid.
[29] It is not entirely clear, but these are likely the same crates from the year before, when the fleet didn't depart.
[30] Pedro Vértiz to Simón Báez Sevilla (hereafter PV to SB), 01.02.1641

A week later, Vértiz reported the first in a succession of difficulties, delays, and complications. Claiming the available vessels were too few for the anticipated crate-ware, 'being as it was all indigo,' the pursers for the Capitana and Almiranta had decided to 'innovate' on the standing shipping fees and raise the price per crate to 13 pesos for cochineal and 9.5 for indigo. Vértiz had, thus far, refused to pay 'for many reasons,' insisting there were other good ships in the fleet (and listing several), where Báez might distribute his merchandise. In any case, he insisted, it would be best not to encourage the pursers.

It was a fairly routine problem; there were never enough vessels, and merchants had to 'seize cargo space while it was available,'[31] often at a considerable cost, when – as in 1640 – the fleet failed to depart. Nor was it unusual for the pursers to raise their fees without warning. In 1629, Juan Fernández Jurado made an unsuccessful attempt to have the shipping fees on 55 crates of indigo (at 8 pesos the crate), moderated retroactively. Representing Jurado and several others was Bartolomé Gonzalez, whose name figured often in legal claims regarding indigo from this period (an investigative line I was unable to pursue further).[32] The owners and encomenderos of the indigo in Cartagena, he claimed, had agreed to the exorbitant fees 'under compulsion, and by reward, in order to redress their vexation, and because the pursers would not bring the said indigo unless they promised, as they did promise, to pay 8 pesos for each crate.'[33] As is often the case, we are forced to wonder just how sincere these claims of intimidation were; the Council, at least, was unconvinced, or took the more pragmatic approach, and refused the claim.

---

[31] Jeremy Baskes, 'Risky Ventures', p.31

[32] AGI, Contratación 819, n.3: 'Autos de Juan Fernández Jurado, Francisco de Arespacochaga y otros cargadores a Indias, vecinos de Sevilla, con Cristóbal Valero y Domingo de Sarricolea, maestres de plata, sobre moderación de fletes en unos cajones de añil,' (1629)

[33] '…fue compulsos y apremiados y para redimir su vejacion, y porque los dichos maestres no le traian el dicho anil si no es prometiendole como le prometieron ocho pessos de flete por cada caxon,' Ibid, s/f

By the end of February, Vértiz began an enthusiastic campaign to have the crateware registered and loaded at the earliest date possible, that he might avoid 'having to rush later.' But it took Báez almost a month to send his instructions for the dispatch of the dyes, and by then Vértiz was in prison, and angry. On March 26th, he wrote an impassioned letter to Báez, detailing his many grievances. 'I do not know,' Vértiz began, 'for which sins of mine I am given so much heartache on account of your affairs.'[34] A relatively minor issue of paperwork concerning five crates of indigo belonging to don Melchor de Valdéz remained unresolved, 'at all times robbing me of my peace and health.'[35] More cumbersome still, had been a trip to Mexico and his current imprisonment, after evidence of unregistered merchandise – some bales of cinnamon belonging to Báez – had been found amongst his papers.[36]

Vértiz was especially upset, and made a point of emphasizing the lack of gratitude shown towards his many sacrifices, 'which have not been appreciated, nor my expenses paid.' The letter continued on a negative note: the remaining *botijas* of wine would not be sold, a shipment of cacao recently arrived from Maracaibo was too expensive to buy, and some crates of cochineal were several pounds short, in what appeared to be a case of theft, ostensibly perpetrated by Báez's servants.[37] Vértiz was also returning Báez's more recent instructions with this letter, requesting he send separate orders for the merchandise dispatched legally and illegally, or he would 'always be in prison.'[38]

For all his acquiescence in fraud, Vértiz proceeded with caution; on an earlier occasion, after Báez requested he delay entering a particular transaction into his account books, Vértiz made it clear the letters discussing the matter 'would have to be lost.' He had

[34] 'Y no sé qué pecados mios son que en todas ocasiones se me ofrecen los disgustos sobre dependencias de causas de vm,' PV to SB, 27.03.1641
[35] '...que en todo tiempo me sacara la paz y la salud,' Ibid.
[36] PV to SR, 07.04.1641
[37] PV to SB, 27.03.1641
[38] 'Porque si cada dia nos coxen los libros y papeles estare yo siempre presso,' Ibid.

slipped, it seems, in the cinnamon affair, recording the incriminating evidence in his books, but altogether refused to take the blame: 'because no one has ever had their books sequestered before... and had I known this could happen I would have been able to resolve it, but I am no angel to know the future, and keeping the books in order is the truth and nothing else.'[39]

Báez eventually offered to pay for the costs of his agent's trip to the capital, and Vértiz reconsidered, claiming he had written the letter with sentiment, after the many 'expenses and discomforts' caused by his employer, but this was all 'in the past and need not be debated further.'[40] The disagreement, in any case, was set aside as news of the Portuguese revolt reached Veracruz on March 30th (Easter Sunday), 1641. In a letter written that afternoon (the *navio de aviso* had arrived at 2pm), Vértiz related some three-month old news; a reflection, perhaps, of the general sentiment in Madrid at the start of 1641, he claimed 'his majesty with all the people he had for Aragon turned and headed towards Portugal, because the (matter of) Aragón and Cataluña had been appeased.' [41] With similar, unfounded optimism, Antonio Carnero, Olivares' secretary, wrote to Pierre Roose on January 27th: 'And with this we shall turn our attention to the west, since the business in the east can be regarded as over and done with...' [42]

There were other signs the uncertainties of 1640 had reached the ports of New Spain: *maestre* Bartolomé Guillén and Captain Juan de la Feria refused to receive 11 crates of cochineal 'in confidence' from Vértiz, 'even though they were warned these were orders

[39] 'Porque nunca an sacado libros a nadie sino ahora y a saver yo que pudiera suceder tambien lo pudiera reparar por no soy angel que e de saver lo por benir Y tener la razon en los libros es la verdad y no otra cosa,' PV to SB, 07.04.1641
[40] 'Eto es ya pasado no ay que debatir sobre ello,' PV to SB, 07.04.1641
[41] 'Que su magestad con toda la gente que tenia para (?) Aragon dio vuelta para Portugal por que lo de Aragon y Cataluña estava ya apasiguado,' PV to SB, 30.03.1641
[42] Cited in John Elliott, *The Count Duke of Olivares*, p.604

from Spain, because they say this is not a year to assume obligations in confidence.[43] By the first week of May, it was clear the volume of goods destined for export would far exceed the available space on the fleet's two main vessels, and an anxious Vértiz resumed his requests for expediency. Although loading was expected to continue into mid-June, Vértiz remained intent on loading all the merchandise meant for the Capitana and Almiranta as soon as possible, before he was 'forced to load an hacienda of such importance as this onto other ships.' There were more, routine setbacks: two shipments of cochineal dispatched from Puebla had been marked incorrectly, making it impossible (or at least extremely cumbersome) to identify a number of crates and *zurrones* packed with half an arroba (12.5 pounds) more than the others.

On Wednesday, May 22nd, however, Vértiz announced all the crateware (reales, indigo, and cochineal) had finally been loaded onto the Capitana and Almiranta. This did not include fifty crates of indigo Martin Pérez de Azcárraga was expected to deliver, nor two of the five (ever problematic) crates belonging to Melchor de Valdéz. A month passed and the fleet was still in Veracruz, while Azcarraga's crates were not expected for another three or four days. Fortunately for Báez, the departure of the fleet, re-scheduled to leave on the feast of St Peter, had been delayed yet again, this time by the death of Admiral Roque Centeno y Ordoñez. Nonetheless, Vértiz cautioned on June 21st, time was running up; the Capitana and Almiranta would not receive 'a single crate,' nor, it seemed, could any other vessel. The alternative, Vértiz proposed, was 'adventuring them from here to Havana on the ships of Barlovento,' for which he would need ample powers of attorney.[44]

---

[43] '…aunque se les advirtió que eran ordenes de España porque dicen que este año no es para encargarse de confianza,' PV to SB, 27.05.1641

[44] '…aventurar de aqui a la havana en las naos de Barlovento,' PV to SB, 21.06.1641

In his next letter, a week later, an exasperated Vértiz insisted on the need for general powers enabling him to register the remaining merchandise – 32 crates of cochineal and 50 of indigo – on any ship he could find. At this point, he concluded, it might not be possible to dispatch the goods, but this is what 'results from leaving things for the last minute.'[45] His pessimism notwithstanding, on July 5th Vértiz reported all the merchandise had been registered and loaded 'without a single crate of indigo remaining in my power, which has been good business and more luck.'[46] He had even managed to register the six remaining crates delivered by Francisco de Largacha onto the Almiranta. Of course, a last shipment of *reales* had not arrived, and Vértiz took the opportunity to complain: 'it is not right, for everyone to have their dispatches done while I am still burdened with yours.'[47]

Vértiz may have exaggerated in his grumbling, and loading was probably always a stressful affair, but there was likely some substance to his complaints of repeated delays, distractions, and miscommunications. As of April, when news of the revolt reached Mexico, the Portuguese community was surely concerned with the possibility of reprisal, while the arrest, that same month, of his uncle Francisco Home, who 'died of his wounds'[48] shortly after, should also have affected the Báez family and their commercial ties. It is not unlikely these delays were deliberate attempts to defer loading the merchandise for fear of confiscation.

At long last, on July 23rd, the fleet sailed from Veracruz, flanked by the Armada de Barlovento on the return leg of its maiden journey. A severely overloaded Almiranta, and a Capitana in desperate need of repairs, reached Havana some weeks later, around the time

---

[45] 'Y esto resulta de dejar las cosas para este tiempo,' PV to SB, 17.06.1641
[46] 'Sin que aya quedado en mi poder ni un caxon de anir que a sido buena negociacion y maior suerte,' PV to SB, 05.07.1641
[47] 'Y no es razon que quando todos tienen hecho su despacho este yo embarasado con el de vm sin concluir el mio,' Ibid.
[48] Liebman, *The Jews of New Spain*, p.226

Báez celebrated a last 'Día Grande' (Yom Kippur) with family and friends, later to be recalled with 'great emotion' by his daughter, Beatriz Enriquez, as she was interrogated by officials of the Inquisition.[49] The convoy began the last stretch of its Atlantic passage in late September, only to be devastated by a hurricane just a few days later, as it exited the Bahama Channel – 'several (vessels) broke open, others were separated, another three capsized, four were turned to splinters on the coast.'[50] The Almiranta suffered an agonising, drawn out end, her exhausted passengers further attacked by English pirates and sharks.[51]

The letter, surely sent, discussing the disaster, does not appear to have survived. In any case, when the news did reach Veracruz, it would have been full of uncertainties – several vessels, the Almiranta amongst them, drifted at sea for over a month.[52] By October, business had returned, cyclically, to wine and vinegar, only to be interrupted just a few months later, as the Inquisition virulently closed in on the Báez household.[53] A desperate Simon attempted to hide what merchandise remained in his possession at the warehouses of his 'old Christian' associates, perhaps even asking Vértiz himself for help, although we may doubt whether the agent would have been willing to do so.

A separate collection of Vértiz's letters, this time to the Florentine merchant, Stefantoni Federighi, has survived at the AGN. This, even more numerous collection of correspondence with one of the most important merchants in Mexico (awaiting further study), seemed quite promising at first glance; but Federighi, the most important cochineal

[49] In Ferry, 'Don't Drink the Chocolate,' pp.16-17
[50] 'Se abrieron varias; se desaparejaron otras; tres zozobraron en la mar; cuatro se hicieron astillas en las costas,' Cesáreo Fernández Duro, *Armada española desde la unión de los reinos de Castilla y de Aragón*, (1895-1903), vol.4, p.336
[51] Ibid, pp.336-337
[52] Ibid, p.337
[53] In July 1642, Báez and his entire family were arrested by the Inquisition, tortured and tried, victims of rumours of the 'great conspiracy,' participants in the dramatic *auto da fe* of 1649; discussed variously in the works cited.

merchant of his time, does not appear to have traded in indigo.[54] I am tempted to suspect further research might point to a divide between the Portuguese indigo and Florentine cochineal merchants, while the question of specialization among traders on both sides of the Atlantic urges a re-examination of its own.

There is no shortage of trials concerning indigo for the period 1620-1666, and yet one would be hard pressed to find anything new. Most are concerned with the same problems discussed in earlier chapters – merchandise lost or destroyed at sea, disagreements with ship Captains and pursers, confiscations and taxes. An informal overview of those concerning the largest number of crates, however, suggested an important presence of foreigners (as one might expect for the period). The English merchant Richard Sweet (Suit for the Spanish), in particular, with close commercial ties to the Portuguese in Seville, was involved several legal disputes relating to large imports of indigo.[55] A number of records at the Archive of the Indies may illuminate these questions further, while the Portuguese

[54] For the correspondence of Stefantoni Federighi, see AGN, Indiferente Vierrinal, 5845-071: 'Lista de mercancías que se cargaron en navíos, dirigidas al capitán Santi Federigui y a Daniel Federigui,' (1621); AGN, 3269-002, Ciudad de México, Atrisco, Veracruz, puertos de Suramérica, España.- Correspondencia y traslado de efectos y mercancías; habla de paños y diamantes, libranzas entre varios personajes, el capitán Santi Federigui, Pedro Vértiz, y otros,'(1607-1632); Indiferente Virreinal, 0535-016: 'Corresponencia remitida al capitán Santi Federigui por varias personas. Le avisan del recibo de mercancías para su comercio,' (1623-1641); Indiferente Vierrinal 6175-060: 'Cartas personales enviadas al Capitán Santi Federigui en el año de 1639 por Juan Bautista Alarcón, y otros,' (1639); Indiferente Virreinal 6175-055: 'Nueva Veracruz. Cartas personales que envió Pedro de Vértiz al señor Santi Federigui,' (1639), and many others; On Federighi and cochineal, see Hoberman, *Mexico's Merchant Elite*, pp.125-126

[55] AGI, Contratación 179, n.10: 'Contra Ricardo Suit, sobre cobranza de maravedíes resto del remate que se le hizo de unas partidas de añil y achiote que se decomisaron,' (1643); also in AGI, Contratación 4888, 'Remates de víveres, pertrechos, vestuarios y otros efectos, así por cuenta de la Real Hacienda como de particulares, 1554 a 1712,' s/f; for a case of French indigo merchants, see AGI, Contratación 188B, n.22: 'Autos contra Guillermo Gentil, francés, y Francisco de la Roela, sobre haber traído de Indias quince cajones de añil, estándole prohibido,' (1662); Gentil is probably the same as Guillu, involved in an interesting, but poorly preserved trial: AGI, Contratacion 816, n.17: 'Autos del tesorero de la Contratación Melchor Maldonado, con Juan Tolinque, Miguel Grue, flamenco, y Guillermo Guillu, mercader francés, sobre 680.340 maravedíes, resto de una partida de añil, vendida de cuenta de Su Majestad,' (1627). On Richard Sweet, see Studnicki-Gizbert, *A Nation Upon the Ocean Sea*, p.111 and Jessica V. Roitman, *The Same but Different? Intercultural Trade and the Sephardim, 1595-1640*, (2011), p.5; as this last author notes, the existence of such foreign merchants, 'firmly entrenched' in the Portuguese networks, 'raises the issue of network limits.' It would be interesting to pursue the possibility that other categories (a specialization in dyestuffs, perhaps?) could reveal other 'strings' keeping these networks together.

Arquivo Nacional da Torre do Tombo should have much to offer, as a search through its digitalized collection suggested.

After about 1640, and especially towards the 1660s, the Central American (and Asian) indigo trades suffered increasing competition from the British and French West Indies. Yet Guatemala indigo retained its status amongst its various competitors, and the rare *flor tizate*, Central America's highest grade, ranked amongst the finest in European markets. The 'penetration of cotton cloth into European wardrobes,' the 'calico craze'[56] of the last quarter of the century, and European attempts to imitate Asian manufactured goods, in turn, all combined to increase demand for indigo.

As the Atlantic fleet system broke down towards mid-century, Central American producers were forced to ship their goods through the long, overland route to Veracruz, or South to catch the fleet from Tierra Firme, and turned increasingly to the illegal trade with foreigners (often 'Hollanders'), topics that have been discussed at length in the works of Macleod and Molina.[57] In this context, Central American indigo producers and merchants also gravitated towards the intercolonial trade, the large, textile markets of New Spain and the Viceroyalty of Peru, discussed in the chapters that follow.

Conclusion

Portuguese participation in the Far East would soon be overrun by the British and Dutch, yet their role in the first chapter, we might say, of the history of Colonial, New World indigo, between 1580 and 1640, was central to all aspects of the industry and trade. They

---

[56] Riello, *Cotton*, p.115

[57] For dicsussions of the Central American indigo trade after 1650, see Macleod, Spanish Central America, Chapter 20, and José Antonio Fernández Molina, 'Colouring the World in Blue: The Indigo Boom and the Central American Market, 1750-1810,' Ph.D. Thesis, University of Texas at Austin (1992), Chapter one, pp. 13-70

contributed to the dye's reception, the formation of markets for, and accommodation of *añil*, fostering a growing sense of familiarity and willingness to experiment throughout Europe, a 'culture of indigo' diffused through the highly mobile members of the 'Nation.'[58] It is a topic, finally, that pursued further, may offer revealing connections between Asia and the Americas – the movement of knowledge and expertise in the manufacture, commercialization, and application of indigo – filling a noticeable gap in our understanding of the global, Early Modern indigo trade.

[58] Prakash Kumar discusses the concept of a 'culture of indigo' at length in *Indigo Plantations and Science in Colonial India*, (2013); see esp. 'Introduction,' and Chapter one.

Chapter 6

Dyers, Dyeing Sites, and the Circulation of Indigo-Dyed Textiles in the Andes

Even as half a million pounds of indigo reached Europe legally with the Spanish fleet, an unknown quantity was exported through the more reliable, if periodically illegal trade from the ports of Realejo and Acajutla, north to Acapulco or south to Callao. The Pacific trade in Central American indigo remains unexamined; Murdo Macleod turned briefly to the exchange of indigo for wine with Peru in his socioeconomic history of Spanish Central America, but finally concluded on a tentative: 'one suspects that the trade may have been large.'[1] A likely source of demand, he hypothesized further, were the *obrajes* of the Quito highlands: 'various sources refer to this area as an important producer of cheap cloth, and presumably at least some of it was dyed.'[2] The discussion that follows will hopefully illustrate just how much of it was, in fact, dyed with indigo – at times in combination with other dyes to produce blacks, greens, and purples, but overwhelmingly for the manufacture of ordinary, blue woollen textiles.

In their earliest encounters with the natives, and across the Indies, Europeans 'found men and women spinning thread and weaving cloth';[3] Toribio de Benavente, Hernán Cortés, Bernal Díaz del Castillo, and countless others would comment on the prodigious weaving skills of the Indians, their ceaseless dedication to the production of cloth. Into this 'web of weavers', wool, the treadle loom and spinning wheel were introduced, and with them larger production units where – in a significant transition for most, if not all regions – men replaced women at the loom.[4] The raw materials, and in particular the dyes employed, however, could vary significantly between regions; indigo, as discussed in Chapter one, was a

[1] Macleod, *Spanish Central America*, p.195
[2] Ibid.
[3] Arnold J. Bauer, *Power, Goods, History: Latin America's Material Culture* (2001), p.105
[4] For a list of all technologies introduced to the sector, see Salvucci, *Textiles and Capitalism*, p.48

familiar dye for the Maya and Mexica, but rare in pre-Colonial Andean textiles.[5] Bernabé Cobo noted the use of *Muelenbeckia volcanica* flowers to dye blue, and other indigotin-containing plants might have grown wild in the region; but blue remained, at most, a secondary colour. [6]

This changed dramatically over the course of the second half of the sixteenth century, as a local textile industry under Spanish administration developed, and the interregional trade in colonial dyestuffs expanded. A relative scarcity of blue dyes in New Spain was resolved within a few decades of discovery: indigo production boomed on the Pacific coast of Central America, and by the 1590s, as Ida Altman's work has drawn attention to, *Poblano* merchants (often *obrajeros*) were importing Guatemalan indigo on a regular basis. Prices reflected this evolution: between 1563 and 1577, the price of indigo decreased from an approximate 8 pesos the pound, as Pedro de Ledesma would claim to the Crown, to 1.5 - 2 *pesos*, a price maintained throughout the 1590s.[7]

While the Atlantic trade was booming, producers in the *Audiencia de Guatemala* may have been content to limit their exports through the Pacific ports, but turned increasingly to the Viceroyalty of Peru as the Indies Fleet called ever less frequently at the Honduran ports. As the Cabildo for the City of Santiago de Guatemala would complain in 1659: it had been

---

[5] Elena Phipps, 'Textile Colors and Colorants in the Andes,' in G. Wolf, J. Connors and L.A. Waldman (eds.), *Colors between Two Worlds: The Florentine Codex of Bernardino de Sahagún* (2011), p. 270

[6] Siracusano presents the theory that indigo produced locally in the Andean region supplied local demand – a comment altogether at odds with the existing literature on the topic. The Argentine historian continues on a confusing note: 'although it is difficult to state precisely from where the *añil* used by painters in centres such as Cuzco or Potosí came, I am tempted to think that, except in the workshops of prestigious painters whose patrons provided top quality *añil*, the indigo may have come from local markets, given the great demand for it.' Indigo may have been produced in colonial Tucumán, and elsewhere in the Andes in small quantities, but hardly on a scale large enough to accommodate demand in the Viceroyalty! In Gabriela Siracusano, *Pigments and Power in the Andes: From the Material to the Symbolic in Andean Cultural Practices, 1500-1800*, (2011), pp.14-16; see also Chapter one of this thesis for references to the absence of indigo in the pre-Colonial Andes.

[7] 'Capítulos que dirige al rey Pedro de Ledesma, sobre las cosas que conviene proveer en Nueva España para engrandecimiento del país y aumento de la Real Hacienda' (1563), AGI, MEXICO 168. In *Colección de Documentos Inéditos para la Historia de Ibero-América* (Madrid, 1927-32), vol. 1, pp. 377-385; see prices in Viqueira, pp.336-3369

more than twenty years since vessels had reached the Atlantic ports regularly from Spain, because of 'the infestation of enemies that infest these Northern coasts,' so they now pleaded with the Crown to grant them licence to trade with Peru, in particular with *tinta añir*, 'a noble article, well known in all of Europe.'[8]

Although commercial exchanges between Santiago and Lima was periodically banned or otherwise restricted over the course of the seventeenth century – generally with aim at protecting Spanish wine from its Peruvian competitors – during intermediate periods, when a limited number of vessels were allowed to trade legally between regions, indigo figured centrally in the exchanges. So, for example, at dawn on November 27th 1630, news reached Lima that Fulano Bravo's ship had reached the nearby port of Paita from Nicaragua, 'full of indigo, but very damaged.'[9] Some years later, the vessel 'La Bendición de Dios reached the port of Trujillo, heavily loaded with *frutos de la tierra*, above all indigo.[10] Legally and illegally, we may assume, Central American indigo supplied the growing demands of the cloth producing sectors of Quito, Cuzco, and Trujillo.

The vast literature on Colonial Latin American textiles has focused on production in the large *obrajes* of New Spain and Peru, with an emphasis on the former, albeit the smaller producer of cloth. Despite the existence of numerous other production units – the *trapiches* and *telares* of New Spain, or the later *chorrillos* in Peru – the *obraje* (and the problematic of its 'industrial potential'[11]) has inspired the larger share of scholarly activity. By the mid sixteenth century, workshops of this kind had been established in Mexico City, Puebla, Tlaxcala, and

[8] 'Género tan noble cuanto conocido en toda Europa,' in Rubio Sánchez, Manuel, *Historia del Añil,* vol. 1, p.231
[9] 'Cargado de tinta, pero muy maltrecho.' Cited in Rubio Sánchez, *Historia del Añil,* vol. 1, p.227, from Juan Antonio Serardo, *Diario de Lima* (1629-1634).
[10] Rubio Sánchez, Manuel, *Historia del Añil,* pp.230-231
[11] Richard Salvucci, 'Las manufacturas en Hispanoamérica,' in A. Castillero Calvo and A.J. Kuethe (eds.), *Historia general de América Latina, Vol. 3 Tomo I, Consolidación del orden colonial* (2000), p.251

Texcoco, with later manufacturing centres developing in Valladolid and Queretaro.[12]

The Andean workshops of Quito and Cuzco were introduced around 1570, and grew in number and size over the following century, in contrast to their Mexican counterparts, that suffered a gradual, but decisive decline.[13] The evolution of the *obrajes,* or the parallel (but distinct) development of smaller manufacturing units are immense, exhaustively researched topics that may (carefully) be set aside; in the production of cheaper fabrics, materials and techniques, as various historians have noted, remained surprisingly unchanged well into the eighteenth century.[14]

The discussion that follows approaches the vast and complex historiography of textile production in the Viceroyalty of Peru with a very limited objective: to look at the availability and use of indigo – dyers, dyeing sites, and methods – with an emphasis on larger production units, the *obrajes* of Quito and Cuzco. While sources are limited, the presence of indigo in small and medium sized workshops, within domestic and communal settings is considered briefly. Reviewing more familiar ground, the circulation and commercialization of domestically produced indigo-dyed textiles are explored throughout.



Their fundamental role in the manufacture of textiles notwithstanding, dyes have figured marginally in studies of the Colonial textile industry; we still know surprisingly little about the individuals, sites, and technologies involved in dyeing, or the movement and transmission of this knowledge, an absence that is particularly acute for the seventeenth

[12] Salvucci, 'Las manufacturas,' pp. 257-260
[13] Manuel Miño Grijalva, 'La manufactura colonial: aspectos comparativos entre el obraje andino y el novohispano,' in H. Bonilla (ed.), *El sistema colonial en la América española* (1991), pp. 135-142
[14] Neus Escandell-Tur, *Producción y comercio de tejidos coloniales: los obrajes y chorrillos del Cusco 1570-1820* (1997), pp.24-25; see also Salvucci, op. cit, p.43

century. In New Spain, the *obrajes* and smaller *trapiches* (similarly organized, but with fewer looms), both housed dyeing facilities in one, and towards the eighteenth century often two specialized rooms (*salas de tinte*);[15] similar arrangements were made in the Andean *obrajes* and later *chorrillos*.[16] Dyeing supplies were stored in warehouses on the premises where (in the case of indigo at least), it would have been important to avoid humidity.[17] While the workshops often integrated all aspects of textile production, the dyeing process was not always carried out within the establishment; in both regions, it was common for the *obrajes* to purchase dyed wool from smaller production units, or organize the dyeing of unfinished textiles on a putting out system, eventually with independent, specialized dyeing units (the *obradores de tinte*, for example). There were other alternatives: units with dyeing facilities could also buy unfinished, undyed fabric from native weavers to dye and finish at their own establishment.[18]

Louisa Hoberman has identified cases of full vertical integration for New Spain, where *obrajeros* financed the cultivation and manufacture of indigo (or cochineal), employing these dyes in their workshops, but this does not appear to have been the case in the Andes, where there is scant evidence of indigo production or cultivation, even though the Central American *indigofera suffructicosa* species was transplanted to the region during the colonial period. Dyestuffs (indigo, brazilwood, and cochineal) were among the few imported materials at these workshops, especially where they were set up on *haciendas*, organized to supply most necessities.

---

[15] See, for example, Edmundo O'Gorman, 'El trabajo industrial en la Nueva España a mediados del siglo XVII: Visita a los obrajes de paños en la jurisdicción de Coyoacán,' *Boletin del Archivo General de la Nación*, 11:1 (1940), pp.78-81

[16] Escandell-Tur, *Producción y comercio,* p.38

[17] Ibid, pp. 34-35

[18] For the Andean region, see Escandell-Tur, *Producción y comercio,* p. 216

In a thoroughly researched study of the textile industry in colonial Cuzco, Neus Escandell-Tur compiled figures for yearly expenditures on dyes at a number of *obrajes* and *chorrillos* between 1768 and 1787; on average, indigo accounted for 95% of these expenses, usually representing between seven and ten per cent of yearly expenditures at the workshop. 'Doubtless,' Escandell-Tur concluded, 'indigo was the most extensively used dyestuff in the *obrajes* and *chorrillos* of Cuzco, generating more commercial movement than any other dye in the regional markets.'[19] The dye reached Cuzco from Lima and (in smaller volumes), Arequipa, commercialized by the same merchants (often administrative officials) dealing in '*efectos de Castilla*.' The *obrajes*, these exchanges suggest, rarely purchased the dye directly, while smaller production units remained dependant on lesser and itinerant merchants.[20] While these are rather late examples, it seems likely the diversity of dyeing sites and commercial arrangements made for the dyeing of cloth developed over the second half of the seventeenth century, if not earlier, as supplies of indigo in the region increased.

In Quito, as Macleod suspected, indigo rapidly came to occupy a central role at the *obrajes*. This is especially evident in the *Ordenanzas* of the *oidor* Matías de Peralta, transcribed and published by Javier Ortiz de la Tabla Ducasse,[21] which also incorporate the rare 'technical and administrative directions,'[22] providing a detailed view of the dyeing process usually absent from surviving sources of this kind. After a disappointing visit to the workshops of the highland district of Riobamba in 1620, Peralta redacted a set of labour regulations and guidelines for the production of textiles in the *obrajes* of Quito that would

[19] Escandell-Tur, *Producción y comercio,* p. 196: 'Sin duda el añil fue la materia tintorea mas extendida en los obrajes y chorrillos del Cusco y el que dio lugar al mayor movimiento comercial de todos los tintes en el mercado regional cusqueño.' Tables on pp. 199-200

[20] Ibid, pp. 239-250

[21] Javier Ortiz de la Tabla Ducasse, 'Las ordenanzas de obrajes de Matias de Peralta para la Audencia de Quito, 1621: régimen laboral de los centros textiles coloniales ecuatorianos,' *Anuario de Estudios Americanos*, vol. 33, 1976, pp. 875-931

[22] Miño Grijalva, 'La manufactura colonial', p.104

remain in vigour, or at least unreplaced until the mid eighteenth century.[23] As early as 1621, the larger part of the dyeing process and facilities destined to this activity, were occupied with indigo.

The organization of labour in the dyeing sector would be as follows: *moledores* were charged with the initial task of grinding the dye (which in fact seems to have referred exclusively to indigo), *tintoreros* (dyers) dealt with indigo, while *tintoreros de paila* (who worked with smaller vats), were responsible for 'purples, greens, and reds.' In New Spain, the distinction was drawn between the larger *tinacos*, and smaller *pailas*, most likely similarly employed.[24] A *maestro tintorero*, finally, assessed and approved the materials before they could be used, and generally oversaw the process. Excepting the *maestro*, the remaining three types of workers were broadly categorized as *tintoreros*, with a salary of 24 *patacones* yearly, slightly more than the lowest stipulated wages (18 *patacones*), for washers, spinners, weavers, carders, and various others.[25]

Indigo dyers were each assigned three vats, and for each of these two and a half arrobas of wool (62.5 pounds). After an initial immersion, the wool was removed from the vat once a day, wrung over the vat and re-immersed ('refreshed') until the *maestro* determined an appropriate shade had been achieved. The slow, gradual process of indigo dyeing, the *Ordenanzas* seemed to acknowledge, cannot be rushed; 'unlike other dyes,' as Jenny Balfour Paul has clarified, 'the subtlest and deepest shades (of indigo) can only be produced by multiple immersions in the vat to build up layers of colour through stages of dyeing and oxidation... there are no short cuts, as dyers with a true feel for indigo soon come to

[23] The profusion of dyer's manuals in eighteenth century Europe (examined in the following section), has no parallel in the Spanish Americas; so it may be unsurprising, that after a 'disagreeable' visit to the workshops, Alexander von Humboldt should have commented on the 'extreme imperfection of their technical operations in the preparation of dyes.'

[24] Miño Grijalva, 'La manufactura colonial', pp.118-119: 'Composición técnica de varios obrajes coloniales' (table)

[25] The indigo miller is mentioned in Salvucci, *Texiles and Capitalism*, p.125, n.161

appreciate.'[26] 'No other dyestuff but indigo,'[27] Peralta's regulations finally established, was to be used in these vats.

The instructions imply, further, that indigo vats were 'kept alive' or nurtured for several days, if not weeks at a time, which would have required some expertise and various organic additives, regrettably unspecified. Dyeing, in this case, was done directly on the fleece, in contrast to the *tintoreros de paila* who worked with cloth, immersing the unfinished fabric woven in indigo-dyed yarn into a new vat. While dyeing straight onto fleece seems to have been the norm with indigo in New Spain as in Peru, spun yarn, unfinished or finished cloth could also be immersed in the vat. A visual example of the process is included in Martinez Compañon's *Trujillo del Peru*, where bolts of cloth, rather than carded fleece are being removed from the *tinaco* (fig. 6.1). Yet the collection of watercolours also highlights the dyeing of raw fleece, as indicated by various images of Indian women spinning blue wool (figs. 6.2 and 6.3).

In the spirit of organizing production along more efficient lines, because one of the 'greatest differences and controversies in the *obrajes* has been to determine the *arrobas* of wool and pounds of dye (to be consumed) for each *paño*, Peralta would also lay out a set of suggested proportions. Having discussed and conferred on the matter with maestros 'in all the province,'[28] the *oidor* established a maximum of 15 arrobas of raw wool per *paño*, from which an *arroba* of 'waste' should be discarded, and the remaining fourteen *arrobas* washed and cleaned – processes that would reduce the fleece to a final six and a half to seven arrobas. As for the regulation of dyes, and the amount to be used for each *paño*, Peralta

[26] Balfour Paul, *Indigo*, p.117
[27] Ducasse, 'Las Ordenanzas,' p.41
[28] Ibid, p.35

would only refer to indigo. Quantity was determined by the desired colour and quality of the fabric:[29]

CLOTH	POUNDS OF INDIGO FROM NICARAGUA (per paño)[30]
Fine blue cloth	5
Ordinary blue cloth	4
Dark green cloth overdyed on blue	4
Lemon green cloth (boiler)	3.5
Green palmilla (coarse woollen cloth)	4
Fine blue florentin cloth	4.5
Ordinary blue florentin cloth	3.5
Ordinary *morisquillo* cloth	4
Ordinary mixed colour cloth in blue.[31]	3.5

The greens would have been achieved with an additional yellow dye, from any of several plants, including the flowers of the pepper tree (Schinus molle L.), and *misuca,* 'a small flower like chamomile', described by the Jesuit Ludovico Bertonio.

The costs of production are difficult to estimate – as Salvucci has noted: 'measures of cloth in colonial Mexico fluctuated from one place to another and from year to year.'[32] We may point, however, to a list of materials used in the production of a *cuarterón de paño azul* (translation) in the eighteenth-century *obrajes* of Querétaro: as itemized by Salvucci, wool represented an approximate 52 per cent of the total cost of production, with indigo accounting for a slight 12 per cent.[33]

Peralta also provided general guidelines for the allocation of colour: for each one hundred *paños*, there should be:

[29] The list has been tabulated in Ducasse, 'Las Ordenanzas,' p.892; my translation
[30] As described in an Appendix on 'The Measurement of Cloth,' in Salvucci, *Textiles and Capitalism*, p.177, a *paño* might measure anywhere from 30 to 80 *varas* (an approximate yard). Rough figures for a variety of textiles are included.
[31] Brown and blue?
[32] Salvucci, *Textiles and Capitalism*, p.177
[33] Ibid, p.44

- 20 fine and 10 ordinary blue paños
- 6 fine and 2 ordinary green paños
- 10 paños morisquillos
- 10 brown paños
- 16 paños in different combinations.[34]

Examples of late sixteenth century registers of sales for wool in the Puebla/Tlaxcala basin, included in Carmen Viqueira and José Ignacio Urquiola's study of the *obrajes* of New Spain, suggest a similar preponderance of blue in distribution. So, for example, in 1593, Hernán Sanchez, an *obrajero* in Cholula, acquired four arrobas of indigo and eight *paños*: six blue, one green, and one yellow (all but the yellow would have been dyed using indigo). A year later, the *obrajera* María de la Paz acquired 700 arrobas of wool for a total of 875 pesos that she would repay in blue says, at 3.5 *reales* the yard (*vara*).[35] In 1588, Hernán Báez Martínez delivered 12 paños to Pedro de Mayrena: six blue, three mixed, two brown, and one *aceituno* (all dyed with indigo).[36] In a later example, the *obrajero* Jacome Pasalli sold the following yards of cloth in 1618: two blue *paños* (80 *varas*), one mixed *paño* (38 *varas*), most likely in blue and brown, and one brown *paño* (38 *varas*).[37] Numerous transactions described for Tlaxcala list the purchase of indigo or its use as payment in kind – it seems odd, in fact, that the authors should not have remarked on the preponderance of blue (and indigo) in the transactions described.

The commercialization of all this blue cloth took one of many paths; the markets for cheap textiles, discussed at length by Salvucci, differed substantially between regions and by production unit. The owners of production units large and small incurred in trade, selling the cloth produced at their establishment directly to the haciendas, or from stalls and shops in urban and rural settings. Making cloth could be cheaper than buying it, and some *haciendas*

[34] Ducasse, 'Las ordenanzas de obrajes de Matias de Peralta,' p. 39, no.47
[35] Viqueira, *Los obrajes en la Nueva España*, p.335
[36] Ibid, pp.336-337
[37] Ibid, p. 339

produced their own for Indian workers and slaves. Wholesalers, lesser merchants, and an army of itinerant tradesmen distributed the cloth throughout.[38] Final consumers, in the words of José del Campillo y Cosío, were 'poor Indians, but also Spaniards of middling means.'[39]

An inventory for the store of Juan Agudo[40], recorded after his death in 1641 at the mining community of San Joseph del Parral, in northern New Spain presents an illustrative example of the presence of indigo-dyed textiles of various origins, artisanal and workshop productions, providing us with a better sense, finally, of who consumed these articles. Limiting our observations to items related to the textile and clothing sectors, Agudo carried an assortment of ordinary finished garments: worsted suits, plain *naguas*, stockings and gloves, for women, men, and children. More luxurious items included several yards of Chinese silk (striped red and black), a pair of woollen sleeves embroidered with green silk, and some pink taffeta from Castile. The domestic yardage included:

- 11 yards of paño azul común
- 12 yards of blue serge and 'monks cloth' (*paño frailesco*)
- 13 yards of canvas (brin) [probably undyed]

All of these, as Boyd-Bowman has observed, were 'suitable for miners' work clothes in the rugged hills around Parral;'[41] they were also, for the most part, blue. Indigo was likely present, moreover, in the important number of blankets and wraps (*mantas* and *frezadillas*, the later *sarapes*). Some of the other ordinary items might have been dyed with indigo, and

[38] Evidence of these ordinary blue textiles isn't always forthcoming: while blankets and other textiles are listed in inventories for *obrajes*, colour is rarely specified; the same is often true for the inventories of stores, especially in relation to domestic cloth, and of course, ordinary household items are usually low on the list of objects to itemize in wills and dowries. Some of the more interesting evidence for the prevalence of blue textiles, as later sections will develop, is in fact pictorial.
[39] Cited in Salvucci, *Textiles and Capitalism*, p.9
[40] Published in English in Peter Boyd-Bowman, 'Two Country Stores in XVIIth Century Mexico,' *The Americas*, vol. 28 no. 3, 1972, pp. 241-246
[41] Boyd-Bowman, 'Two Country Stores,' p.239

incorporating another dimension of trade, so would the pair of 'blue taffeta garters from China.' A preponderance of simpler fashions suggests the humbler status of Agudo's clients – 'country people, Spaniards, Indians and others on the haciendas and in the mines,'[42] requiring warm, *paño común* for the winter.

A second example, this time from the notarial archives of Cuenca, is transcribed in Ross Jamieson's 'Bolts of Cloth: Impressions of Caste in the Material Culture of the Seventeenth Century Audiencia of Quito': Included in Lieutenant Juan de Lusuriaga's will, recorded in 1696, was an inventory for 'two locked leather trunks' belonging to the *forastero* Juan Clemente de Bustamante. Either at a stall in the central plaza facing Lusuriaga's home, or more likely as an itinerant salesman (in *tiendas* or *cajones*), Bustamante sold a wide array of local and imported fabrics, tailoring supplies (scissors, coloured threads, and sewing needles), a few finished clothing items (socks and shawls), and a variety of lace, silk and satin ribbons, pieces of false gold *sevillaneta*, and other decorative trims. The few goods that seemed unrelated to clothing and attire included half a pound of cumin seeds, paper notebooks, Dutch locks with their keys, and knives of the same origin.

A number of pictorial references from the *casta* paintings of New Spain suggest the context these goods might have been sold in, even the physical appearance of the crates and merchandise. José Gil Buenaventura's *De español e india nace mestiza* (fig. 6.4), depicts a near identical collection of items: strapped to the male figure's shoulders is an open chest displaying several pairs of scissors and fold-out knives, packets in different sizes (of needles, perhaps), and bright ribbons of the same kind used to decorate his wife's *huipil*. In his right hand, the Spaniard holds a wooden measuring stick with notches burnt or carved on the side

[42] Cited in Salvucci, *Textiles and Capitalism*, p.58

(listed among Bustamante's goods as a 'measuring stick with hinges'[43]), employed either for the ribbons and lace, or cloth.

Salesmen with their *cajones* of goods are fairly common subjects in *casta* painting: in another example, Luis Berrueco's *Cambujo con india, sale albarazado* (fig. 6.5) shows two larger crates (like Bustamante's, perhaps) one being used as a seat by the Cambujo. Another frequent scene depicted the cloth merchant with long pieces of fabric (usually striped in blue or red and white) slung over his shoulders, and a measuring stick in his hand. The amount of cloth in Bustamante's crates was substantial; the finer silks and cottons had been imported from Spain, France, and the Italian Peninsula, but the bulk of fabrics were ordinary, locally produced woollens:

> - 47.5 *varas* of bayeta de la tierra azul de la angosta [local plain-weave wool, dyed with indigo, narrow]
> - 18 *varas* of bayeta azul de Quito [indigo-dyed Quito plain-weave wool]
> - 14 *varas* of cristal mezcla verdosa [green lustrous wool cloth]
> - 12.25 *varas* of pelo de camello de la angosta tornasol [narrow iridescent "camlet" cloth]
> - 8 *varas* camello de rosa seca de la angosta [narrow pink camlet cloth][44]

The remaining, imported fabrics in his possession were mostly silks from Spain, France, and the Italian Peninsula, but a few woollens were included: purple and green *bayeta* from Castile which, by this time, would also have been dyed with indigo. Why so much blue cloth? Demand, as the following section develops, was probably related to its use for larger items: skirts, cloaks, and breeches.

Bustamante's belongings also included 'two leather bags of *tinta añil*, weighing 24 pounds with the bags,' a reminder that indigo could also be sold for domestic use. 'It is rare,' as Escandell-Tur has noted, 'to find an inventory for a store, however small, that does not

---

[43] Ross W. Jamieson, 'Bolts of Cloth and Sherds of Pottery: Impressions of Caste in the Material Culture of the Seventeenth Century Audiencia of Quito,' *The Americas*, 60:3 (2004), p.443
[44] Ibid, pp.441-442

include dyes.'[45] The regular presence of indigo in store inventories from both regions and throughout the period suggests just how common it may have been for the lower classes to dye (and especially re-dye) their garments in indigo.[46] *Añil* is more common in these inventories than any other dye; cochineal, for example, is rarely if ever listed. Dyeing with indigo might have required skills and knowledge, but (as one of few substantive dyes) did not demand the use of metallic salts or mordants, and was therefore more adaptable to a domestic setting. These records may also illuminate the ways in which these ordinary blue textiles were incorporated into the wardrobes of the lower classes, humbler fashions that, somewhat unexpectedly, circulated throughout vast regions practically unchanged.

Sebastiana da Isla, a woman of African descent residing in Cuenca, Ecuador, included the following items of clothing in her will, redacted in 1690 – it seemed best to cite these in full, that the reader might get a better sense of just how important indigo-dyed textiles were to the whole of her wardrobe:

> - 8 worn *camisas de lienzo de la tierra* [shirts of local plain-weave cotton cloth] labrada con lana de diferentes colores [with multicoloured wool decoration]
> - 4 worn enaguas [slips/petticoats] of the same material
> - 2 new lligllas [shawls] of *bayeta ancha de la tierra* [wide local plain-weave wool cloth], one blue with vueltas de tafetan amarilla [yellow taffeta bands], the other black with tafetan rosada [pink taffeta]
> - 2 worn *polleras de bayeta de la tierra* [skirts of local plain-weave wool], one mora [purple] with three *vueltas de sevillaneta de oro falsa* [bands of false gold sevillaneta cloth], the other azul [indigo-dyed], decorated with a band of false gold sevillaneta cloth

[45] Escandell-Tur, *Producción y comercio,* p. ' Raro es encontrar algun inventario de tienda, por pequeña que sea, que no incluya tintes.'

[46] See, for example: AGN, INDIFERENTE VIRREINAL, CAJA 2370, EXP. 008: 'Libro donde se asentaron las deudas sobre mercancías diversas como jarros, colchones, baúles, cacao, azúcar, mantas, canela, tabaco, añil, entre otros, perteneciente a Andrés García que probablemente perteneció a una pulpería.' (Mexico, 1707); AGN, INDIFERENTE VIRREINAL, CAJA 0962, EXP. 011: 'Inventario de una tienda de mercaderias en el Real Minas de Pachuca, de propiedad de Nicolas de Vía Romano' (Mexico, 1687); AGN, INDIFERENTE VIRREINAL, CAJA 6006, EXP. 005: 'Inventario de los géneros y mercancías que presenta el mercader Manuel de Montes, perteneciente a su tienda, al corregidor de esta Ciudad Don Juan Nuñez de Villavisencio' (Mexico, 1688); AGN, INDIFERENTE VIRREINAL, CAJA 4735, EXP. 006: 'Inventario de la tienda de Doña Leonor Gausin difunta y su hijo Bernardo Pasalle natural de Tescuco pide censuras de los bienes heredados, (México, 1675).

> - 1 *paño de lienzo de la tierra* [shawl of plain-weave cotton] *listado con lana azul* [with indigo wool stripes], 3 varas in size.[47]

Of her two *polleras*, the blue with a single gold band was likely for everyday use, while the more costly purple with added bands could have been reserved for religious rites or festivities. The more extravagant purple, however, had also been achieved with indigo, probably in combination with a native red dyestuff.

Identical skirts – blue with a band of gold *sevillaneta* – may readily be found in *casta* paintings, often (perhaps not coincidentally), on women of African descent, as in figures 6.6 and 6.7. These were also imitations of more luxurious fashions; the far more important wardrobe of the '*morena libre*' Juana Barba, notarized in Lima in 1651, included a blue *mantellina* or *mantilla*, with three gold bands of *sevillaneta* that make no mention of being *falsa*. We may further remark upon the evident similarities between Sebastiana's blue skirt, and the dress worn by Margaret of Spain in Diego Velázquez' *La Infanta Margarita Vestida de Azul* (1659), while an even closer version can be seen in Denijs Van Alsloot's earlier vision of Antwerp: *Skating Masquerade, or Carnival on Ice at the Kipdorppoort Moats,* c.1620 (fig. 6.8). Were it not for the documentary evidence, one might readily reach the conclusion that this particular skirt was an artistic recourse rather than a fixture of the Early Modern wardrobe. Sebastiana's very large, striped shawl in wool and cotton also has its parallels: the beautiful example worn by the *Española* in figure 6.9, attributed to José de Ibarra, or the simpler version worn by an *Albina* in figure 6.10.

These coincidences are remarkable; the shawl and skirt are fairly ordinary items of clothing, and even as imitations of elite fashions, they implied similar adaptations by the lower classes, the more so in an age when clothes were mostly confectioned at the home.

[47] Jamieson, 'Bolts of Cloth,' pp.438-439

Through men such as Bustamante, perhaps, who sold copious amounts of blue *paño*, but also carried false gold *sevillaneta*, ideas about fashion, taste, and beauty could circulate throughout the Viceroyalties of New Spain and Peru, to influence the material self-fashioning of women of different classes, racial or ethnic identities. Less surprising, perhaps, is the persistence of these particular items – in the case of the blue skirt with a gold band, over half a century – notably more lasting than elite fashions.

A recent doctoral dissertation reviewing the presence of colour and dyestuffs on surviving textile fragments from the archaeological site of Magdalena de Cao Viejo, on the northern Peruvian coast, concluded blue was 'the dominant dyed colour' at the location. The colonial town – with a layout suggesting a *reducción* – was inhabited from 1578 to 1712 by a predominantly Indian population. The prevalence of very similar shades of blue among cotton fragments (particularly cotton) belonging to different clothing items, Brezine has noted, may point to the standardized dyeing (of yarn or yardage) at larger workshops, but the availability of 'a few local indigo vats for communal use,'[48] as she suggests, is also likely, perhaps even the seasonal, collective dyeing and re-dyeing of garments. We may note that indigo's introduction to the Andean *obrajes,* even its domestic use by the indigenous involved a more significant transmission or 'dispersal of knowledge'[49] than in New Spain, learning dyeing practices that required skill, and a basic understanding of the workings of indigo.[50]

The use of indigo in small and domestic production units is illustrated in two scenes from Martinez Compañon's *Trujillo del Peru*: '*Noques de tinte azul*,' and '*Yndios tiñendo lana'* (figs. 6.11 and 6.12). The first depicts a man stirring one of three vats filled with indigo next to a

[48] Carrie J. Brezine, *Dress, Technology and Identity in Colonial Peru.* PhD diss., Cambridge Mass., Harvard University (2011), p.172
[49] Kumar, *Indigo Plantations,* p.26
[50] Until the 1970s, indigenous communities in Ecuador were employing natural indigo from El Salvador in traditional textiles, 'using no less than twelve ingredients in their dye vats,' in Balfour-Paul, *Indigo*, p.121

building, presumably housing dyeing facilities and materials. The second shows a man bending over a similar vat, introducing a piece from a pile of fleece at his side into a small container in the ground with his bare hands. A woman and child stand beside him, while an oversized cat rests on a pile of logs next to the same structure as before. The man's hands and nails, we may imagine, would have been stained a dark blue, and only gradually rub off; even in subtle ways, as the Indian poor gained access to dyes (and colour), it served the somewhat paradoxical purpose of differentiating them further from the elite.

Conclusion

In terms of commercialization and consumption, the historiography of natural dyestuffs from the Spanish Americas has focused on the export trade; we know far less about the colonial use of indigo, logwood, cochineal, or brazilwood in the textile production units of New Spain and Peru, than we do about their introduction and manipulation at the dye houses and workshops of Europe.[51] Limited source material, and considerably less evidence of methodical experimentation in Latin America has contributed to this gap, but the absence may also be attributed to the priorities of scholars: interest in colour and dyestuffs has usually been the field of anthropologists or historians concerned with the Native world.

This brief narrative can only outline some of the more general aspects of indigo dyeing in the textile producing sectors of the Viceroyalty, yet the evidence points to a widespread, prevalent use of the dye in production units large and small – from the *obrajes* to the domestic rural setting – by the first quarter of the seventeenth century; a conclusion that

[51] For an insightful, masterfully researched study of American dyestuffs in 18th and 19thC Europe, see: Agustín Nieto-Galán, *Colouring Textiles: A History of Natural Dyestuffs in Industrial Europe* (2001)

may tentatively be extended to New Spain. Indigo was a relatively inexpensive product with several advantages: a substantive dye, its colour fixes naturally to the fabric or fleece without requiring a mordant. In contrast, the making of red, yellow, black, and green cloth would all have demanded additional materials, expertise, and facilities. *Añil* provided, further, a base over which purples, greens, and blacks could be achieved with added dyestuffs – it was therefore in many ways a base colour, its presence especially important in units that made cheaper fabrics, and therefore immediately visible in the basic, utilitarian clothing of the poor.

Chapter 7

Poor Man's Blues: Colour, Clothing, and Race in New Spain

In 1774, after a decade of travels between Cádiz and Mexico, the merchant Pedro Alonso O'Crowley, born in Spain to Irish parents, described his impressions of the 'common Indian':

> Burdened by the yoke of servitude and mistreatment, along with their known indolence and drunkenness, they constitute the lowest class of mortals known... most are stupid, without letters or cultivation, and it is difficult to tell whether their meekness and humility arise naturally, or from the miserable state in which they live…[52]

There was therefore 'little to be said about their customs and clothes,' but the latter merited a few more words:

> In the cold and temperate climates, the common men wear a jacket (*chamarreta*) and breeches (*calzón largo*) made of coarse wool, usually of a blue colour. In warm climates, the same clothing is worn, but made of cotton. The most important garment for women is their Quipil, in the manner of a short surplice, decorated with trims dyed red at the seams. (They wear) blue skirts (*naguas*), but are always barefoot…[53]

These male and female attires, along with similar suggestions regarding the uncivilized state of their wearers are reproduced in fig. 7.1, a *casta* painting contemporary with O'Crowley's visits to New Spain. The violent scene depicts the union of an *India* with a *Chamizo* (predominantly of Indian descent with a somewhat removed African ancestor, an

[52] 'El común de los indios agobiados al yugo de la servidumbre y mal trato, junto con su conocida indolencia y embriaguez las constituye la mas infima clase de mortales que se conocen, de poco sirve el que sobresalga tal cual, cuando la mayoria son estúpidos sin letras ni cultivo de gentes, siendo problemático si su mucha mandesumbre y humildad, provienen de índole natural o del miserable estado en que viven... O'Crowley, R. A. *Idea compendiosa del Reino de la Nueva España.* (1744); facsímil, BN MSS/4532, folio 150. For biographical notes on O'Crowley, see: Wauchope, Robert, Ed, *Handbook of Middle American Indians: A Guide to Ethnohistorical Sources* (1964-1976), vol. 13, p.63

[53] De lo dicho se evidencia lo poco que hay que discurrir de sus trajes y costumbres... el común de los hombres visten una Chamarreta y Calzón largo de paño burdo, por lo regular de color azul; esto es en paises frios y templados; que en los cálidos, usan el mismo ropaje de lienzo de algodón o crudo; el mayor ornato de las mujeres es su Quipil de algodón a modo de sobre pellíz corta, con guarnición de tinta encarnada en las costuras. Naguas de sarga azul, pero siempre descalzas de píes y piernas.' Ibid, fol.150

influence conveyed through the subject's violent temper),[54] dressed in various worn garments made of the same, plain blue fabric.

Printed a few decades before O'Crowley's *Idea Compendiosa*, Juan and Ulloa's account of their geodesic expedition to South America would also include a few remarks on the fashions of the poor:

> The dress of the mestizos is all blue, and of *paño de la tierra*; and although Spaniards of the lower spheres seek to distinguish themselves, either through colour or quality, there is usually little difference between them.[55]

The implications were twofold: *mestizos* dressed in cheap, indigo-dyed woollens, which the poor or middling (but Spanish) tried actively to avoid – cloth *and* colour could reinforce social class, ethnic or racial identity. While this may seem obvious for an age that was slowly abandoning but (especially in the case of Spain and her territories) still retained sumptuary legislation, colour remains one of the least explored aspects of clothing.

The recent, academic turn towards consumption has not escaped historians concerned with the Americas, but here as well, studies have favoured luxury items: imported fabrics, European or Asian-inspired designs and motifs, usually examined within the frame of developing consumption patterns and changes in demand, or colonial extensions of the eighteenth-century luxury debates. Focusing on textiles rather than colour as the defining element of luxury, however, dyeing materials – the value or meaning they might affix to a garment – have been overlooked. Nor have historians extended the caring attention devoted

---

[54] A *chamizo* resulted from the following sequence of unions: A Negro with an India had a Lobo son. With an India/o the Lobo/a had a Sambaigo/a, who, again with an India/o, had an Albarazado/a. In a final step, the Albarazado/a and an India produced a Chamizo.

[55] 'El vestuario de los mestizos es todo el azul, y de paño de la tierra; y aunque los Españoles de baxa esfera procuran distinguirse de ellos, o bien por el color, o por la calidad, lo comun es, que entre unos y otros haya poca diferencia.' Jorge Juan and Antonio de Ulloa, *Relación histórica del viage a la America Meridional* (1748), vol.1, book V, ch.5, no.652, p.366

towards calicoes and chintzes to the ordinary, coarse textiles (bays, says, friezes, and serges) worn by the poor and middling.[56]

Even as supply increased and prices fell on imported cottons in the first third of the eighteenth century, and despite a preference among all classes for foreign textiles, only a small percentage of the population had access to these fashions (and this, in varying degrees), well into the eighteenth century. As Salvucci has noted for New Spain, 'the market for imported luxury goods was no more than a million persons, or seventeen per cent of the population in 1817.'[57] The remaining eighty per cent of the population relied on an assortment of used and inherited clothing, textiles produced by the *telares sueltos* or larger *obrajes*, and of course, an important quantity of homespun.[58]

Using specific articles of clothing as a point of departure, this second part of the discussion digs deeper into the social and cultural repercussions of a dramatic increase in the availability of indigo, broadly considering the various manifestations of ordinary, indigo-dyed fabrics in the wardrobes, as in the visual representation of the more humble sectors of society. How were these common blues incorporated into the wardrobes of the poor and middling? And what might these fashions say about the relationship between colour and textile in the sartorial distinction between classes? What was the role of colour, and in this case indigo blue, in the pictorial evocation of poverty? The evidence is patchy, but still suggestive, illuminating connections between the object (our small cakes of blue), and subject – those who manipulated, circulated, and wore indigo.

---

[56] Richard Salvucci, *Textiles and Capitalism in Mexico: An economic history of the obrajes, 1539-1840* (1987), p.58; on ordinary attire, see, for example, John Styles, *The Dress of the People: Everyday Fashion in Eighteenth-Century England*, (2008).
[57] Salvucci, *Textiles and Capitalism*, p.48
[58] Ibid, pp.19-21

As a final caveat, visual and material evidence of the clothes worn by the poor was especially forthcoming for the eighteenth century – the result, in part, of changing social preoccupations – and the discussion below has drawn significantly from sources well beyond the confines of this study. All of the 'fashions' discussed, however, could be dated to the second half of the seventeenth century, if not earlier, as in the case of Sebastiana de la Isla's blue skirt, described above. Yet these later sources, and the *Casta Paintings* in particular, also presented the advantage of depicting the ordinary, woollen blues alongside new and fashionable calicoes, or other luxury items in blue, furthering the analysis of how colour and textile may have interacted in the sartorial expression, or pictorial representation of class.

Blue Habits

In a florid preface to Isidro Felix De Espinosa's *Crónica de los Colegios de Propaganda Fide de la Nueva España* (1746), the great Mexican orator, D. Bartolomé de Ita y Parra, likened Saint Francis to the Virgin, and his disciples to her vestments*: astitit Regina a dextris tuis in vestitu deaurato, circundata varietate* (Psalm 44:10). He envisioned the raiment in luxurious *tornasol*: a fashionable cloth weaved in contrasting colours (using a dark-coloured warp over a brighter weft in a warp-faced fabric), to provide a 'shimmering effect' under light.[59] The 'gold of charity' thus shined beneath a multicoloured weave – the many shades of the Franciscan habit.

> What other sacred Family but that of Francis admits within its Institute such diversity in the tincture of its dress: now blue, now grey, now brown, now light…[60]

[59] Phipps, 'Textile Colors and Colorants in the Andes,' pp.277-280; and Phipps, 'The Iberian Globe: Textile Traditions and Trade in Latin America,' in A. Peck and A.E. Bogansky, *Interwoven globe: The worldwide textile trade, 1500-1800* (2013), p.43

[60] 'Qué otra sagrada familia sino la de Francisco admite en su Instituto tanta distincion en la tintura de su vestido, ya azul, ya ceniciento, ya pardo, ya claro; esto es lo externo, y galano de su ropage,' in Isidro Felix De Espinosa, *Crónica de los Colegios de Propaganda Fide de la Nueva España* (1746), Parte Primera, Bartolomé de Ita y Parra, 'Censura.'

Ita y Parra's European counterparts would have been unlikely to make a similar observation; surely, no Spanish theologian would have begun the list with blue. For the resident of eighteenth-century New Spain, however, Franciscans wearing blue – real and pictorial – would not have been an unfamiliar sight. The innovation was not entirely American, but the sporadic use of unsanctioned blue in Europe had been generally (and quite successfully) discouraged by the sixteenth century.[61] It would certainly be rare to see a Franciscan wearing blue in early modern European art.

Instead, depictions of the Saint and his friars in vivid, intense shades of blue may readily be found on the walls of churches, chapels, and convents throughout the Valley of Mexico (figs. 19-39). Examples are especially forthcoming from the late seventeenth and eighteenth centuries, in murals and oil canvases, but the convention has remained in use: more recently, the Irish immigrant Cecil Crawford O'Gorman depicted Bernardino de Sahagún in bright blue, while his better-known son, Juan, included a Franciscan in blue on the southern corner of his stunning mosaic murals at the UNAM's Biblioteca Central.

This enduring, widespread departure from a more traditional grey or brown has merited the occasional, passing reference, but yielded little by way of critical examination – a recent doctoral dissertation on Franciscan portraiture in New Spain discussed the trend in less than a paragraph.[62] With the exception of a creative proposal by Mexican historian Solange Alberro, scholars have generally been satisfied to cite a passage from Lucas

[61] The mid thirteenth-century Constitutions of Narbonne, for example, resolved the friars should dress in habits 'of an approved colour', while an early fifteenth century Chapter from Bavaria declared 'no friar should wear black or blue, or tending to blue.' John Moorman, *A History of the Franciscan Order From its origins to the Year 1517* (Oxford, 1968), pp. 148-149; 359

[62] Pedro Angeles Jiménez, 'Imágenes y Memoria: La pintura de retrato de los Franciscanos en la Nueva España,' Doctoral thesis for the Department of History of Art, UNAM (2010), p. 169-170

Alaman's *Disertaciones sobre la Historia de la República Megicana* (1844-49), included almost verbatim a few decades later in Manuel Rivera Cambas' *Mexico pintoresco, artístico, y monumental*:

> The continual work and travel of the missionaries consumed their habits in little time, and there was no serge or wool with which to make them, because the herds of cattle were still too small to produce it. So, they resorted to the laborious expedient of having the Indian women undo the torn fabric of their old habits, comb and spin the wool they were made of and weave new ones. To give these a more lasting colour, claiming that Saint Francis had not determined a colour or shape for the habits of his friars, but only recommended that they be poor and mundane, they had them dyed with the most ordinary dye available, which was indigo, and this is why the Franciscans in America wore blue…[63]

The account has its weaknesses: indigo was hardly the most ordinary dye available in mid to late-sixteenth century New Spain, a 'highly valued colour,'[64] in the words of Sahagún, so expensive, reported Pedro de Ledesma to the Crown (no doubt with some exaggeration), that 'it is used only in painting.'[65] As discussed in Chapter 1, Franciscan missionaries would have been especially familiar with *xiuhquilitl*, observing its use as a dye and pigment in the daily labour of weaving, the colouring of anything from cornices and murals to maps, codices, and decorative artwork – not to mention its various manifestations in native clothing. Doubtless, they had some notion of its cultural and material value.

These considerations aside, it would always have been simpler – and a greater indication of humility, as Alberro has pointed out, to leave the wool un-dyed, to use the 'white or dun worn by the people.'[66] Alemán did not disclose his sources, but the first part of his account has clearly been drawn from an episode in Gerónimo de Mendieta's *Historia Eclesiástica Indiana,* incorporated with slight modifications into Torquemada's *Monarquía*

---

[63] Lucas Alamán, *Disertaciones sobre la Historia de la República Megicana, desde la Epoca de la Conquista que los Españoles hicieron hasta la Independencia* (Mexico, 1844), vol. ii, pp. 151-152, my trans.
[64] '...es color preciado…,' Fr. Bernardino de Sahagún, *Historia General de las Cosas de Nueva España* (Mexico, 1975) book IX, 2:10, p.699.
[65] AGI, MEXICO 168. Printed in *Colección de Documentos Inéditos para la Historia de Ibero-América* (Madrid, 1927-32), vol. 1, pp. 377-378
[66] Solange Alberro, *Del Gachupín al Criollo: o de cómo los Españoles de México dejaron de serlo* (1992), p.29

Indiana: neither version, however, said anything about blue or indigo-dyed habits. It is unclear where Alamán might otherwise have drawn from; none of the better-known chroniclers – Toribio de Benavente, Pedro Mártir, or Agustín de Ventacurt – recounted a similar episode.

Then why blue? Solange Alberro put forward a second, rather less prosaic, if still tenuous explanation: The first Franciscan convents, located in Huitzilopochco-Churubusco and later Tenochtitlán,[67] were both erected on land previously dedicated to the warrior god Huitzilopochtli, a deity depicted and impersonated in blue body paint. Wearing indigo-dyed habits, the colour of the resident god, the earliest Franciscans could therefore 'transact' in the more 'innocuous' aspects of native deities,[68] an expression of the 'negotiations' they were willing to concede in their struggle against idolatry.

'It is obvious', Alberro concluded, 'that in choosing this colour of divine and royal connotations, Franciscans settled on the lands of Huitzilopochtli sought to recover and prevail themselves of the feelings and veneration rendered to this Mexica deity and to the prestigious house of Texcoco,'[69] using these feelings, once directed towards the 'powerful pagan supernatural, for the benefit of the evangelical law.'[70] Yet for all the 'pre-Tridentine openness of the first twelve,'[71] the notion that they deliberately associated their own person to the local nobility and a pagan god, is less than 'obvious.'

---

67 Alberro, *Gachupín*, p.30

68 Solange Alberro, 'Los Franciscanos y la tabula rasa en la Nueva España del siglo XVI', in María Sten; Alejandro Ortiz Bullé-Goyri, and Oscar Armando García, eds., El teatro franciscano en la Nueva España: Fuentes y ensayos para el estudio del teatro de evangelización en el siglo XVI' (Mexico, 2000), pp. 30-32

69 'Es obvio que al escoger este color de connotaciones divinas y reales, los franciscanos asentados en los solares de Huitzilopochtli buscaban recuperar y prevalerse de los sentimientos y veneracion altamente tributados a esta deidad Mexica y a la prestigiosa casa real de Texcoco.' The kings of Texcoco, as mentioned earlier, wore indigo dyed capes. Alberro, 'Los Franciscanos y la Tabula Rasa en la Nueva España,' p.31

70 '(un color que ayudaría a recuperar en parte la veneración antes tributada al poderoso) sobrenatural pagano, para beneficio ahora de la ley evangélica.' In Alberro, *El Aguila y la Cruz: orígenes religiosos de la conciencia criolla, México, siglos XVI-XVII,* (1999), p.60

71 Miguel de Leon Portilla, *Los Franciscanos vistos por el hombre Náhuatl: testimonios indígenas del siglo XVI* (1985), p.284

The habit embodied and expressed that fundamental principle of the Seraphic: the practice of poverty. Early chronicles of the Order in New Spain place great emphasis on the humility of the missionaries, conveyed in a most immediate manner by their clothing. But the most dramatic example was surely the long, barefoot walk from Veracruz to Tenochtitlán, the contrast between the martial, ostentatious costumes of the conquistadores, and the ragged, torn habits of the Twelve. Would these same Franciscans, so preoccupied with a semblance of humility, have chosen the colour of kings and gods? Perhaps, as Stanley Pool has suggested of Alberro's broader discussion, the Mexican historian 'overstates the conscious nature of the syncretism.'[72] Might not the question of agency, in the present case, be reversed? Another passage from the *Historia Eclesiástica* describes one possible scenario:

> A Mexican Indian woman had the donation of habits to friars as her devotion, and one day she went to discuss this matter with a servant of God called Fray Melchior de Benavente, who at that time was in charge of the Indians of the chapel of San José in Mexico City. And she said to him: "Father, I want to make habits for five of the friars, and you with them, which makes six".[73]

It was not the only incident of its kind: the natives, wrote Torquemada, became such great tailors that they had to be prohibited from giving their priests 'embroidered chasubles.'[74] With great dedication and speed, he continued elsewhere, on their own incentive, and in order to make new habits for the friars, they learnt how to weave serge. The making of the habits, at least, was clearly in the hands of Indians; one of so many hybrid objects combining native materials with European techniques.

---

[72] Stafford Poole, 'Review: *Solange Alberro, El Aguila y la Cruz: orígenes religiosos de la conciencia criolla, México, siglos XVI-XVII,' Hispanic American Historical Review* 81:2 (2001), p.371

[73] 'Una india mexicana tenia por devoción vestir algunos frailes, y queriendo una vez ponerlo por obra, fuélo a tratar con un religioso llamado Fray Melchor de Benavente, que en aquella sazón tenía cargo de los indios en la capilla de San José. Y díjole: "Padre, yo quiero vestir cinco religiosos, y a ti con ellos, que todos sereis seis." Gerónimo de Mendieta, *Historia Eclesiástica Indiana*, vol.5, part 1, ch.XIX

[74] Fray Juan de Torquemada, *Monarquia Indiana*, vol.3, ch.39: "Y no se permita que los indios de aqui adelante nos den casullas bordadas'

In the absence of any direct, revealing sources, conclusions must remain tentative; the blue habits might have been acquired as gifts, the result of a concession or a deliberate choice, just as meanings and associations may also have been inspired by European references. Ultimately, blue was still the colour of the Virgin, in many ways acceptable for the Friars Minor (cochineal red, we may imagine, would have been unthinkable). A third proposal concerning the blue habits has broadly emphasized this Marian connection – Franciscans wore blue in New Spain as an external manifestation of their devotion, visual affirmation of their role in the Immaculist debate.[75] Even if we yield to this last alternative, however, the new colour was still made possible by the availability of indigo, a native pigment with it's own complex connotations.[76]

For Europeans, if perhaps more so for the Mexica, clothing bore social, cultural, and religious meaning, immediately suggesting gender, class, and context. These meanings became fluid in a changing, post-conquest environment, as new identities were negotiated. The ritual and cultural, pre-colonial uses of indigo – associations with royalty, gods, and sacrifice – were forgotten or proscribed, and the relationship with indigo changed: once used for lavish costumes and on sanctified skin, it came to colour the coarse woollens of the poor. The habits, we may suggest, are the product of a transitional period when these meanings were re-defined.

While historiographic references to the blue Franciscan habits have focused on the question of origin, the material evidence invites a reflection on their evolution. The general

---

[75] For a general, passing reference to this last theory, see: Pedro Angeles Jiménez, 'Imágenes y Memoria,' p. 170; the theory was also proposed in several informal conversations with scholars from Mexico and Seville.

[76] For recent discussions of the metaphorical, descriptive, and symbolic meanings of pigments used by the Mexica, see: Jorge Gomez Tejada, *Making the 'Codex Mendoza', Constructing the 'Codex Mendoza': a reconsideration of a 16th Century Mexican Manuscript.* PhD diss., New Haven, Yale University (2012), pp. 80-98; Salvador Reyes Equiguas, 'Plants and colors in the Florentine Codex,' pp. 135-156 and Piero Baglioni et al, 'On the Nature of the Pigments of the 'General History of the Things of New Spain,' pp. 79-106, in G. Wolf, J. Connors and L.A. Waldman (eds.), *Colors between Two Worlds: The Florentine Codex of Bernardino de Sahagún* (Florence, 2011)

impression is one of a more popular convention; the habits seem to belong with that 'ocean of mannerist and baroque forms that covered the (Mexican) countryside' after 1600 – ornaments and decorations filling churches and chapels in the poorest, most remote locations, produced and often financed by Indians, 'their hands and sweat.'[77]

The use of blue has been dated to the first half of the sixteenth century, but always on the basis of Alaman's account; my own investigation yielded little by way of early pictorial examples. An overview of representations of Franciscans in the post-Conquest codices – from a list of examples identified by Leon Portilla – did not produce any friars in blue. [78] Likewise, there appear to be no blue habits among the numerous depictions of Franciscans in early post-conquest mural painting.[79] In both mediums, the arrival of the missionaries and first encounter with Cortés were preferred subjects, where they might accurately be shown in their original, Spanish brown. At the former monastery of Ozumba, for example, the friars are depicted in brown on the sixteenth-century *Arrival of the Twelve* (clear blue has been used for the breeches on a kneeling Cortés), but wear blue habits in two late seventeenth-century additions: an *Immaculate Conception* above the entrance to the cloisters (fig. 7.2), and the *Discipline of Hernan Cortés* next to the main arcade (fig. 7.3).[80]

The absence of blue extends to the end of the century; the earliest, unequivocal examples may be dated to the early 1600s, including a portrait of Bernardino de Sahagún in the collection of Mexico City's *Museo Nacional de Historia* (fig. 7.4),[81] where the subject is painted standing before a lectern, in full body, his figure tall, perhaps too tall, prominently

---

[77] Gruzinski, *Painting the Conquest*, p.222; Mendieta, *Historia Eclesiastica Indiana*, vol.3, ch.17: '*con sus manos y propio sudor*.'
[78] Leon Portilla, *Los Franciscanos,* pp. 266-276
[79] At Izaman, Xoxoteco, Actopan, et al.
[80] For the dating of these murals see Jiménez, 'Imágenes y Memoria,' pp. 33-40
[81] ANONYMOUS: *Portrait of Bernardino de Sahagún*, early seventeenth century, *Museo Nacional de Historia* (Mexico). Dated by Hilda Sanchez Villanueva, Subdirectora Técnica, Museo Nacional de Historia, in personal communication.

displaying a dark, blue-green habit. What the samples do suggest is an association with the first two delegations of Franciscans: the 'little Flemish band'[82] of 1522, and Pedro de Valencia's famous group of twelve. Perhaps Alamán drew his own ties between the textual and material evidence: Pedro de Gante, Bernardino de Sahagún, Valencia and the twelve friars together were all painted wearing light, to dark blue habits (see figs. 7.5-9).

The atypical garment often seems to serve the visual purpose of emphasizing the subject's particularly American experience: Miguel de Cabrera, for example, used brown for his depictions of Saint Francis and his European disciples, but rendered Juan de Zumárraga in a heavy, deep blue habit and mantle (fig. 7.10). Other early arrivals shown in blue include Andres de Olmos, Fray Juan de Torquemada, the martyr Fray Juan Calero, and San Sebastián de Aparicio (figs. 7.11-13). Despite a wealth of examples, however, blue was always the exception; as a rule, New World artists portrayed Franciscans in a customary brown or grey. The novel colour was never used by the great Mexican artists of the seventeenth and eighteenth centuries –Cristóbal de Villalpando, Juan Correa, José Juarez, or the Spanish-born Sebastián Lopez de Arteaga. Cabrera's Juan de Zumárraga and a portrait of Sebastián de Aparicio at the Franciscan sanctuary of Zapopán attributed to Juan Rodriguez Juárez are among the few, authored works to use blue. The bulk of examples may be found in anonymous, evidently humbler works more likely to have been produced, if not commissioned by Indians.

At Ozumba, the figures of Saint Francis and Juan Duns Escoto wear blue in a relatively poor rendition of a popular eighteenth century theme, including the figure of María de Agreda kneeling beside the Saint. The late eighteenth-century *Tree of Saint Francis* at the Church of Toluca, in turn, with the Saint reclining in a long, thick habit dyed a lustrous blue

[82] Serge Gruzinski, *Images at War: Mexico from Columbus to Blade Runner: 1492-2019* (2001), p.71

(fig. 7.14), is the likely choice of a native painter – familiar, perhaps, with the prehispanic elements the image incorporated.[83] On a smaller scale, a devotional tablet commissioned by the wealthy *indios* Don Juan de la Cruz Toribio and Doña Marta Francisca Toribio in the late seventeenth century (fig. 7.15), depicts the donors' various namesakes: Saint John the Evangelist, John Nepomucene, Saint Martha,[84] and finally Saint Francis in a luminous blue habit on the upper right corner of a Crucifixion.[85]

From the eighteenth century, a gilded painting on the interior lid of a small ballot box (fig. 7.16) shows three friars in dark azure habits, the main subject seated at a table with a local magistrate, officiating over what seems to be a land dispute between an Indian peasant and a wealthier Spaniard or mestizo. Donated by secretary Sor Maria Ana for unspecified elections (perhaps at a convent or friary), the lacquered wood exterior is ornately carved in traditional *rayado* (cut-out) technique from the village of Olinalá, in modern Guerrero. The technique, as Paula Kornegay has noted, has pre-Hispanic origins: lacquered gourds are included in tribute lists from the region recollected in the Codices Mendoza and Ixtlilxochitl. It seems most likely, then, that the small box was the work of a local Indian.[86]

Entering such vastly studied ground as the history of the Franciscan enterprise in New Spain is a daunting task; the notions explored here lead broadly into the terrain of the debate over Evangelization, the friars' varied, creative attempts to present Christianity in a

[83] Delia Annunziata Cosentino, 'Under the Shadow of God: Roots of Primitivism in Early Colonial Mexico,' in *Primitivism and Identity in Latin America: Essays on Art, Literature, and Culture* (2000), pp.48-49

[84] I would suggest Elisa Vargaslugo is mistaken in identifying the female figure in the tablet as Saint Helena; she bears all the attributes of Saint Martha, holding an aspergillium in her hands, with a lionlike dragon at her feet. In Elisa Vargaslugo, 'El Indio como donante de obras pías,' in *Imágenes de los Naturales en el Arte de la Nueva España, siglos XVI-XVIII* (2005), p.271

[85] Repr. in Elisa Vargaslugo, Cándida Fernández de Calderón, et al, *Imágenes de los naturales en el arte de la Nueva España: Siglos XVI a XVIII* (México, 2005).

[86] Paula Kornegay, *Ballot Box*, in Joseph J. Rishel and Suzanne Stratton-Pruitt, eds., *The Arts in Latin America, 1492-1800* (2006), p.135

manner 'comprehensible to the native mentality'[87] (and the resultant concessions this might have implied), or their more general receptivity to the native world. Focusing on the blue habits, however, we may consider aspects of indigo left unexamined by previous chapters – the symbolic (as opposed to economic) attributes of indigo blue.

The example may also illuminate some of the more elusive processes through which commodities are given social, cultural, even spiritual meaning. The habit itself, 'badge and symbol' of the Franciscan order could be made an object of devotion in the Americas: the *Lives* of the early missionaries are filled with stories of habits 'torn to pieces' by devout Indians to be preserved as relics. These were visible objects, seen daily on the friars, but also present in religious rituals (the feast of St. Francis, for example, where Indian children dressed as the Saint), in local festivities, even the theatrical performances organized by the missionaries.[88] The meanings and attributes of indigo-dyed cloth were made and remade.

There were other ties, I would propose, between the blue habit and the Indian poor: In the anonymous *Hallazgo de la Imagen de Nuestra Señora de Ocotlán* (fig. 7.17), the friars' habits have been painted the same blue as the stripes on the *tilmàtli* and shirt worn by the figure of Juan Diego in the foreground. The fabrics appear similarly heavy and coarse, although the Indian's could have been made with maguey fibre, while the friars should have worn woollen serge. Yet the Franciscans are not being likened to the Indian they first encountered; the artist has rendered Juan Diego in contemporary Indian attire, the poor, but Europeanized clothing championed with such enthusiasm by the friars. Colour, in this regard, seems to

[87] Leon Portilla, *Bernardino de Sahagún*: *First Anthropologist*, trans. Mauricio J. Mixco (2002), p.106

[88] On the 'habitillos' worn by Indian children on the feast of St. Francis, see Pablo Escalante Gonzalbo, *Historia de la vida cotidiana en México: Mesoamérica y los ámbitos indígenas de la Nueva España* (Mexico, 2004), vol.1, p.379. The blue habits would also make their way into Nahuatl theatre –considered a more efficient, memorable means to conversion– in the costumes assigned to Saint Francis and his friars, Fernando Horcasitas, *El Teatro Nahuatl: Épocas Novohispana y Moderna* (México, 1957), pp. 135, 137-138; Horcasitas produces no evidence for the blue habits other than Alamán's quote, cited above, and I have found no other reference to the blue costumes in texts concerning this form of theatre.

reflect the transformations of conquest: social, economic, cultural – the poor do not wear blue in the Mendoza or Florentine Codices. The images in the latter's Book Eight alone should suffice to establish the contrast between the humble white *tilmas* of the *macehuales*, and the turquoise blue, knotted capes of the aristocracy.[89]

The decision to depict Juan Diego in this particular costume, finally, suggests it was already identifiable with the Indian poor; that, as indicated in the previous section, by the mid-seventeenth century, when the painting was produced, cheap woollen textiles dyed in indigo – blue *paños de la tierra* – were standard production for the *obrajes*, used for cloaks, trousers, ponchos, and *huipiles* worn by the Indian and mestizo poor. Indigo, at this point, had indeed become the most 'ordinary' dye available. Within their contemporary context, then, the painted (and real) blue habits would also have immediately evoked the humble attire of the peasant masses.

Three paintings from Zacatelco

In 1692, an epidemic of measles devastated the indigenous population of Zacatelco, some eight miles south of Tlaxcala;[90] that same year, the Indians financed a reconstruction of the local Church of Santa Inés, 'purchasing materials, contributing with their own labour, and hiring a master architect.'[91] When they ran out of funds a few months later, they petitioned the local authorities for a dispensation from tribute, and finally completed the proposed renovation within two years. Stripped of its religious rites and ceremonies, as Elisa

[89] See, for example, *Historia General de las Cosas de Nueva España*, Book 8, esp. the images in chapter XVII, fols.37V; 41R; 43R; and Chapter XX, fol.56V (*World Digital Library*); See also from Sahagún's *Códice Matritense*, fol.252V
[90] Leslie Bethell, *The Cambridge History of Latin America* (1984), vol. II, p.24
[91] José Maria Lorenzo Macias, 'La Reedificación del Templo de Zacatelco,' in *Imágenes de los Naturales*, p.413

Vargaslugo has observed, indigenous society turned to 'the construction and ornamentation of their temples, as to the cult and care of their sacred images,'[92] decorating these new spaces in ways that combined European designs with a native palette and pigments.

The Indian *pueblo* made a second, collective effort to embellish their church in 1760, this time to have the main *retablos* gilded, a contribution commemorated with two oil paintings, the so-called *Labores Femeninas* and *Labores Masculinas* (figs. 7.18-20). Divided into four scenes framed with *rocaille*, the paintings depict men and women at work in the textile (female) and agricultural (male) sectors, busy generating the funds for the decorations. Beside, a later addition to the series by a different artist depicts a final restoration to the Church – initiated during a smallpox epidemic in 1797 (fig. 7.21).[93] These works have been selected for evident reasons: in varying patterns and fabrics, the subjects all wear blue.

Progressing counter-clockwise from the upper right, the *Labores Masculinas* depicts the cultivation cycle of corn: tilling, sowing, and harvesting, with a final frame in two scenes illustrating the harvest of wheat. The men in the field are dressed in identical, thigh length shirts and breeches, both in a striped blue and white fabric, tied at the waist with a dark brown cord. Some are barefoot, but most wear sandals and felt hats. In contrast, the overseers on horseback have dark leather shoes and shirts striped with an additional, more valuable cochineal red, used often in illustrations of *caciques* (as in fig. 7.22).

The humbler version of the shirt in blue and white is a constant in mid-seventeenth to late eighteenth-century depictions of Indians from the central Mexican valley (see figs.

[92] Vargaslugo, 'El Indio como donante,' p. 247
[93] Bethell, p.24

7.24-29). This is the same shirt worn by Juan Diego in the *Hallazgo de la Imagen de Nuestra Señora de Ocotlán*, described earlier, as in the better-known *Virgen de Guadalupe de la 'Jura' o del Patronato* (fig. 7.23), or in the series of murals by Manuel Caro (figs. 26-28). Examples are surprisingly numerous; it seems to be the only widespread, recurrent alternative to the all-white ensemble traditionally associated with the Mexican Indian – as in the more iconic images of Juan Diego by Cabrera, or the murals of Diego Rivera.

The striped shirts were ordinarily made of a serge-type cloth: *jerga*, a woollen (sometimes cotton) twill weave woven on a European treadle loom. The worst of the raw material was set aside for these fabrics: rough, carded short staple wool, or as specified in Matías de Peralta's *Ordenanzas,* the '*arroba* of waste should be employed in blankets and *jergas*, and in belts for the spinners' wheels.[94] As indicated by the pattern, the yarn (spun or unspun) had been previously dyed. In one of the more common variations of this model, however, the white is replaced by a blue background, suggesting the use of different coloured yarns, perhaps even a later immersion of the finished cloth in indigo. It is possible these garments were always initially striped in white and blue, and later re-dyed in an indigo vat when they were stained or overworn – indigo could disguise the occupational hazards, we might say, of being poor.

A similar pattern, and occasionally the same fabric were used in blankets, regularly itemized in inventories for *obrajes*, most likely meant for distribution during the winter. An example may be found in the anonymous *Scenes from the life of Diego Lázaro* at the Sanctuary of San Miguel del Milagro (figs. 7.24 and 29); the matching textiles may even have inspired the nineteenth-century term '*ensabanados*' (sheeted) to describe the Indian and mestizo poor. The

[94] Ducasse, 'Las Ordenanzas,' p.36: '(Otro si ordeno y mando que) la una arroba de deshecho arriba referida los dichos maestros la gasten en haser xergas o fresadas y en cuerdas para los tornos de los hiladores...' See also Manuel Miño Grijalva, 'Industria textil y vestido,' p. 281

shirts were likely supplied by *obrajeros* and *hacendados* – their uniformity alone suggests this, but they were also worn by slaves, as depicted in the lower right corner of the map of *Nova Mexico*. A stronger presence in works from Tlaxcala, as in depictions of Otomí Indians, finally, suggests the striped cloth may have been a local specialty, produced on a larger scale in the *obrajes* of the Puebla/Tlaxcala region.

Jerga was available in other colours and patterns – with stripes in yellow or red, and in a traditional checkerboard in various combinations of colours – but blue is decidedly more common in pictorial representations. The shirt is especially recurrent in *casta* painting, its use limited to Indian men and their various possible descendants: *albarazado* (fig. 7.30), *chamizo* (fig. 31), *lobo torna atrás* (fig. 32), and *tente en el aire* (fig. 33), usually in rural settings. It is also frequent on children and young Indian servants (depicted carrying the central child figure on their shoulders), as in figures 34 and 35.

Within the genre, examples seem to increase towards the second half of the eighteenth century, coinciding with growing anxieties among the Viceroyalty's elite over the famed sartorial luxury of its lower classes, anxieties that would translate into a more pronounced emphasis on clothing as an indicator of social status.[95] In this context, the striped blue *jerga* denoted the poorest of the poor. A good example may be found in the anonymous *De lobo torna atrás e india sale tente en el aire* (fig. 7.32): father and son are dressed in matching shirts of *jerga*, while the mother wears a slightly different version of the pattern on a similar fabric. The father wears sandals, but woman and child are barefoot. The similarity of their fabrics is itself another indicator of poverty – depictions of wealthier couples consistently emphasize a diversity of texture, sheen, patterns or embellishments on clothing.

[95] Katzew elaborates on the topic in *Casta Painting*, pp.106-107

In 1797, Puebla had a mere two *obrajes* remaining, but nine 'factories' of *jerga* and woollen sheets.[96] Even as general objections were being raised at the increasing difficulty 'of discerning the different social groups in the colony,'[97] the elite seemed equally distressed by the visibility of poverty. Two years later, Viceroy Azanza issued various ordinances for the reformation of attire, decreeing no person should be allowed 'in processions or on streets... public roads or at the solemn rites of the church (...) wrapped in *mantas*, sheets, blankets, *jergas* (...) or similar things...'[98] In the pictorial representation of these, the material objects of the very poor, blue (and indigo-dyed) textiles were as emblematic as the tans and browns of undyed fabrics. Yet the striped *jerga* was also quite unique: a particular textile that indicated poverty in the same immediate manner as bare feet, worn or torn garments. It is a quality, or perhaps a 'function' we might expect from a more lavish item suggesting luxury: embroidered damasks, for example, or deep coloured velvets. Just as a glimpse of translucent lace might readily establish the impression of wealth, the striped blue *jerga* brought to mind the poor, rural, and Indian.

Returning to the paintings at Zacatelco, the *Labores Femeninas* (fig. 7.18) presents some obvious contrasts with its counterpart: flowers have been added to the *rocaille*, (including an Asian inspired bouquet at the centre), and the scenes take place entirely indoors. The theme itself – stages in the production of cotton skeins – suggests another

[96] Walter O. Arias Estrada, 'Desarrollo textil en la ciudad de México 1790-1817: la fábrica de Pintados de Francisco Iglesias i Capdevila,' *200 años de Iberoamérica (1810-2010): Congreso Internacional: Actas del XIV Encuentro de Lationoamericanistas Españoles* (2010), p.512

[97] Katzew, *Casta Painting*, pp.108-109

[98] 'Ni en las procesiones ni en las calles (...) ni en los paseos pulicos, ni en las funciones solemnes de la iglesia (...) persona alguna envuelta en mantas, sabanas, frazadas, jergas (...) o cosas semejantes.' Cited in Estrada, 'Desarrollo textil en la ciudad de México,' p.511

intentional parallel: the cycles of corn and cotton were closely bound for the Mexica, each represented by a manifestation of the female deity Tlazoltéotl – as Ixcuina or Ixcuiname, goddess of cotton, or Xilonen, the 'young goddess' of corn.[99]

The first scene depicts the distribution of raw, un-dyed cotton:[100] women of various ages stand in line to receive their bundles, the last with a small child at her side. They all wear the same, dark blue skirts, covering their shoulders with striped *rebozos* (shawls) in combinations of blue, red, and natural white. The child, in turn, is dressed in trousers of an identical blue fabric, made with the leftovers, perhaps, from his mother's clothing. Dispensing the wool is a taller, darker-skinned woman – possibly an intentional attempt to depict a *mulata* – in a white, broad-sleeved blouse over a European-style full skirt dyed the same blue as the narrow, native version worn by the other women.

In the following scene, the women are sitting on the floor, some turned to each other in conversation, willowing, lapping, and carding the yarn. Their shawls have been discarded, revealing a short and sleeveless *huipilillo* in plain blue, or striped blue and white cloth, worn over the blue skirts. A third scene depicts the more arduous task of spinning: four, somewhat idealized women are shown at the wheel, all young and beautiful, with strong features, slender bodies, and muscular arms reminiscent of sixteenth century allegorical personifications of America. They are dressed in the same, plain 'work clothes' – the deep blue *huipil* and skirt, tied at the waist with a simple brown sash; yet they are elegantly adorned with earrings and red silk ribbons woven into their braided hair.

---

[99] Katarzyna Mikulska, 'Tlazolteotl, Una diosa del maguey,' Anales de Antropologia, v. 35 (2001), p.92; Thelma S Sullivan, 'Tlazoltéotl-Ixcuina: the great spinner and weaver,' in E.H. Boone (ed.), The art and iconography of late Post-classic central México, (1982), p. 28-29. As Sullivan notes: corn undergoes 'the same process of waxing and waning as a spindleful of thread.'

[100] José Maria Lorenzo Macias suggests this is wool, but the inscription on the bottom clearly indicates it is cotton.

In a last scene, accompanied by their cacique (identified by his wooden staff), the women deliver the skeins to a cleric, possibly D. Joseph Valentin Romero, organizing the collection of funds for the *retablos*. Under other circumstances, they might have been paid in kind by a local *obrajero*: at the textile obrajes of New Spain (and likewise in the Andean workshops), the tasks of carding and spinning were usually organized on a putting out system.[101] As in every other scene, the women are barefoot, immediately identifying them as Indians, and wear the same blue skirts with striped shawls as before. Their identical *huipiles*, however, are now intricately embroidered on a lustrous brown fabric.

All of these female attires are exceedingly common in painting; from the first scene, the blue skirt paired with a striped *rebozo*, usually in blue and white, is typical of Indian women in *casta* paintings (see figs. 7.36 and 45, for example), but may also be found in votive and religious works. Versions of the brown embroidered group garment are depicted in the Anonymous *Souls of Purgatory* at the Parish of San Dionisio Yauhquemehcan, in Tlaxcala (fig. 7.37), and in the mid eighteenth-century *Procession of the Saintly Christ* at the former Augustinian convent of Singuilucan (figs. 7.38 and 39). Yet the most striking figure in this last painting is a young Indian woman in the foreground, retreating from the procession with her husband and child. All three are rendered in blue clothing: the child wearing the striped blue over blue shirt described earlier, his father in plain blue breeches with a chequered red and black *tilma,* and the imposing female figure in an embroidered, full blue skirt under a large white *huipil* decorated with blue ribbons at the seams and neckline.

Examples of this particular decoration over a plain white *huipil* (a version in blue of O'Crowley's garment) are especially common in *casta* paintings, as illustrated in figs. 7.41-44. Whereas the striped fabric was associated with Otomí Indians, this basic *huipil* is typical of

[101] Salvucci, *Textiles and Capitalism*, p.51; Escandell-Tur, *Producción y comercio,* p.39

depictions of *Indios Mexicanos*, (see figs. 41 and 42); yet they were just as often combined. These later depictions emphasize the plainness of the garment, with simple details and a single decorative bow at the front. The contrast with earlier examples is significant: as Rebecca Earle has noted, '*casta* paintings from the first half of the eighteenth century,' more concerned with a representation of the wealth of the land, 'usually depict all classes and races in equally luxurious attire.'[102]

The *huipil* is a good case in point: earlier renditions portray a finer garment on white silk or fine cotton, with satin ribbons (more often red), richly embroidered or otherwise decorated, such as the one worn by the *Lobo* child on the cover of Ilona Katzew's study of the genre (fig. 43), or the similar garment on the Indian woman in figure 44. The same is true of the narrow, blue *enredo* almost invariably worn beneath it; a more azure, lustrous version may be seen on the Indian mother in José de Ibarra's *De Negro e India, Lobo* (1725), but later versions distinctly emphasize a plain, lacklustre fabric, most likely the *naguas de sarga azul* (blue serge skirts) described by O'Crowley.

Countless examples of the Indian blue skirt may readily be found on all manner of painting from the mid-seventeenth to the late nineteenth-centuries; they testify to the endurance of certain fashions, but also suggest some of the ways in which colour was affixed to these garments. A version associated with the Puebla/Tlaxcala region (fig. 46) usually in a European style (adopted by Indian women as early as the mid-sixteenth century), was white for the first third of the length and then a solid blue, suggesting it was dip-dyed, possibly domestically by the wearer herself.[103]

---

[102] Rebecca Earle, 'Two pairs of pink satin shoes!! Race, clothing and identity in the Americas (17th-19th centuries),' *History Workshop Journal*, vol. 52 (2001), p. 181

[103] It may be worth noting that the Matlalcuéyetl volcano in this region, renamed Malintzin by the Spaniards, had honoured the 'woman of the blue/green skirts.' The skirts might have brought to mind snow-capped Matlalcuéyetl. In this spirit as well, we may note that women are referred to as 'the skirt owner' in both the

The European-style full skirt in blue is a somewhat more versatile item that may be found on *Mulatas*, *Negras*, and *Indias,* usually embroidered or otherwise decorated, but the colour is altogether rare on *Españolas* before the mid-eighteenth century. The few, luxury versions of the blue skirt are quite clearly distinguished by lace, gold or silver *passamanerie*, and sumptuous fabrics. The contrast is especially marked in later images, between the solid blue skirt of the Indian, at times no more than a coarse cloth wrapped around the waist, and the calicoes or chintzes (often in blue and white, indigo-dyed 'China blue,' or 'pottery style'),[104] increasingly available to the middling classes, but still well out of reach for the rural poor. Compare, for example, the female attires in figs 7.40a and b, from the same *casta* set.

In these paintings, access to European clothing visibly signifies socioeconomic class: the lowest ranks are limited to domestically produced textiles in plain colours (surely not a full reflection of realities), often uniformly dressed, reinforcing the impression of lower quality cloth produced at local workshops. Colour and textile combine to mark the contrast between domestic and imported fashions, fundamental to the distinction between rich and poor – wearing Spanish textiles was perceived throughout the period as a 'marker of European civilization.'[105]

The last painting in the series depicts the renovation of the temple in two vertical scenes. To the left, in an idealized rural landscape, Indians (now in solid, greyish-blue shirts), harvest wheat beneath the watchful eye of an overseer. The second scene takes place

Florentine Codex and Sahagún earlier *Códice Matritense*, suggesting how relevant this particular article of clothing may have been to notions of identity and belonging.

[104] In Agustín Nieto-Galán, *Colouring Textiles,* p.52. Blue was the most popular colour for calicoes, as may readily be gathered from the literature on the topic, and visual sources (for example, in Grijalva, in 'Industria Textil,' p.286).

[105] Marta Valentín Vicente, 'Fashion, race and cotton textiles in colonial Spanish America,' in G. Riello and P. Parthasarathi (eds.), *The Spinning World: A Global History of Cotton Textiles, 1200-1850* (Oxford, 2009), p.259

indoors, depicting an artisan kneeling on the floor of the church as he places new, tiled flooring. Standing behind him, a *cacique* and *fiscal* raises a forceful glance at the viewer. Like the overseer in the other scene, he wears a pair of blue breeches in plain, solid blue cloth with slits on the slide revealing white underpants finished with lace. This combination of items is typical of eighteenth-century depictions of Indian nobility, as in the anonymous *Retrato de Felipe Antonio de Austria y Moctezuma* (fig. 7.47), or in fig. 7.48, a portrait of a wealthy Indian donor in one of the *retablos* at the Church of Oxtotípac. Yet they are also clearly imitations (or adaptations) of European fashions: few items are more characteristic of male clothing in the eighteenth century than the matching blue breeches and coat. Defining the role of colour – its influence on the social or material attributes of the garment – in this case, is more complicated. All men, the pictorial evidence suggests, had access to and wore blue. Textile and colour still interacted, however, to mark the differences between rich and poor.

In an early eighteenth century set of *casta* paintings attributed to Luis Berrueco (figs. 7.49a and b), the contrast between the clothing worn by the men, we may note first, is rather less obvious than the disparity between their wives' attires – both men wear similar articles in red, white, and blue. Yet they may still be told apart as easily as their wives. Focusing on their breeches, the wealthier subject wears dark and lustrous blue velvet with gold trimming, red silk ribbons, and undergarments in delicate lace. The *Cambujo* tailor and tradesman, instead, wears an altogether different version of the same model: plainweave blue trousers with ordinary buttons, and a patch or rip at the knee. The colour, in contrast to the more lavish item, is lighter, faded, and uneven. In a later set by Ramón Torres (figs. 7.50a and b), the distinction between luxury and ordinary blue trousers is expressed in similar terms: deep blues (requiring more time and materials), that fade in the clothing of the poor. As Katzew has observed: 'social stratification is thus rendered clear in these paintings through the

differentiation of clothes;'[106] these particular examples tell us a bit more about how this was achieved.

Conclusion

Indigo provides a unique lens for the exploration of material culture, revealing subtle, if suggestive details about consumers and patterns of consumption, the movement of fashions, even expressions of identity and belonging, that might otherwise go unnoticed. In the words of Bethany Aram, it may illuminate 'the definition of identities through the differentiation among products and tastes.'[107] It is a blurred lens, but perhaps irremediably so; this discussion may at least identify some of the possibilities (paths, more and less fruitful), of incorporating colour as a relevant analytical category. Conclusions may still be strengthened, and the relationship between sartorial expression, notions of individual and group identity, explored further. The sources examined in this and the preceding chapter, encourage the view that over the course of the seventeenth century the humbler sectors of society gained increasing access to indigo and indigo-dyed textiles, the extent of which has been underestimated. There were social consequences to this material use and visibility of blue: the sartorial possibilities of the plebeian consumer were broadened, and the dark, deep shades of an elite became accessible, to display a broader democratisation of consumption.

The eighteenth century indigo boom has drawn attention away from the earlier, central presence of the dye as a raw material in the Colonial textile sector, the social and cultural repercussions of indigo's increasing presence in the ordinary fabrics of everyday wear. Entering these humbler homes, finally, we might find the blue hands of those who

---

[106] Ilona Katzew, 'Casta Painting: Identity and Social Stratification in Colonial Mexico,' *Laberinto*, vol. 1 (1997)
[107] Bethany Aram, 'Global Goods and the Spanish Empire, 1492-1824: State of the art and prospects for research,' in in Yun Casalilla and Bethany Aram, eds., *Global goods and the Spanish Empire, 1492-1824: Circulation, Resistance and Diversity* (2014), p.9

manipulated the colourant, grinding the bricks into a fine powder, starting the vat and keeping it 'alive,' immersing the fabric and removing it still white, to see the blues of indigo appear as if by magic, as the cloth came into contact with the air – those for whom the colours of clothing, the materials and processes used to obtain them, were still tied in ways both real and symbolic.

Chapter 8

Indigo in the Artist's Palette

With this last, brief episode, the discussion moves into the artist's world, focusing on oil painting, and following some of the themes discussed throughout this thesis – the course of experimentation, the diffusion of knowledge and expertise, the accommodation of indigo into the artist's palette, and the agents involved in all these processes as production and trade increased worldwide.



Blue was a somewhat problematic colour for early modern European artists; it was not included as a primary colour in the great treatises of classical antiquity, yet Renaissance painters had inherited a medieval tradition that assured them it was. The contradiction was resolved inconsistently by artists and art theorists: the Sevillian Francisco Pacheco relied only on Alberti and Da Vinci for his hierarchy of colours in *The Art of Painting*; blue came fourth, for air, and was composed of both 'light and darkness.'[108] Elsewhere, Pacheco drew more substantially from Pliny, whose perfect palette included only 'white, red, black, and yellow.'[109] For all its theoretical complications, even the most cursory look at religious painting in Early Modern Europe will immediately suggest the importance of blue (and of course, red).

Between 1500 and 1700, the principal sources of blue in the artist's palette were mineral pigments; azurite, mined in Italy, France, and Spain produced a relatively inexpensive ultramarine, while the 'beautiful, brilliant pure blue'[110] of its authentic version, the colour of the Virgin's regalia, was extracted from the lapis lazuli stone, found only in the Sar-i-Sang

[108] Francisco Pacheco, *Arte de la Pintura* (1649; Madrid, 1990), p. 396
[109] Cited in Pastoureau, *Blue*, p. 23
[110] David Bomford and Ashok Roy, *A Closer Look: Colour* (London, 2009), p. 28

mines of Afghanistan.[111] A lighter, inferior tone could be obtained from a combination of cobalt oxide and molten glass; 'smalt' was cheap, readily available, and 'standard material' throughout the period.[112] Indigo compared poorly to these alternatives: it was not particularly inexpensive and, like most organic pigments, faded rapidly with exposure to light. Before the sixteenth century, while supplies remained scarce, it was generally reserved for decorative leatherwork, wood, and illuminated manuscripts, easily kept away from sunlight.[113]

There were other alternatives: tinted blue papers, the Venetian *carta azzura*, a novelty brought from Persia in the fifteenth century, became fashionable in Spain, Italy, and Northern Europe, while indigo wash drawings enjoyed some popularity with Italian and Flemish landscapists. This base, or 'wash' in indigo could be used to 'create dreamlike distant backgrounds,' or 'amplify the effects of distance.'[114] It was not uncommon, finally, for subjects to be drawn in indigo chalk on these blue backgrounds,[115] designs that offered '*cet effet de camaïe, de ton sur ton*' that would later captivate such Latin American artists as Baltazár de Echave Ibía, known as *el Echave de los azules* for his chromatic use of blue hues.

For that most noble, and dominant art of oil painting, however, indigo was used sparingly before the seventeenth century, ground and mixed with a medium, as a base for blues overlaid in more expensive azurite and, very rarely, costly ultramarine. On its own, indigo could degenerate rapidly into a 'subdued, greyish blue colour' or, when mixed with lead-white, might 'change into black.'[116] Combined with yellow *Jalde* for the production of various shades of green, the pigment would still tend towards unseemly fading. Emphasizing this impermanence, artist's manuals discouraged the use of indigo on oil canvases well into

---

111 Ibid, p.28
112 Bomford and Roy, *A Closer Look*, p.28
113 Ibid, p.30; Balfour-Paul, *Indigo*, pp. 209-212
114 Pastoureau, *Blue*, p. 112
115 Françoise Viatte, 'La Couleur du Peintre', in *Sublime Indigo,* p. 86
116 See Schweppe, *Artist's Pigments*, p.88

the seventeenth century.[117] Vincenzo Carducci or *Carducho*, as he was was known in Spain, listed several possible uses indigo in his *Diálogos de la Pintura. Añil* could be used as ink, to dilute other colours (*para las aguadas de colores*), or for drawing paper (*para papel de dibujo*).[118] Pacheco had little more to say. In frescoes, he encouraged the use of 'indigo and orchil to darken blues,' but on canvas and oils on walls, he was 'of the opinion that blues should be made light; the darkest colour should be pure blue (azurite) and, at most, the darkest areas may be helped with black, not with carmine violet, and even less with indigo…'[119] In view of these prejudices, assuming indigo was rarely used, the pigment has received quite limited attention from contemporary art historians.

Margriet van Eikema Hommes has done much to fill this gap with an insightful chapter on the use of indigo in Rennaisance and Baroque oil painting.[120] Focusing on northern European artists, Hommes has argued for a more prominent (and widespread) use of the blue pigment than had previously been recognized, as availability increased in the first decades of the seventeenth century. The technical art historian conducted her own chemical (and visual) examinations of various Dutch paintings, but relied heavily on personal communications with scholars for information relating to Italian and French artists. A decade later, despite tremendous advances in the field of pigment analysis, the number of published reports taking indigo into consideration are still few.

---

[117] As noted in Hommes, op. cit.: 'Indigo is not even mentioned in most printed instructions on oil painting, such as those by Van Mander (1604), Nunes (1615), Biens (1635) and Pacheco (written before 1638, published 1649),' p.133, n.149

[118] Vincenzo Carducci, *Diálogos de la pintura, su defensa, origen, esencia, definición, modos y diferencias* (Madrid, 1634), fol. 133R

[119] 'Yo soy de la opinion que los azules se labren claros y que lo más oscuro sea el mesmo azul puro y, cuando mucho, se ayude lo más oscuro no con negro, no con morado de carmín y menos con añir…' Pacheco, *Arte*, p. 452

[120] M.F. Van Eikema Hommes, 'Discoloration in Renaissance and Baroque Oil Paintings: Instructions for Painters, theoretical Concepts, and Scientific Data,' PhD. diss., University of Amsterdam (2002), pp.109-166

From Venice, in the trajectory proposed by Hommes, where painters had been experimenting in the use of Asian indigo for more than a century, the pigment reached the palette of Peter Paul Rubens, possibly the first northern European painter to make regular use of indigo. In time, he would impart the practice to his pupils, Anthony van Dyck (1599-1641) and Jacob Jordaens (1593-1678). For the first half of the seventeenth century, however, the use of añil was still limited to an underpaint, or for less prominent areas of the canvas (particularly in important commissions, where fading would have been especially undesirable).

By the second half of the century, however, indigo had spread to the palettes of artists in Leiden, Delft, and Rotterdam (somewhat belatedly, considering these were all textile centers). Hommes has further observed an increase in the use of indigo among the French painters, notably Poussin, around the mid-seventeenth century, while further research may readily extend her conclusions elsewhere. Yet this hard gained, larger role in the painter's palette was short-lived, a parenthesis of sorts, filled with trials and tests, but confined to the seventeenth century – indigo returned gradually back into disuse after the chance discovery of Prussian Blue in 1704.

An increase in supply cannot, on its own, explain indigo's growing protagonism in the artist's palette; rather, availability encouraged experimentation, and eventually improvements in the methods of 'elaboration and purification needed to reveal all (the pigment's) chromatic potential.'[121] For all its disadvantages, indigo was a promising pigment: it remained significantly cheaper than azurite or ultramarine, and was easier to handle. An 'enormous tinting strength' meant small, affordable amounts could supply a deep colour, but

[121] No es tanto la variedad de materias primas sino los procesos de elaboracion o purificacion aplicados para sacar toda su potencialidad cromatica lo que aporta riqueza a la gama de colores. Estos procesos de elaboracion se dominaban en pocos lugares,' in Rocío Bruquetas Galán, 'Técnicas y materiales en la pintura limeña de la primera mitad del siglo XVII: Angelino Medoro y su entorno,' *Goya: Revista de Arte*, n.327 (2009), p.151

also made it possible to combine indigo with generous amounts of lead–white, creating a 'flexible and malleable paint' particularly suited to the difficult art of rendering textiles.[122] As opposed to azurite or smalt, finally, indigo could be employed finely ground, allowing the artist greater control over the material, leaving fewer visible 'impurities' on the canvas.[123]

These desirable results, however, could only be obtained with high quality indigo; where the percentage of indigotin was low, the 'result (was) a greyish green paint with little tinting strength and hiding power.'[124] The ever present contaminants discussed in Chapter three could further complicate the artist's task, making it impossible to grind the pigment suitably, and contributing to its rapid degeneration.

By the mid-seventeenth century, artists were finding solutions to these problems; without going further into the technical developments Hommes has painstakingly drawn from treatises and other documentary sources, it is the degree of experimentation, the quite determined quest for solutions to the technical difficulties presented by indigo, that stand out. Two observations are particularly relevant to our discussion: first, that Guatemala indigo was considered of superior quality and, sources would indicate, preferred by Dutch artists.[125] Central American indigo, then, had secured the support of Castilian dyers, but also managed to convince the far more skeptical northern European oil painters, who would have had a particular interest in, and an eye for a more highly concentrated, less contaminated pigment.[126] How these reputations may have circulated between artists and dyers, who shared a preoccupation for the qualities of brightness and fastness, are questions that have not, as yet, been examined.

---

[122] Hommes, 'Discoloration,' p.131
[123] Ibid, p.132 and pp.165-166
[124] Ibid, p.131
[125] See Hommes, 'Discoloration,' pp.125-128; there popularity of Central American indigo in the Dutch markets has been explored in Chapter three and five of this thesis.
[126] See Hommes, p.125

Second, is the technical particularity that indigo will fade with exposure to light, a quality that had influenced artists against the pigment, but that could also be avoided using it in higher concentrations. The 'intense, inky-blue' of generously applied indigo is present, albeit as a minor pigment, in the works of Rubens, the palettes of Murillo, Van Dyck, and Vermeer.[127] Growing availability would have allowed for this particular use, as evidenced in indigo's increasing presence as an underpaint, or in the darker areas of the canvas, but supply also encouraged experimentation – through trial and error, we must imagine, indigo was gradually made more appealing to the artist.



The situation was somewhat different in New Spain, where Europeans encountered a much longer tradition in the use of indigo; here was a pigment known in Classical Antiquity, which indigenous artists were better equipped to handle. Supplying the (blue) needs of Colonial artists (Native and European), limited quantities of smalt (*esmalte de vidrio*, *esmalte azul para pintores*, *cenizas de esmalte*, or *esmalte de Flandes*) were shipped from Spain, while azurite (*azul fino*) was locally mined in New Spain and Santo Domingo. Yet these imports suffered the usual irregularities of Atlantic trade, and European pigments remained scarce, often unavailable even in the capitals and cities close to commercial routes. Artists made due, creating their own palettes from local materials (overseen by the guilds),[128] pigments that can appear quite distinguishable from those of their European counterparts.

Recent contributions to the identification of pigments in Colonial Latin American art have indicated azurite was the 'undisputed protagonist' in the blues of New Spain (as in

[127] Ashok Roy, Elizabeth Fitzhugh, Barbara Hepburn et al. eds., *Artist's pigments: a Handbook of their History and Characteristics* (Cambridge, 1986), vol. 3, p.101
[128] Bailey, *Art of Colonial,* p.190

Seville) were the mineral was locally extracted,[129] while South American artists may have relied more substantially on indigo. A study of blue pigments in oil paintings from the Andean region (1610-1780) revealed the presence of indigo in 64 of 106 paintings, all but one produced in the vicinities of Cuzco – where European pigments are likely to have remained scarce, while indigo would have been imported to supply the needs of large, local *obrajes*.[130]

More recently, a collaborative investigation of artist's materials and techniques in Viceregal Peru concluded the use of azurite predominated throughout the seventeenth century, with an increasing presence of smalt towards the eighteenth. Indigo, third on the list of blues before 1650, was even less present thereafter.[131] These results notwithstanding, the investigative team found frequent references to the pigment *polvos azules* ('blue powders') in written documents – store inventories, public sales, and lists of goods purchased by local merchants in Lima, between the early seventeenth and eighteenth centuries.

As described by Rocío Bruquetas, *polvos azules* 'figures with greater regularity and frequence than other pigments, and in considerable quantities, often associated with categories that do not belong to painting.'[132] It could not, therefore, be azurite (as had previously been supposed), too scarce to be available in such volumes, and at least ten times more expensive. The pigment was not produced in Peru, Bruquetas deduced, cost an aproximate 2-14 reales the pound, was also used for dyeing, and yet could not be indigo because *añil* was sold in 'cakes or bricks.' But while this was the more familiar form for the

---

[129] Elsa Arroyo, Manuel E. Espinosa, Tatiana Falcón and Eumelia Hernández, 'Variaciones celestes para pintar el manto de la Virgen,' *Anales del Instituto de Investigaciones Estéticas*, vol.34, n.100 (2012), pp.85-117

[130] See 'Indigo in the Andes,' above.

[131] Rocío Bruquetas Galán, 'Técnicas y materiales en la pintura limeña de la primera mitad del siglo XVII: Angelino Medoro y su entorno,' *Goya: Revista de Arte*, n.327 (2009), pp.144-161. Summarizing the state of the literature on the topic, Bruquetas concluded on the topic of *añil*: 'no hay informacion sobre su posible uso en la pintura.'

[132] Ibid, p.155

commercialization of the dye, ground indigo (or 'indigo dust') packed in leather sacks or barrels was not uncommon. It seems unlikely another blue dye and pigment could be imported on such a large scale, used from Lima to Potosí, and sold at the going price for indigo.

As for New Spain, a technical analysis of pigments used for the Virgin's mantle in eight paintings revealed indigo had not been employed, yet this is hardly surprising: in the absence of ultramarine, costly azurite was traditionally reserved for the mantle. I would argue this shold not be taken as evidence of the absence of indigo elsewhere, especially among the humbler artists – although locally mined azurite and imports from Santo Domingo should not have been difficult to find, they were still expensive.[133] Two seventeenth-century documents from the city of Mexico reinforce this impression, suggesting indigo may have enjoyed a more prominent role in the artist's palette than the literature would indicate, revealing some of the technical advances described by Hommes were not unknown to artists across the Atlantic.

The first, an inventory for the store of Alonso de Herrera, dated 1645, and transcribed in Abelardo Carrillo y Gariel's seminal *Técnica de la Pintura en Nueva España*, includes a single blue pigment, indigo rather than azurite.[134] At four pesos (thirty reales) the pound, indigo was one of the more expensive pigments, comparable to yellow *jalde*, and only slightly cheaper than fine carmine, heading the list at six pesos the pound. Twenty three pounds of '*añil fino de pintores'* were available, compared to only seven of carmine, thirty-four of *jalde*, and a considerable two hundred and fifty pounds of the essential *albayalde*, a lead

[133] See Rocío Bruquetas Galán, 'Azul fino de pintores: Obtención, comercio y uso de la azurita en la pintura española,' in *In Sapientia Veritas*: *Homenaje a Alfonso E. Pérez Sánchez*, (2008), pp.148-157
[134] Abelardo Carrillo y Gariel, *Técnica de la Pintura en Nueva España* (1946), p.40

based white.[135] As mentioned earlier, we may take into account the particular concentration of indigo, its use in combination with yellows and, with few exceptions, abundant white, in evaluating its relative cost and demand.

The second document, an undated file from Mexico's *Archivo General de la Nación*, includes a list of painting materials requested by Don Lazaro Francisco Fajardo, a copy transcribed by the designated buyer, and a corresponding receipt.[136] The second of these three, loose pages, no more than 15 x 15 cm, has one remarkable particularity: it appears to have been signed by Juan Correa. The signature, in a darker ink than the rest of the document, seems hurried, but not unlike examples from Correa's paintings, confirming the identification (with that great representative of the Mexican Baroque), insofar as possible.[137]

The context, however, is difficult to reconstruct: the first page is evidently an informal list of materials Fajardo intended to purchase through Correa, who handled the paper, crossing out items and scribbling notes on the margins in the same darker ink as his signature. The second is a clean copy of the first, in a different handwriting, with some minor revisions (*ancorca*[138] could not be found in all of Mexico), and an account of prices on the side, presumably intended for Fajardo's approval. A last rubric, finally: 'to the Master who bought them (the materials), for his work, two pesos and six reales,' reinforces the impression that this was, in fact, the *maestro pintor*, Correa.

I would suggest Fajardo lived outside Mexico City, was likely an administrative or religious official employing the more knowledgeable Correa to obtain the materials necessary for an oil painting (as indicated by the oils and *albayalde*). In his own list, Fajardo seemed to

---

135 Ibid. *Albayalde*: 'carbonato básico del plomo; es sólido, de color blanco y se emplea en la pintura,' *RAE*.
136 AGN, Indiferente Virreinal, c.3019, exp.24: 'Razón de los géneros de pintura que pide Lasaro Francisco Faxardo, como aceite de linaza, añil, carmín, bermellón, pinceles y brochas,' (undated, 17thC), s/f
137 For an instructive biographical study, and the artist's various signatures, see Elisa Vargaslugo and Gustavo Curiel, *Juan Correa: Su Vida y su Obra*, (1985)
138 A type of ochre tinted pigment.

reveal his inexperience when he wrote: 'half a pound of indigo, calcinated, of the kind painters use there, fine.' But he was right to request the pigment calcinated; some of the more effective, known methods of purifying indigo involved heating. As Hommes has observed for Northern Europe:

> …the prescriptions in the sources indicate that painters developed sophisticated methods to 'purify', 'calcine' or 'prepare' the indigo lumps... these procedures removed most of the undesirable organic impurities form the pigment leading to a more concentrated pigment... We can now deduce that recipes which precribe this approach resulted in an indigo that could withstand the conditions in oil paint more effectively.[139]

Further evidence is needed, but it would seem these improved techniques in the handling of indigo were well known to mid-seventeenth century Latin American artists – a diffusion that would benefit from more sustained examination.

Correa, in turn, used the more concise '*añil beneficiado*,' and felt the need to provide instructions for its use, noting to the side of his signature: 'the drying medium that is added to indigo should not be mixed in until (one) is painting, because it is added as one paints.'[140] The comment attests to Correa's expertise: indigo will dry slowly and unevenly unless it is mixed with a drying oil or agent (such as lead white), a problem tackled variously in contemporary treatises.[141] On the topic of '*secantes para el añil*,' Palomino reccomended combining the blue pigment with ground smalt or glass, nut oil, 'or a tip of verdigris, which I consider best,' to accelerate the drying process. The receipt included a peso in 'all manners of brushes,' several dark shades, four pounds of *albayalde*, six ounces of vermillion and one of fine carmine. From the range of blues and greens, the artist requested five ounces of verdigris and half a pound of indigo, but again, no azurite. The list revealed other local

[139] Hommes, 'Discoloration,' p.166
[140] 'El secante que se le echa a el añil no se le echa sino es quando se pinta porque se echa al pintar,' in AGN, Indiferente Virreinal, c.3019, exp.24, s/f
[141] See Schweppe, *Artist's Pigments*, p.89, and Hommes, 'Discoloration,' p.138

adaptations: two small flasks of Mexican chia oil replaced a more traditional linseed or flaxseed. Local, rather than imported raw materials predominate; the azurite and flaxseed oil reccommended even in the Latin American treatises were replaced by indigo and chia.[142]

Conclusion

As elsewhere, indigo experienced a temperate reception from artists; whereas its use flourished in some mediums, encouraging fashionable new decorative techniques, oil painting was a different matter altogether. Again, a negative reputation meant a more gradual acceptance, but here a growing supply encouraged experimentation, and eventually the diffusion of new, practical knowledge that transformed the place of indigo in the European palette. In the Indies, instead, we find more rupture than continuity, the loss of native techniques and technologies, complex notions about colour (and especially blue/green), faded or forgotten, and the pigment's once revered role, hopelessly diminished.

The possibilities presented by the study of indigo in Baroque Latin American art and art theory have not been exhausted; treatises, inventories, and other documentation may still contribute to our understanding of how technical expertise and novel practices regarding pigments were diffused throughout the Empire, and adapted to local context. It would be interesting, for example, to explore the contribution of native artists to the manipulation of pre-Hispanic pigments such as indigo and cochineal, in the less familiar oil medium they quite rapidly mastered. More fascinating still, are questions related to the interaction between the 'material and the symbolic/chromatic dimension of colour,' in the words of Gabriela

[142] For an indigo recipe in an Andean treatise (Manuel de Samaniego's *Tratado de Pintura*, 18thC.), using flaxseed, see Siracusano, *Power and Pigments*, p.16

Siracusano, and the interplay between pigment, colour, and meaning in Colonial painting.[143] Doubtless, the story of indigo in the artist's palette is more complex than historians have been encouraged to assume.

[143] Gabriela Siracusano, *Pigments and Power in the Andes: From the Material to the Symbolic in Andean Cultural Practices, 1500-1800*, (2011), p.xi

Conclusion

An empire-wide, coherent historical study of Mesoamerican indigo necessarily involved numerous choices. Mine were guided by an effort to shed some light on the processes that shaped its path from the clay earthenware of Aztec noblewomen, to become a commodity circulated globally, within a narrative that involved producers, merchants, and consumers on both sides of the Atlantic. How Spaniards became acquainted with *añil*, where and under what circumstances knowledge regarding indigo (its production and application), was created and contested, the variegated influences (individual agents and official policies), that shaped this commercial trajectory, lie at the heart of my study.

Part one considered a brief chapter in the history of colonial indigo, the beginnings of Spanish-American trade in the second half of the sixteenth century – a period of discovery, experimentation, and much frustration. Yet the examination of the decade or so following the identification of *xiquilite* revealed far more enthusiasm and enterprise on the part of Spanish settlers than the historiography had suggested. It would also highlight the ways in which authorities responded to and intervened (for better or worse) in the formation and growth of these new enterprises, how imperial attitudes and concerns came to bear upon personal initiatives.

These first two chapters will hopefully have shed some light on the transfer of knowledge and expertise regarding this particular commodity, even, and remarkably for the period, in textual form, the interaction of diverse influences in the development of early production methods, those practices and technologies which persisted, and those gradually set aside. The narrative that emerged from this study revealed not one, but many and varied

'genealogies' of indigo production,[1] different systems coexisting, rather than replacing each other in sequence. It would also highlight Spanish participation in the development of these manufacturing methods, the degree of informal experimentation, and the lasting presence of an Indigenous influence – which has found little place in the historiography.

Although this discussion moved within limited geographical boundaries, commodities will rarely respect these, often steering us towards the Global. From the Spanish Americas, technologies spread to the Caribbean, and later Bengal, where indigo production grew dramatically in the mid-eighteenth century, to become the largest supplier of indigo to the world. Isolating the individual characteristics of early colonial manufacturing methods employed in the Indies, the trajectory considered here may contribute to the broader history of indigo, our understanding of the reciprocal influences that transformed (sometimes, but not always, improving) production, the diffusion of technical knowledge and innovation across time and space.

The first crates of New World indigo reached the busy port of Seville to a market flooded with Portuguese woad. *Añil* was the superior dye, as a result of which, perhaps, historians have neglected the complex processes that shaped its reception, early commercialization, and accommodation into the dyeing sector. Chapter three approached these questions, describing the difficulties entailed, and the learning process involved in employing but also trading this product, seeking out expressions of acceptance and rejection to its introduction in Spain, from merchants and dyers alike. The central issue of quality intersected here with my earlier discussion of production, pointing to the successful results of early manufacturing methods, but also drawing out evidence of informal communication between producers and consumers regarding ideas about quality, the desired form and

[1] I have borrowed Prakash Kumar's expression here, as discussed in Chapter 2.

appearance of products.

It did not take long for Spanish merchants and dyers to perceive indigo's potential as an alternative to woad, as the superior and more versatile blue that it was; but indigo had a difficult reputation among merchants, while the guilds proved reticent to the change. The defining features of a high-quality dye in this period were fastness, appeal, that it should prove harmful neither to the artisan nor the cloth; Spanish dyers were still unsure whether indigo complied with the first and last of these when American *añil* was introduced. The introduction and diffusion of indigo in the Spanish Empire, this chapter proposed, was not the swift, straightforward affair presented in earlier studies of the topic. Reviews and reactions, one might say, were uneven – *añil* was neither instantly, nor uniformly embraced.

If indigo fought a 'war with woad' abroad, it faced a different battle in Spain; although no powerful economic interests arrested its introduction, other, often, but not always, more localized factors (numerous subtleties), shaped the process of reception, assimilation, and diffusion. The concern over fraud, and an obsession with quality, in turn, appear to have been stronger here, than elsewhere. Neither tobacco nor cacao, as an example, trades that also gained momentum towards 1600, required any particular expertise from traders or buyers, nor did either suffer a reputation that preceded them. The comparatively high complexity of dealing with indigo, in addition to those discouraging ideas concerning it, finally, contributed to the notable degree of specialisation among merchants deling in this particular good. This leads us to Chapter 4.

With the Carmonas, I added one more, detailed study of a merchant family to a rather long list; but I would propose this close, microhistorical approach,[2] to the Atlantic

[2] I am thinking here of the narrative style associated with the Anglophone, rather than Italian microhistorians, which has received its fair share of criticism; but an approach that has proved useful in studies with a Transnational, or Global focus.

wholesalers has its rewards. Firstly, it allowed me to amend the numerous factual errors included in previous studies, sometimes concerned with other commodities traded by this family, a foreseeable consequence of dealing in the variegated source material such approaches involve (and a fair warning to this author as well).[3] It would also provide an intimate window onto processes of network formation, the development and expansion of social and commercial ties (ties that fostered the circulation of new, Atlantic goods), even the 'basis and extent of this solidarity,'[4] a rather more complex issue. The example considered here, highlighted the diversity of individual experience, even within a single family, with members following traditional paths and moving in familiar networks, a picture characterized by movement, constant journeys across the Atlantic and back, connections, everywhere.

Above all, however, the Carmonas became indigo merchants – perhaps the most important Atlantic traders in this commodity – active throughout the course of a first boom in trade. As I hope this chapter made apparent, they did not follow this route by chance. The family had artisanal origins with ties to the textile sector – and Granada in particular – links they cultivated and maintained in successive generations. Their initial investments included dyestuffs, their friends and relatives were employed in these and related trades, and the Carmonas kept close to the centers of production. With indigo, these merchants applied specialised and expert knowledge transferred over generations, and their own, practical expertise (we must recall a first generation were apprenticed as artisans), to a new, but not entirely unfamiliar product, stimulating its Global circulation in unprecedented quantities.

---

[3] To highlight a last example, and returning to the comparison with tobacco and cacao, Norton has argued the Carmonas included two chests of the former for personal consumption in 1612, possibly because they 'felt comfortable smoking' it, partaking in a 'criollo culture,' but did not yet perceive the substance as a commodity. The *registros* indicate this particular shipment was sent by vicar Antonio Ximenez to be delivered to his father *through* the Carmonas, a rather different scenario.

[4] I am citing Francesca Trivellato, who has pointed to this rather more neglected aspect of merchant relations in 'Is There a Future for Italian Microhistory in the Age of Global History?', *California Italian Studies* 2:1 (2011).

The final chapter in this section raised more questions than answers. The presence of the Portuguese, their links to the trade in dyestuffs, and their familiarity with this particular sector – hinting at the possibility of far-reaching, specialised networks – involve immense, well-researched topics that require careful analysis. My own, small contribution, has been to highlight the importance of members of the 'Nation' in the Atlantic indigo trade, where the literature had been limited to their investment with the Asian product, identifying promising sources and investigative possibilities that may enrich our understanding of the Global circulation of indigo.

With the last part of this thesis, I moved into more speculative territory, incorporating visual and material sources, drawing out evidence of qualitative changes in the use, value, and meaning of indigo (or indigo dyed garments), mapping the interplay between colour and textile in specific, sartorial contexts. These chapters explored the ways in which indigo was used, applied, and circulated, but also adapted and transformed as it became increasingly available. When, in the late-seventeenth and especially throughout the eighteenth century, European dyers mastered Asian dyeing techniques and made improvements of their own, it was also because they had undergone an earlier, much more gradual process of familiarization with indigo, increasing their receptivity to new technologies, and willingness to engage in experimentation.

Again, unlike tobacco or chocolate, indigo was introduced into well-defined, pre-existing markets (it was, after all, promoted as a potential substitute for woad); but *añil* also found new consumers, new patterns and places of consumption, its material uses adapted and transformed. Underlying these chapters, finally, was the suspicion that indigo's increasing, and noticeable presence in the wardrobes of the poorer classes had broader social consequences, their visibility articulating a democratisation of consumption. This discussion,

I hope, will have left little doubt that colour mattered; the more in a society where its extraction involved complex processing in distant lands, and where it might immediately be appreciated how, where, and what dyestuff had been applied on a particular garment.

The prospects for future research in the fields of consumption and material culture, are plentiful. This work set aside the topic of elite garments and textiles, where indigo would play such a large role towards the eighteenth century, in the blue and white fashions Europeans found so alluring. The question of reputation, finally, may be explored further; Guatemala indigo rapidly developed, and remarkably maintained a reputation as one of the finest (and for many the best of all) indigo on the market. Scattered comments from artists, dyers, and merchants, some incorporated into this thesis, leave little doubt this standing was generally acknowledged throughout Europe, influencing the choices of indigo producers and merchants across the early modern world. The qualities that defined this reputation, its character and evolution, may yet provide a fruitful line of inquiry.[5]

While this study has, in some measure, emphasized change, the story of indigo in Mesoamerica is also one of continuity. A century and a half after synthetic indigo replaced the 'queen of all dyes,' contemporary tastes and concerns have pushed a resurgence in production – indigo has joined the ranks of 'environmentally friendly,' 'natural,' even 'organic' materials used by luxury brands – one museum curator went so far as to call it the 'new green.'[6] From handcrafted ethnic rugs to fashionable jeans, indigo is once again available in the European markets; yet it has also returned, cyclically, to become an exotic, luxury item available only to an elite. In El Salvador, where the revived industry is advertised even at the airport, great fields of *indigofera* grow to a man's height in an idyllic landscape,

[5] In a different take on the impact of Global reputations, Max Edelson has explored the disappointingly poor standing of South Carolina indigo in the late 18thC. See Chapter 3, n.117

[6] Annie Laurie Sánchez, from a brochure for the exhibit: 'Blue' at the *George Washington University Museum: The Textile Museum*, April-September 2008

surrounded by volcanoes. Meanwhile, local dyers complain they have no more indigo to colour their wares, while production, with the exception of cooperative ventures funded by European, Asian, and North American investors, remains in the hands of a landowning few.[7]

[7] For various, colourful examples of indigo production, and dyeing today, see: Catherine E. Mackinley, *Indigo: In Search of the Colour that Seduced the World* (2011) and Catherine Legrand, *Indigo: The Colour that Changed the World* (2013). Other comments gathered from various contemporary media articles related to the industry in El Salvador.

Epilogue

Seville's Archive of the Indies holds a small collection of textiles dating from the late eighteenth to the early nineteenth century. Most of these are samples sent for commercial purposes, small squares of cloth attached to official and private documents from all parts of the Empire; so while they cover no more than half a century, they present a snapshot, one could say, of the Empire-wide trade in textiles.[8] Looking at these samples, it would be hard to ignore the overwhelming presence of blue – blues that by this time would all have been achieved with indigo. There are *indianillas* (printed cottons) produced in New Spain with Asian inspired designs in blue over white backgrounds, soldier's uniforms from Santo Domingo, even a selection of habits from the Franciscan Order in Caracas (dyed blue!) – evidence of the dispersal of that earlier tradition, or rather innovation on the part of the Friars in New Spain.[9]

The collection points, further, to the diffusion of dyeing techniques, novelties and improvements that would transform the uses and applications of indigo – resist-dyeing methods from India used for the intricate patterns on calicoes, or the European technique for printing indigo 'using potash, quicklime, and orpiment.'[10] Seeing, even handling these squares of cloth, also brings to mind the importance of texture, softness, the appeal of silk and the 'revolution' of cotton. The blues, in particular, speak to a globalised, connected world, best exemplified by the set of samples from a shipment of 50,000 *piezas* (pieces) of cloth, purchased by the Governor of Manila, José de Basco y Vargas, and shipped on the

[8] AGI, Mapas y Planos: Tejidos, 1757-1826 (MP-Tejidos)
[9] AGI, MP-Tejidos, n.11: "Muestras de los géneros de que viste la Religión de San Francisco de Caracas," (26.03.1787); MP-Tejidos, n.15 & 15bis: 'Muestras de Indianas y Sedas,' (30.08.1793); MP-Tejidos, n.2: 'Muestra de tela azul,' (undated).
[10] Giorgio Riello, 'Asian Knowledge and the Development of Calico Printing in Europe in the Seventeenth and Eighteenth centuries,' *Journal of Global History*, 5 (2010), p.20

frigate Astrea – incidentally also carrying Alessandro Malaspina returning from his first voyage to the Philippines. After rounding the Cape of Good Hope, with a brief stop in Buenos Aires, the vessel crossed the Atlantic to Cádiz, where the cloth was transferred onto another ship, and finally exchanged for slaves on the West African coast, or more specifically, as the accompanying documents suggested, at the Island of Annobon.

Basco y Vargas had a royal commission for the purchase, and sent a detailed report itemizing the various textiles and quantities shipped, and it was here that he attached the samples.[11] Of an approximate 17,000 yards and 45,000 pieces of cotton cloth, about half were undyed, but all the rest were blue, dyed in China and Manila. Indigo-dyed cloth was highly prized in West Africa, and the English and Dutch resorted to similar practices in this period, exchanging blue, 'Guinea' cloth, but also the dye for slaves.[12] The Governor appears to have been familiar with these preferences, and even added several thousand pieces of indigenous *guimaras* (after the Island they were made in) – a cotton fabric dyed blue with a single fine red stripe – on his own initiative.

By the mid-eighteenth century, fields of *indigofera* with facilities for processing had altered landscapes and lives in Portuguese Brazil, Spanish Venezuela, British Jamaica and Dutch Java, the French colonies of Guadaloupe, Martinique, and above all Saint Domingue. Around 1740, Eliza Lucas Pickney revived the industry in South Carolina, to considerable interest from local planters, although the dye would suffer an enduringly poor reputation

[11] AGI, MP-Tejidos, n.34: 'Quince muestras de géneros bastos de algodón y guimaras indígenas, remitidos por el gobernador de Filipinas en la fragata Astrea y Urca Santa Inés con destino al comercio africano,' (1778); related documents in AGI, Buenos Aires 41, n.97

[12] See, for example, Giorgio Riello and Tirthankar Roy, 'Introduction: The World of South Asian Textiles, 1500-1850,' in Riello and Roy, Eds., *How India Clothed the World: The World of South-Asian Textiles, 1500-1850* (2009); and Riello, *Cotton*, p.34

among European merchants and consumers.[13] This eighteenth-century, global boom in colonial indigo production, moreover, paralleled an explosion in European demand for Indian cottons, a large percentage of which were dyed blue. With the 'birth of consumer society,'[14] then, and to cite Michel Pastoureau: '*le bleu triomphe*.'[15]

Much has been written about New World (and even more so, Asian) indigo in the eighteenth-century, but the Spanish contribution (through her subjects in Europe and the Colonies) to developing ideas about the dye's cultivation, manufacture, and application has found little place in the historiography – a neglect that seems especially undeserved in view of the Central American product's significant presence, and exceedingly high reputation in the European markets. And what of its resilience? As the author of a mid-nineteenth century treatise would observe:

> Amongst the American indigos, the best are the Guatemala, Caragua, and Mexican. Some years ago the island of St. Domingo produced a very fine indigo, and some were received from Louisiana, South Carolina, and Brazil, but the culture of this plant has been abandoned in these countries.[16]

In the course of this investigation, I invariably stumbled upon records that, while intriguing, lay beyond the scope of my study, and had to be set aside. These final comments may turn to one of the more captivating documents among the large, variegated file of 'leftovers' I gradually compiled, a lecture presented by the French Astronomer Louis Godin[17] at the inaugural meeting of the *Asamblea Amistosa Literaria* (Friendly Literary Assembly), on

---

[13] See, for example, S. Max Edelson in: 'The Characters of Commodities: The Reputations of South Carolina Rice and Indigo in the Atlantic World,' in Peter A. Coclanis, Ed., *The Atlantic Economy During the Seventeenth and Eighteenth Centuries: Organization, Operation, Practice, and Personnel*, (2005).
[14] Maxine Berg, 'The Rise and Fall of the Luxury Debates,' in M. Berg and E. Eger, eds., Luxury in the Eighteenth Century: Debates, Desires, and Delectable Goods, (2002), p.2
[15] Michel Pastoureau, 'Vers un Histoire de la Couleur Bleue,' in *Sublime Indigo*, p.26
[16] Felicien Capron de Dole, *Blues and Carmines of Indigo*, (1863),
[17] Who would also lead the group of scientists that joined Juan and Ulloa on their Geodesic Expedition mentioned earlier.

January 30th, 1755, in Cadiz – where 'learned men met to discuss scientific matters.'[18] If he did, in fact, read the full text that has survived in the manuscript collection of Madrid's Biblioteca Nacional, it would have been a very long presentation indeed, on the topic of indigo cultivation and manufacture in the Indies.[19]

As Kumar has written on the subject of the sea of indigo-related pamphlets and tracts published over the course of the eighteenth century, 'they committed experiences circulating in the indigo world, those resting with "old hands" and "native" customs, into tangible, described knowledge.'[20] The text suggests Godin was familiar with these, numerous contributions by French naturalists, as with Elias Monnereau's *The Indigo Maker*, published in Santo Domingo twenty years earlier,[21] but also added from his own, considerable experience observing the industry over the course of an extended, somewhat improvised stay in the Indies. It is a wonderfully detailed piece, describing the customs of local producers, the different types of *indigofera* cultivated for commercial purposes, and their distinct requirements during processing, encouraging a comparative approach, one that might draw out the Iberian contribution to the improvement of manufacturing techniques, as to the circulation and diffusion of expertise.[22]

---

[18] 'Varones doctos se reunieron en cadiz para tratar temas científicos,' Cited in José Luis de Pando, *Boletín de la Asamblea Amistosa Lieraria* (1984), p.13

[19] BNE, Mss. 11553, 'Memorias Leídas en la Asamblea Amistosa Literaria de Cádiz,' fols. 4-34V: Louis Godin, 'Observaciones sobre la hierba Añil,' (30.01.1755).

[20] Prakash Kumar, *Indigo Plantations and Science in Colonial India*, (2012), p.31

[21] On this text and its author, see Ibid, pp.33-41

[22] Godin would also add a few, suggestive notes on colour: 'In America, the light and tender colours appreciated in other parts (as in his native France, perhaps) are looked down upon; its blue is dark, and its cochineal tends towards the colour of blood, as that of Venice.' Elsewhere, he expanded further on the topic: as for the lightness or darkness of the colour, and its esteem, the uniforms of the troops might urge a greater fastness from the dye, but will not determine general taste, which seems to be the opposite.' From the manuscript cited: 'En América se desprecian aquellos colores tiernos o claros tan apresiados en otras partes; su azul es obscuro y su grana tira a color de sangre, como la de Venecia.' And: 'En quanto a lo mas o menos oscuro del color, y su mayor estimacion, los uniformes de las tropas podran argüir la mayor duración del tinte, pero no determinar el gusto general que parece contrario,' BNE, Mss. 11553, s/f

Compiling his notes for publication, Godin added a few pages to the text read at the Assembly; his final thoughts may conclude this study, perhaps even mark the start of another: 'all this, in the spirit of increasing the useful materials for a complete history of the indigo herb and its dye, should there be someone who wished to write it.'[23]



[23] 'Todo esto con el animo de aumentar los materiales utiles para una historia completa de la hierba añil y de su tinta, si uviere alguno que se dedique a escrivirla (sic),' Ibid, s/f

Bibliography

1. Manuscript and archival sources

Archivo General de Indias (AGI)
Audiencia de Buenos Aires, legajo 1 (L.3), 41 (N.97)
Audiencia de Guatemala, legajos 13 (R.4, N.41), 63, 80 (N.15), 386
Audiencia de Lima, legajo 567 (L.8)
Audiencia de Mexico, legajos 19, 68, 100, 168, 172, 227 (N.27), 263, 364, 367, 1088, 2999
Audiencia de Santo Domingo, legajos 868 (L.1), 899 (L.1, N.2)
Contratación, legajos 179 (N.10,14), 188, (N.22), 650 (N.7),732 (N.11)742 (N.2, 5), 789 (N.20), 816 (N.17), 819 (N.3), 1112 (N.3, 6), 1131 (N.2),1153 (N2), 1156 (N.1), 1159 (N.4), 1160 (N.6),1798, 1811, 2129 (N.2), 2132-2139, 4412, 4888, 5276 (N.77), 5308 (N.2)
Diversos-Colecciones, legajo 26 (N.3)
Indiferente General, legajos 418 (L.1), 420 (L.8), 423 (L.18), 425(L.23), 427 (L.29), 438 (L.19), 738 (N.29, N.152),1092 (R.11), 1383, 1530 (N.4, 5, 17, 18), 1963 (L.9), 1965 (L.13), 1967 (L.16), 2056 (N.91), 2059 (N.157), 2060 (N.27), 2067 (N.29), 2071 (N.38), 2075 (N.40), 2087 (N.109)
Justicia, legajos 183 (N.3, R.2), 1016 (N.6)
Mapas y Planos, Ingenios y Muestras, 42
Patronato Real, legajos 60 (N.5, R.1), 64 (R.7), 68 (N.1, R.4), 72 (N.1, R.1), 80 (N.3,R.4), 83 (N.4, R.4), 171 (N.1, R.23).

Archivo Histórico Provincial de Valladolid (AHPV)
Protocolos, cajas 6830, 7701, 7702
Archivo Ruiz, cajas 16, 26, 31, 42, 59, 74, 82, 84, 247, 250

Archivo General de la Nación, Mexico (AGN)
Inquisición, caja 200 (exp.3), 202 (13), 211 (1-5), 261 (7), 285 (16), 300 (4), 301 (43), 318 (8), 467 (66), 472 (02), 474 (8)
Indiferente Virreinal, caja 0535 (exp. 16), 0962 (11), 2140 (29), 2370 (8), 30199 (24), 4735 (6), 5140 (48), 5145 (46), 5486 (34), 5845 (71), 6155 (1), 6175 (55, 60), 6239 (2), 6552 (69), 6651 (13)

Archivo Histórico de Notarías de la Ciudad de Mexico (AHN)
Antonio Alonso, notarías 1 (v. 9), 2 (v. 4)

Archivo General de Centro América
Colonial, Protocolos Notariales, legajo 433

Archivo de Protocolos de Sevilla (APS)
Oficio 19, legajos 12620, 12637, 12711

Biblioteca Nacional de España (BN)
Godin, Louis, 'Observaciones sobre la hierba Añil,' *Memorias Leídas en la Asamblea Amistosa Literaria de Cádiz* (1755), MSS. 11553, fols. 4-34V

II. Printed Primary Sources

Badiano, Juan and Martín de la Cruz, *The Badianus Manuscript, Codex Barberini, Latin 241, Vatican Library: An Aztec Herbal of 1552*, trans. & ed., Emily Walcott Emmart (Baltimore, 1940).

Beccarie de Pavie, Raimond (Baron de Fourquevaux), *Dépêches De M. De Fourquevaux: Ambassadeur Du Roi Chares IX En Espagne, 1565-1572,* ed. Célestin Douais, vol. 1 (Paris, 1896)

Benavente, Toribio de (Motolinía), *Historia de los Indios de la Nueva España*, eds. Mercedes Serna Arnaiz, and Bernat Castany Prado (Madrid, 2014).

Berthollet, Claude Louis, *Elements of the Art of Dyeing*, trans., Andrew Ure (2nd ed., London, 1824).

Carducci, Vincenzo, *Diálogos de la pintura, su defensa, origen, esencia, definición, modos y diferencias* (Madrid, 1633). Copy held at: University of Oxford, Christ Church Library Special Collections.

Castillo, Jerónimo del, *Diccionario Histórico, Biográfico y Monumental de Yucatan: Desde la Conquista Hasta el Ultimo Año de la Dominación Española en el Pais* (Mérida, 1866).

Chávez Orozco, Luis, ed., *Códice Osuna: Reproducción Facsimilar De La Obra Del Mismo Título, Editada En Madrid, 1878, acompañada De 158 Páginas Inéditas Encontradas En El Archivo General De La Nación* (Mexico City, 1947).

Cid, Juan de Dios del (attrib.), *El Puntero Apuntado con Apuntes Breves*, ed. Isabel Casín de Montes (San Salvador, 1999).

Ciudad Real, Antonio de, *Diccionario de Motul, Maya Español*, ed. Juan Martínez Hernández (Mérida, 1929).

Cortés, Hernán, *Cartas de Relación*, ed. Manuel Alcalá (Mexico City, 1993).

De la Garza, Mercedes, and Ana L. Izquierdo, eds., *Relaciones Histórico-Geográficas de la Gobernación de Yucatán: Mérida, Valladolid, y Tabasco* (Mexico City, 1983).

Díaz del Castillo, Bernal, *Historia verdadera de la conquista de la Nueva España*, ed. Miguel de León Portilla (Madrid, 1984).

Fernández de Navarrete, Martín, *Colección de los viages y descubrimientos que hicieron por mar los Españoles desde fines del s.XVI*, 4 vols. (Madrid, 1825-37).

Fernández de Oviedo, Gonzalo, *Sumario de la Historia natural de las Indias*, ed. Manuel Ballesteros Gaibrois (Madrid, 1986).

Gage, Thomas, *A New Survey of the West Indies* (3rd ed, London, 1677).

Gómez de Cervantes, Gonzalo, *La vida económica y social de Nueva España al finalizar el siglo XVI*, ed. Alberto María Carreno (Mexico City, 1944).

Hernández de Toledo, Francisco, *Quatro libros de la naturaleza y virtudes de las plantas y animales que estan receuidos en el uso de la medicina en la Nueva España* (1615), World Digital Library. https://www.wdl.org/en/item/7334/

Catálogo de los fondos americanos del Archivo de Protocolos de Sevilla, Instituto Hispano-Cubano de Historia de América (Madrid, 1930).

Herrera y Tordesillas, Antonio de, *Historia general de los hechos de los Castellanos en la Islas y Tierra Firme del Mar Océano,* ed., Antonio Ballesteros Beretta (Madrid, 1934).

Juan, Jorge and Antonio de Ulloa, *Relación histórica del viage a la America Meridional*, 4 vols. (Madrid, 1748).

Landa, Diego de, *Relación de las Cosas de Yucatán*, ed. Miguel Rivera (Madrid, 1985).

López de Cogolludo, Diego, *Historia de Yucatán*, ed. Justo Sierra O'Reilly (Campeche, 1954).

Paso y Troncoso, Francisco del., *Epistolario de la Nueva España: 1505-1818*, 16 vols. (Mexico City, 1939-1942).

Colección de documentos inéditos relativos al descubrimiento, conquista y organización de las antiguas posesiones Españolas de Ultramar, Real Academia de la Historia (Madrid, 1885-1932).

Rosetti, Giovanventura, *The Plictho; Instructions in the Art of the Dyers: Which Teaches the Dyeing of Woolen Cloths, Linens, Cottons, and Silk by the Great Art as Well as by the Common*, eds. Sidney M. Edelstein, and Hector C. Borghetty (Cambridge, MA, 1969).

Rossignon, Julio, *Manual del Cultivo del Añil y del Nopal, o sea Extracción del Índigo, Educación y Cosecha de la Cochinilla, Extracción de los Principios Colorantes de Varias Plantas Tinctoriales* (Paris, 1859).

Sahagún, Bernardino de, *Historia general de las cosas de Nueva España* (c.1577), World Digital Library. https://www.wdl.org/en/item/10096/

Saladrigas Cheng, Silvia, and Joan Soler i Jiménez, eds., *El Arte Real de Perseguir a los Sombreros: Textos y Documentos para la Historia del Tejido y la Indumentaria en las Monarquías Hispánicas, s.XIV-XVIII* (Barcelona, 2009).

Scholes, France Vinton, *Don Diego Quijada: Alcalde Mayor de Yucatán, 1561-1565* (Mexico City, 1938).

Quezada, Sergio, *Relación Documental Para La Historia De La Provincia De Yucatán, 1520–1844* (Mérida, 1992)

Quinn, David B., and Raleigh Ashlin Skelton, eds., *The Principall Navigations, Voiages, and Discoveries of the English Nation*, 2 vols. (Cambridge, 1965).

Varey, Simon, ed., *The Mexican Treasury: The Writings of Dr. Francisco Hernández* (Stanford, CA, 2000).

III. Printed Secondary Works

Aguado de los Reyes, Jesús, 'El apogeo de los Judios Portugueses en la Sevilla Americanista,' *Cadernos de Estudos Sefarditas*, no.5 (2005), pp. 135-157

--- 'Lisboa, Sevilla, Amberes, eje financiero y comercial en el sistema atlántico (primera mitad del s.XVIII),' in Carlos Martinez Shaw, and José María Oliva Melgar, *El Sistema Atlántico Español: siglos XVII- XIX* (Sevilla, 2005), pp.101-126

Alberro, Solange, *Del Gachupín Al Criollo: O De Cómo Los Españoles De México Dejaron De Serlo* (Mexico City, 1992).

Altman, Ida, *Transatlantic Ties in the Spanish Empire: Brihuega, Spain & Puebla, Mexico*, *1560-1620* (Stanford, 2000).

--- *Emigrants and Society: Extremadura and America in the Sixteenth Century* (Berkeley, 1989).

Appadurai, Arjun, ed., *The Social Life of Things: Commodities in Cultural Perspective* (Cambridge, 1986).

Aram, Bethany, and Bartolomé Yun Casalilla, eds., *Global goods and the Spanish Empire, 1492-1824: Circulation, Resistance and Diversity* (Basingstoke, 2014).

Arnold, Dean, 'The Evidence for Pre-Columbian Indigo in the New World,' *Antropología y Técnica*, 2 (1987), pp. 53-84.

Arroyo, Elsa, Espinosa, Manuel, et al., 'Variaciones Celestes Para Pintar El Manto De La Virgen,' *Anales Del Instituto De Investigaciones Estéticas*, 34: 100 (2012), pp. 85-117.

Asensio Fuentes, A., "Historia De La Tintura. Consideración y Aportación Social,' *Catálogo De La Exposición Plantas Tintóreas y Su Uso* (Madrid, 1982.), pp. 25-39.

Ashok, Roy, Barbara H. Berry, Robert L. Feller, and Elizabeth Fitzhugh, eds., *Artists' Pigments: a Handbook of Their History and Characteristics* (Cambridge, 1986).

Aguilera, Carmen, 'Of Royal Mantles and Blue Turquoise: The Meaning of the Mexica Emperor's Mantle,' *Latin American Antiquity*, 8: 1 (1997), pp. 3-19.

Alden, Dauril, 'The Growth and Decline of Indigo Production in Colonial Brazil: A Study in Comparative Economic History,' *The Journal of Economic History*, 25: 1 (1965), pp. 35-60.

Badet, Claude, 'Marseille et Le Commerce de l'indigo', in Viatte, Françoise, and Madeleine Pinault Sørensen, eds., *Sublime Indigo*, (Marseilles, 1987), pp. 213-5.

Bailey, Gauvin A., *Art of Colonial Latin America* (London, 2005).

Balfour-Paul, Jenny, *Indigo* (London, 2006).

--- *Indigo in the Arab World* (Richmond, 1997).

Baskes, Jeremy, 'Risky Ventures: Reconsidering Mexico's Colonial Trade System', *Colonial Latin American Review*, 14:1 (2005), pp. 27-54.

Bauer, Arnold J., *Goods, Power, History, Latin America's Material Culture* (Cambridge, 2001).

Bazant, Jan, 'Evolution of the Textile Industry of Puebla: 1544- 1845', *Comparative Studies in Society and History*, 17: 1 (1964), pp. 56-69.

Beeson, Kenneth H., 'Indigo Production in the Eighteenth Century,' *The Hispanic American Historical Review,* 44: 2 (1964), pp. 214–218.

Bennassar, Bartolomé, 'Facteurs Sévillans Au XVIe Siècle: D'Après des Lettres Marchandes', *Annales. Histoire, Sciences Sociales*, 12: 1 (1957), pp. 60-70.

Berg, Maxine, *Writing the History of the Global: Challenges for the 21st Century* (Oxford, 2013).

Berthe, Jean Pierre, 'El Cultivo Del "Pastel" En Nueva España,' *Historia Mexicana*, 9: 3 (1960), pp. 340-67.

Boyajian, James C., *Portuguese Trade in Asia under the Hapsburgs* (Baltimore and London, 2008).

Boyd Bowman, Peter, *Patterns of Spanish Emigration to the New* World (1493-1580), (Buffalo, 1973).

--- *Indice Geobiográfico De Cuarenta Mil Pobladores Españoles De América En El Siglo XVI*, (Bogotá, 1964).

--- 'Two Country Stores in XVIIth Century Mexico', *The Americas*, 28: 3 (1972), pp. 237-51.

Brown, Richmond F., 'Profits, Prestige, and Persistence: Juan Fermín De Aycinena and the Spirit of Enterprise in the Kingdom of Guatemala,' *The Hispanic American Historical Review*, 75: 3 (1995), pp. 405-40.

Bruquetas Galán, Rocío, 'Técnicas y Materiales En La Pintura Limeña De La Primera Mitad Del Siglo XVII: Angelino Medoro y Su Entorno,' *Goya*, 327 (2009), pp. 144-61.

--- Bruquetas Galán, López de Letona, Ana C., et al., 'Materials and Techniques in Viceregal Paintings and Sculpture in Lima (16th and 17th Centuries),' *Art Technical Source Research* (2011), pp. 1-8.

Butler Greenfield, Amy, *A Perfect Red: Empire, Espionage and the Quest for the Colour of Desire* (London, 2006).

Cabello Carro, P., 'Tintes y Colorantes De La América Indígena,' in Ana Roquero, ed., *Catálogo De La Exposición Plantas Tintóreas y Su Uso* (Madrid, 1982), pp. 47-71.

Carillo y Gariel, Abelardo, *El Traje En La Nueva España* (Mexico City, 1959).

--- *Técnica De La Pintura De Nueva España* (Mexico City, 1946).

Cardon, Dominique, *Natural Dyes: Sources, Tradition, Technology and Science* (London, 2007).

--- *Le Monde Des Teintures Naturelles* (Paris, 2003).

Carlsen, Robert S. and Wenger, David A., 'The Dyes used in Guatemalan Textiles: A Diachronic Approach,' in *Textile Traditions of Mesoamerica and the Andes: An Anthology* (New York, 1991), pp. 359-80.

Casado Alonso, Hilario, 'El Comercio Del Pastel: Datos Para Una Geografía De La Industria Pañera Española En El Sigo XVI,' *Journal of Iberian and Latin American Economic History*, 8: 3 (1990), pp. 523-48.

Castelló Yturbide, Teresa, *Colorantes Naturales De México* (Mexico City, 1988).

Caster, Giles, 'Types Économiques Et Sociaux Du XVIe Siècle: Le Pastelier Toulousain,' *Annales, Histoires, Sciences Sociales*, 9: 1(1954), pp. 63-74.

Céspedes, Guillermo, *La Avería En El Comercio De Indias* (Sevilla, 1945).

Chaunu, Pierre and Huguette, *Seville et l'Atlantique*, 8 vols. (Paris, 1955-1959).

Chamberlain, Robert S., *The Conquest and Colonization of Yucatan, 1517-1550* (Washington, 1948).

Chenciner, Robert, *Madder Red: A History of Luxury and Trade: Plant Dyes and Pigments in World Commerce and Art* (Richmond, 2000).

Chevalier, François, *La Formación De Los Latifundios En México: Haciendas y Sociedad En Los Siglos XVI, XVII y XVIII* (Mexico City, 1976).

Collado Villalta, Pedro, 'El Embargo De Bienes De Los Portugueses En La Flota De Tierra Firme De 1641,' *Anuario De Estudios Americanos*, 36 (1979), pp. 69-207.

Contreras, Jaime, 'Clientelismo y Parentela de los Famliares del Santo Oficio', in Agustín Redondo, ed., *Les Parentés Fictives En Espagne, XVIe-XVIIe Siècles* (Paris, 1988), pp. 51-69

Cosentino, Delia A., *Las Joyas De Zinacantepec: Arte Colonial En El Monasterio De San Miguel* (Mexico City, 2003).

Cunill, Caroline, 'Siete Cartas Inéditas de Yucatán: Comunicación Privada Entre Mayas y Españoles, y Explotación Ilegal del Añil en el Siglo XVI,' *Estudios de Cultura Maya*, 45 (2015), pp. 91-120.

Dannehl, Karin, 'Object Biographies from Production to Consumption,' in Karen Harvey, ed., *History and Material Culture: A Student's Guide to Approaching Alternative Sources* (Oxford, 2009), pp. 123-38.

De Grazia, Victoria, and Ellen Furlough, eds., *The Sex of Things Gender and Consumption in Historical Perspective* (Berkeley, 1996).

De la Tabla Ducasse, Javier Ortiz, 'Las Ordenanzas De Obrajes De Matias De Peralta Para La Audencia De Quito, 1621: Régimen Laboral De Los Centros Textiles Coloniales Ecuatorianos,' *Anuario De Estudios Americanos*, 33 (1976), pp. 875-931.

Duch Colell, Juan, ed., *Yucatán En El Tiempo: Enciclopedia Alfabética* (Mérida, 1998).

Dominguez Ortiz, Antonio, *Los Judeoconversos Españoles En La España Moderna* (Madrid, 1992).

Earle, Rebecca, 'Clothing and Ethnicity in Colonial Spanish America,' in Riello, Giorgio, and Peter McNeil, eds., *The Fashion History Reader: Global Perspectives* (London, 2010), pp. 383-5.

--- 'Luxury, Clothing and Race in Colonial Spanish America,' in Maxine Berg and E. Eger, eds., *Luxury in the Eighteenth Century: Debates, Desires and Delectable Goods*, (New York, Balsingstoke, 2003), pp. 219-27.

--- ""Two Pairs of Pink Satin Shoes!!" Race, Clothing and Identity in the Americas,' *History Workshop Journal*, 52 (2001), pp. 175-95.

Edelson, Max, 'The Characters of Commodities: The Reputations of South Carolina Rice and Indigo in the Atlantic World,' in Peter A. Coclanis, ed., *The Atlantic Economy During the Seventeenth and Eighteenth Centuries: Organization, Operation, Practice, and Personnel* (Columbia, 2005).

Elliott, John H., *Empires of the Atlantic World: Britain and Spain in America, 1492-1830* (New Haven, 2006).

--- *Spain and its World, 1500-1700: Selected Essays'* (London, 1990)

--- *Imperial Spain, 1469-1716* (Harmondsworth, 1975).

Escalante, Pablo, ed., *Historia De La Vida Cotidiana En México,* vol. 1 (Mexico City, 2004).

Escandell-Tur, Neus, *Producción y Comercio De Tejidos Coloniales: Los Obrajes y Chorrillos Del Cusco 1570-1820* (Cusco, 1997).

--- 'El Comercio De "Ropa De La Tierra" En Los Obrajes y Chorrillos Del Cuzco: Fuentes Documentales 1650-1820,' *América Latina En La Historia Económica*, 1: 2 (1994), pp. 37-54.

Farriss, Nancy M., *Maya Society Under Colonial Rule: The Collective Enterprise of Survival* (Princeton, 1984).

Feeser, Andrea, *Red, White, and Black Make Blue: Indigo in the Fabric of Colonial South Carolina Life* (Athens, GA., 2013).

Feeser, Andrea, Daly Goggin, Maureen, and Beth Fowkes Tobin, eds., *The Materiality of Color: The Production, Circulation, and Application of Dyes and Pigments, 1400-1800* (Farnham, 2012).

Fernández Molina, José Antonio, *Pintando el mundo de azul: El auge añilero y el mercado centroamericano, 1750–1810* (San Salvador, 2003).

Ferry, Robert J., 'Don't Drink the Chocolate: Domestic Slavery and the Exigencies of Fasting for Crypto-Jews in Seventeenth-Century Mexico,' *Nuevo Mundo, Mundos Nuevos* (Online, 17 May 2005).

Finlay, Robert, 'Weaving the Rainbow: Visions of Colour in World History,' *Journal of World History*, 18: 4 (2007), pp. 383-431.

Floyd, Troy S., 'The Indigo Merchant: Promoter of Central American Economic Development, 1750–1808,' *The Business History Review*, 39: 4 (1965), pp. 466–488.

Frick, Carole Collier, *Dressing Renaissance Florence: Families, Fortunes, & Fine Clothing* (Baltimore, 2002).

Gage, John, *Colour and Meaning: Art, Science and Symbolism* (London, 1999).

García Bernal, Manuela Cristina, *Yucatán: Población y Encomienda Bajo Los Austrias* (Sevilla, 1978).

--- 'Apuntes Sobre La Sociedad Urbana De Yucatan En El Siglo XVI,' *Anuario De Estudios Americanos*, 40 (1983), pp. 3-38.

--- 'El Afianzamiento De Un Precario Comercio: Los Intercambios Entre Sevilla y Yucatán, 1590-1600,' *Historia Mexicana*, 50: 2 (2000), pp. 201-269.

García Fuentes, Lutgardo, *Los Peruleros y El Comercio De Sevilla Con Las Indias, 1580-1630* (Sevilla, 1997).

Garrigus, John, 'Blue and Brown: Contraband Indigo and the Rise of a Free Colored Planter Class in French Saint-Domingue,' *The Americas*, 50: 2 (1993), pp. 233-63.

Geggus, David, 'Indigo and Slavery in Saint Domingue,' in Shepherd, Verene A., ed., *Slavery Without Sugar: Diversity in Caribbean Economy and Society Since the 17th Century* (Gainesville, FL, 2002), pp. 19-35.

Gentil da Silva, Jose, *Lettres De Lisbonne, 1563-1578*, 2 vols. (Paris, 1959).

Gerhard, Peter, *The Southeast Frontier of New Spain* (Princeton, 1979).

Gil, Juan, *Los Conversos y La Inquisición Sevillana*, 8 vols. (Sevilla, 2003).

Gil-Bermejo García, Juana, 'Tintes Minerales En Nueva España,' *Anuario De Estudios Americanos*, 41 (1984), pp. 579-615.

--- 'Mercaderes Sevillanos (II): Una Relación De 1640,' *Archivo Hispalense*, 61: 188 (1978), pp. 25-52.

Grijalva, Manuel, 'Manufactura Colonial Comparativa: Aspectos Comparativos Entre El Obraje Andino y El Novohispano,' in Bonilla, Heraclio, and Peter John Bakewell, eds., *El Sistema Colonial En La América Española*, (Barcelona, 1991), pp. 102-53.

Gruzinski, Serge, *Painting the Conquest: the Mexican Indians and the European Renaissance* (Paris, 1992)

--- 'Entre Monos y Centauros. Los Indios Pintores y La Cultura Del Renacimiento,' in Berta Ares Queija, and Serge Gruzinski, eds., *Entre Dos Mundos: Fronteras Culturales y Agentes Mediadores* (Sevilla, 1997), pp. 349-71.

Haude, Mary Elizabeth, 'Identification of Colorants on Maps from the Early Colonial Period of New Spain,' *Journal of the American Institute for Conservation* (1998), pp. 240-70.

Heers, Jacques, 'La Búsqueda De Colorantes,' *Historia Mexicana*, 11: 1 (1961), pp. 1-27.

Heredia Herrera, Antonia, 'Las Cartas De Los Virreyes De Nueva España a La Corona Española En El Siglo XVI,' *Anuario De Estudios Americanos*, 31 (1974), pp. 441-596.

Hillerkuss, Thomas, 'Los Méritos y Servicios De Un Maya Yucateco Principal Del Siglo XVI y La Historia De Sus Probanzas y Mercedes,' *Estudios De Historia Novohispana*, 13: 13 (2009).

Hoberman, Louisa S., *Mexico's Merchant Elite, 1590-1660: Silver, State and Society* (London, 1991).

Hordes, Stanley M., 'The Inquisition as Economic and Political Agent: The Campaign of the Mexican Holy Office Against the Crypto-Jews in the Mid-Seventeenth Century,' *The Americas*, 39: 1 (1982), pp. 23-38.

Hurry, Jamieson B., *The Woad Plant and its Dye* (London, 1930).

Jamieson, Ross W., 'Bolts of Cloth and Sherds of Pottery: Impressions of Caste in the Material Culture of the Seventeenth Century Audiencia of Quito', *The Americas*, 60: 3 (2004), pp. 431-46.

Jickling, David, 'Los vecinos de Santiago de Guatemala en 1604', *Mesoamérica* 3: 3 (1982), pp. 145-231

Katzew, Ilona, *Casta Painting: Images of Race in Eighteenth-Century Mexico* (New Haven, 2004).

Kirby, Jo, Nash, Susie, and Joanna Cannon, eds., *Trade in Artists' Materials: Markets and Commerce in Europe to 1700* (London, 2010).

Kicza, John E., *Colonial Entrepreneurs: Families and Business in Bourbon Mexico City* (Albuquerque, 1983).

Kumar, Prakash, *Indigo Plantations and Science in Colonial India* (Cambridge, 2012).

Lapeyre, Henri, *Une Famile De Marchands: Les Ruiz* (Paris, 1955).

--- 'El Archivo Ruiz: Veinte Años Después,' *Revista De Occidente*, 107 (Madrid, 1972).

Lee, Raymond L., 'American Cochineal in European Commerce, 1526-1625,' *The Journal of Modern History*, 23: 3 (1951), pp. 205-24.

Leon-Portilla, Miguel de, Mauricio J. Mixco, trans., *Bernardino De Sahagún: First Anthropologist* (Norman, 2002).

--- 'Los Franciscanos vistos por el hombre Náhuatl: testimonios indígenas del siglo XVI,' *Estudios de Culura Náhuatl*, 17 (1984), pp. 261-339.

Liebman, Seymour B., *The Jews in New Spain: Faith, Flame, and the Inquisition* (Florida, 1970).

López Belinchón, Bernardo José, '"Sacar La Sustancia Al Reino": Comercio, Contrabando y Conversos Portugueses, 1621 – 1640,' *Hispania*, 61: 209 (2001), pp. 1017-49.

Lorenzo Sanz, Eufemio, *Comercio De España Con América En La Época De Felipe II,* 2 vols. (Valladolid, 1979).

MacLeod, Murdo J., *Spanish Central America; a Socioeconomic History, 1520-1720* (Berkeley, 1973).

McCreery, David, 'Indigo Commodity Chains in the Spanish and British Empire, 1560–1860,' in Topik, Steven, Carlos Marichal, and Frank Zephyr, eds., *From Silver to Cocaine: Latin American Commodity Chains and the Building of the World Economy, 1500-2000* (Durham, N.C., 2006), pp. 53-75.

Miller, Sara, 'Francisco Palomino: Protector y Defensor de los Indígenas,' *Mesoamérica*, 6: 9 (1985), pp.133-153.

Molas Ribalta, Pere, 'La Política Del Tinte En La España Del Siglo XVII,' *Espacio, Tiempo y Forma*, 4: 7 (1994), pp. 55-68.

Molina Solís, Juan Francisco, *Historia De Yucatán Durante La Dominación Española*, 3 vols. (Mérida, 1904).

Nieto-Galán, Agustí, *Colouring Textiles: A History of Natural Dyestuffs in Industrial Europe* (Boston, 2001).

Norton, Marcy, *Sacred Gifts, Profane Pleasures: A History of Tobacco and Chocolate in the Atlantic World* (Ithaca, 2008).

Nuñez Roldán, Francisco, 'Tres Familias Florentinas en Sevilla: Federighi, Fantoni, y Bucarelli (1570-1625),' in *Presencia Italiana En Andalucía, siglos XIV-XVII: Actas Del III Coloquio Hispano-Italiano* (Sevilla, 1989).

Otte, Enrique and Albi Romero, Guadalupe, *Cartas Privadas De Emigrantes a Indias, 1540-1616* (Sevilla, 1988).

Otte, Enrique, *Sevilla y Sus Mercaderes a Fines De La Edad Media* (Sevilla, 1996).

--- 'Cuentas De Dos Compañías Del Pastel De Las Islas De Las Azores De 1558 y 1559,' *Historia, Instituciones, Documentos*, 30 (2003), pp. 429-68.

Patrón Sartí, Rafael and González González, Enrique, 'El Capitán Martín De Palomar, Regidor, Encomendero y Benefactor: Su Testamento (Merida, Yucatan, 1611),' *Estudios De Historia Novohispana*, 43 (2010), p.526

Pastoureau, Michel, *Blue: The History of a Color* (Princeton, 2001).

--- 'Vers un Histoire de la Couleur Bleue,' in Viatte, Françoise, and Madeleine Pinault Sørensen, eds., *Sublime Indigo* (Marseilles, 1987), pp. 18-27.

Paulino Murugarren, Iradiel, *Evolución de la industria textil castellana en los siglos XIII-XVI* (Salamanca, 1974).

Peck, Amelia and Bogansky, Amy, eds., *Interwoven Globe: The Worldwide Textile Trade, 1500-1800* (New York, 2013).

Pike, Ruth, 'Sevillian Society in the Sixteenth Century: Slaves and Freedmen,' *The Hispanic American Historical Review*, 47: 3 (1967), pp. 344-59.

--- 'The Genoese in Seville and the Opening of the New World,' *The Journal of Economic History*, 22: 3 (1962), pp. 348-78.

--- 'Seville in the Sixteenth Century,' *The Hispanic American Historical Review*, 41: 1 (1961), pp. 1-30.

Phelan, John L., *The Kingdom of Quito in the Seventeenth Century: Bureaucratic Politics in the Spanish Empire*, (Madison, WI, 1967).

Ponting, Kenneth G., *A Dictionary of Dyes and Dyeing* (London, 1980).

Posthumus, Nicolaas Wilhelmus, *Inquiry into the History of Prices in Holland*, 2 vols. (Leiden, 1946–1964).

Presta, Ana María, 'Undressing the Coya and Dressing the Indian Woman: Market Economy, Clothing, and Identities in the Colonial Andes,' *Hispanic American Historical Review*, 90: 1 (2010), pp. 41-74.

Ramada Curto, Diogo and Molho, Anthony, eds., *Commercial Networks in the Early Modern World* (Florence, 2002).

Riello, Giorgio, *Cotton: The Fabric that Made the Modern World* (Cambridge, 2013)

--- 'Asian Knowledge and the Development of Calico Printing in Europe in the Seventeenth and Eighteenth Centuries,' *Journal of Global History*, 5: 1 (2010), pp. 1-28.

Rishel, Joseph J. and Stratton-Pruitt, Suzanne L., eds., *The Arts in Latin America, 1492-1820* (Philadelphia, 2006).

Roque, Georges, ed., *El Color En El Arte Mexicano* (Mexico City, 2003).

Roquero, Ana, *Tintes y Tintoreros De América: Catálogo De Materias Primas y Registro Etnográfico De México, Centro América, Andes Centrales y Selva Amazónica* (Madrid, 2006).

--- 'Colores y Colorantes de América,' *Anales del Museo de América*, 3 (1995), pp. 145-160.

Rowe, Anne Pollard, ed., *Weaving and Dyeing in Highland Ecuador* (Austin, 2007).

Rubio Mañé, Jorge Ignacio, *La Casa De Montejo En Mérida De Yucatán* (Mérida, 1941).

--- *Los Primeros Vecinos De La Ciudad De Mérida De Yucatán* (Mérida, 1935).

Rubio Sánchez, Manuel, *Historia Del Añil o Xiquilite En Centro América*, 2 vols. (San Salvador, 1976)

Rueda Ramírez, Pedro, *Negocio e Intercambio Cultural: El Comercio De Libros Con América En La Carrera De Indias, Siglo XVII* (Sevilla, 2005).

Ruiz Martin, F, ed., *Lettres Marchandes Échangées Entre Florence Et Medina Del Campo* (Paris, 1965).

Ruz Sosa, Mario Humberto, 'El Añil En El Yucatán Del Siglo XVI,' *Estudios De Cultura Maya* 12 (1979), pp. 111-56.

Salvucci, Richard J., *Textiles and Capitalism in Mexico: An Economic History of the Obrajes, 1539-1840.* (Princeton, 1987).

--- 'Las Manufacturas En Hispanoamérica,' in A. Castillero Calvo and A.J. Kuethe, eds., *Historia General De América Latina: Consolidación Del Orden Colonial*, 3 vols. (Madrid, 1999), pp. 247-68.

Sandberg, Gøsta, *Indigo Textiles: Technique and History* (London, 1989).

Sánchez, José María and Quiñones, María Dolores, 'Materiales Pictóricos Enviados a América En El Siglo XVI,' *Anales Del Instituto De Investigaciones Estéticas*, 95 (2009), pp. 45-67.

Sarabia Viejo, María Justina, *La Grana y El Añil: Técnicas Tintóreas En México y América Central* (Sevilla, 1994).

--- 'Evolución De Los Colorantes Mesoamericanos en El Siglo XVIII,' in *Actas del IX Congreso Internacional De Historia De América*, 2 (Sevilla, 1992.), pp. 321-342.

--- 'Intentos de Aclimatar Productos americanos En Andalucía En El Siglo XVI: el Añil,' in *IX Congreso Internacional de Historia de América, Asociación Española de Americanistas* (Sevilla, 1982), pp. 39-48.

Simpson, Lesley Byrd, 'Bernal Diaz Del Castillo, Encomendero,' *The Hispanic American Historical Review*, 17: 1 (1937), pp. 100-6.

Siracusano, Gabriela, *Pigments and Power in the Andes: From the Material to the Symbolic in Andean Cultural Practices, 1500-1800* (London, 2011).

--- 'Polvos y Colores En La Pintura Barroca Andina: Nuevas Aproximaciones,' in *Actas del III Congreso Internacional del Barroco Americano: Territorio, Arte, Espacio y Sociedad* (Sevilla, 2011).

Smith, Robert S., 'Seville and the Atlantic: Cycles in Spanish Colonial Trade,' *The Journal of Economic History*, 22: 2 (1962), pp. 253-9.

--- 'Indigo Production and Trade in Colonial Guatemala,' *The Hispanic American Historical Review*, 39: 2 (1959), pp. 181-211.

--- 'Forced Labour in the Guatemalan Indigo Works,' *The Hispanic American Historical Review*, 36: 3 (1956), pp. 319-28.

Stearns, Peter N., 'Social History and World History: Prospects for Collaboration,' *Journal of World History*, 18: 1 (2007), pp. 43-52.

Studnicki-Gizbert, David, *A Nation Upon the Ocean Sea: Portugal's Atlantic Diaspora and the Crisis of the Spanish Empire, 1492-1640* (Oxford, 2007).

--- 'From Agents to Consulado: Commercial Networks in Colonial Mexico, 1520-1590 and Beyond,' *Anuario De Estudios Americanos*, 57: 1 (2000), pp. 41-68.

Taussig, Michael, *What Color is the Sacred?* (London, 2009).

Teixera da Mota, Avelino, 'Les Routes Portuguaises de l' Atlantique,' *Anuario De Estudios Atlánticos,* 25 (1968), pp. 129-146.

Trivellato, Francesca, 'Is There a Future for Italian Microhistory in the Age of Global History?', *California Italian Studies* 2: 1 (2011).

Uchmany, Eva Alexandra, 'Simón Váez Sevilla,' in *Estudios de Historia Novohispana*, 9: 9 (1987), pp. 67-93.

Ulloa, Modesto, 'Unas notas sobre el Comercio y la Navegación Españoles en el siglo XVI,' *Anuario de Historia Económica y Social*, 2 (1969), pp. 191-237.

Vargas Lugo de Bosch, Elisa, Fernández de Calderón, Cándida, Angeles Jiménez, Pedro, eds., *Imágenes De Los Naturales En El Arte De La Nueva España: Siglos XVI al XVIII* (Mexico City, 2005).

Vargas Lugo de Bosch, Elisa, ed., *Juan Correa: Su Vida y Su Obra,* 2 vols. (Mexico City, 1985).

Vázquez de Prada, Valentin, *Lettres Marchandes d'Anvers* (Paris, 1960).

Vela Santamaría, Francisco Javier, 'Protoindustria y fábrica difusa: el distrito industrial Segoviano en el Siglo de Oro,' lecture presented at the *XI Congreso Internacional de la Asociación Española de Historia Económica* (Madrid, 4- 5.09.2014).

Vetterli, W.A., 'The History of Indigo', *CIBA Review*, 85 (1951), pp. 3066-3071.

Vicente, Marta V., *Clothing the Spanish Empire: Families and the Calico Trade in the Early Modern Atlantic World* (New York, 2006).

--- 'Fashion, Race and Cotton Textiles in Colonial Spanish America,' in Giorgio Riello and P. Parthasarathi, eds., *The Spinning World: A Global History of Cotton Textiles, 1200-1850* (Oxford, 2009), pp. 247-60.

Vila Vilar, Enriqueta, *Los Corzo y Los Mañara: Tipos y Arquetipos Del Mercader Con Indias* (Sevilla, 1991).

--- 'Una Amplia Nómina De Los Hombres Del Comercio Sevillano del s. XVII,' *Boletín De La Real Academia Sevillana De Buenas Letras: Minervae Baeticae*, 30 (2002), pp. 139-91.

Vinton Scholes, France and Adams, Eleanor B., *Don Diego Quijada, Alcalde Mayor de Yucatán (1561–1565)* (Mexico City, 1938).

Viqueira, Carmen and José Ignacio Urquiola, *Los Obrajes En La Nueva España: 1530–1630* (Mexico City, 1990).

Wolf, Gerhard, Connors, Joseph, and Waldman, Louis A., eds., *Colors between Two Worlds: The Florentine Codex of Bernardino de Sahagún* (Florence, 2011).

IV. Unpublished dissertations

Angeles Jiménez, Pedro, 'Imágenes y Memoria: La Pintura de Retrato de los Franciscanos en la Nueva España', Ph.D. Dissertation, Universidad Nacional Autónoma de Mexico, 2010.

Brezine, Carrie J., 'Dress, Technology, and Identity in Colonial Peru', Ph.D. dissertation, Harvard University, 2011.

Fortea Pérez, José Ignacio, 'Córdoba en el s.XVI: las Bases Demográficas y Económicas de una Expansión Urbana', Ph.D. dissertation, Universidad de Salamanca, 1981.

Henke Breuer, Kimberly, 'Reshaping the Cosmos: Maya Society on the Yucatecan Frontier', Ph.D. dissertation, Vanderbilt University, 2004.

Joba, Dorothy Jane, 'Santiago de los Caballeros, 1604-1626: Society and Economy in Colonial Guatemala', PhD dissertation, University of Connecticut, 1984.

Van Eikema Hommes, M.H., 'Discoloration in Renaissance and Baroque Oil Paintings: Instructions for Painters, theoretical Concepts, and Scientific Data', PhD dissertation, University of Amsterdam, 2002.

Webre, Stephen, 'The Social and Economic Bases of Cabildo Membership in Seventeenth-Century Santiago de Guatemala', PhD dissertation, Tulane University, 1980.

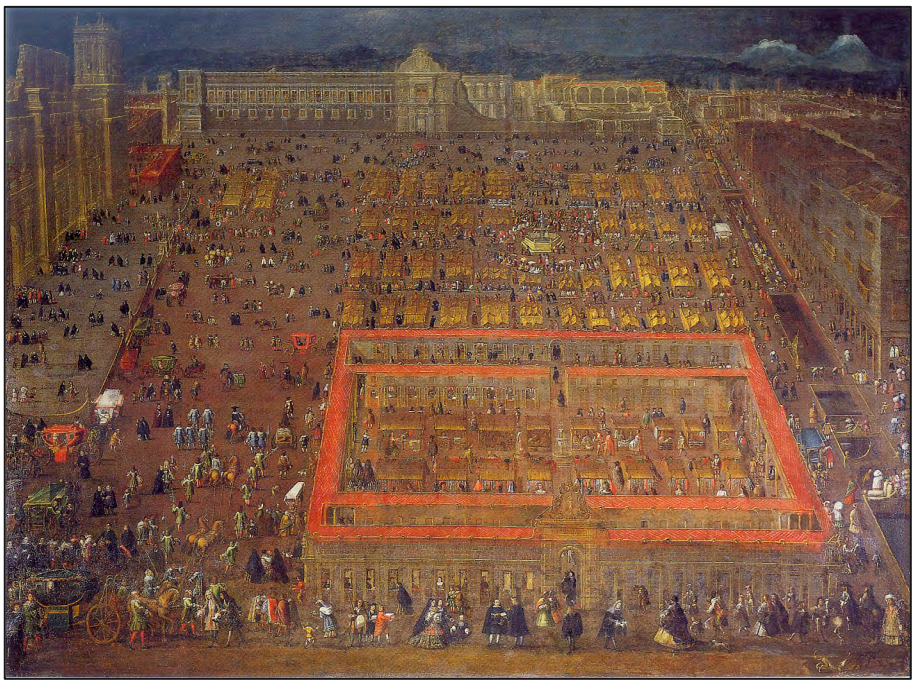


Fig. 1: Cristobal de Villalpando, *View of the Plaza Mayor* (ca. 1695). Oil on Canvas. Corsham Court Collection, United Kingdom

NOTE: * Illustrations created for the author by Jade Rodriguez Arroyo. Sources: AGI, Indiferente, leg. 1530, N.17: 'Memoria de como se a de beneficiar el añir,' (undated); AGI, Indiferente, leg. 1530, N.4: 'Del arbol del hec y del añil,' (1577). AGI, Guatemala, leg. 13 (R.4, n.41); AGI, Guatemala, leg. 386 (L.2), fols.557R-559R. • Source: Elisa Vargas Lugo de Bosch, Cándida Fernández de Calderón, Pedro Angeles Jiménez, eds., *Imágenes De Los Naturales En El Arte De La Nueva España: Siglos XVI al XVIII* (Mexico City, 2005). ♦ Source: Ilona Katzew, *Casta Painting: Images of Race in Eighteenth-Century Mexico* (New Haven, 2004). † Source: Joseph J Rishel and Suzanne L. Stratton-Pruitt, eds., *The Arts in Latin America, 1492-1820 (Philadelphia, 2006).* ‡ Source: Gauvin Bailey, ed., *Art of Colonial Latin America* (London, 2005).



Fig. 2: Anonymous: *A beggar boy with piece of pie* (mid-17C). Oil on Canvas. Canesso Gallery, Paris.

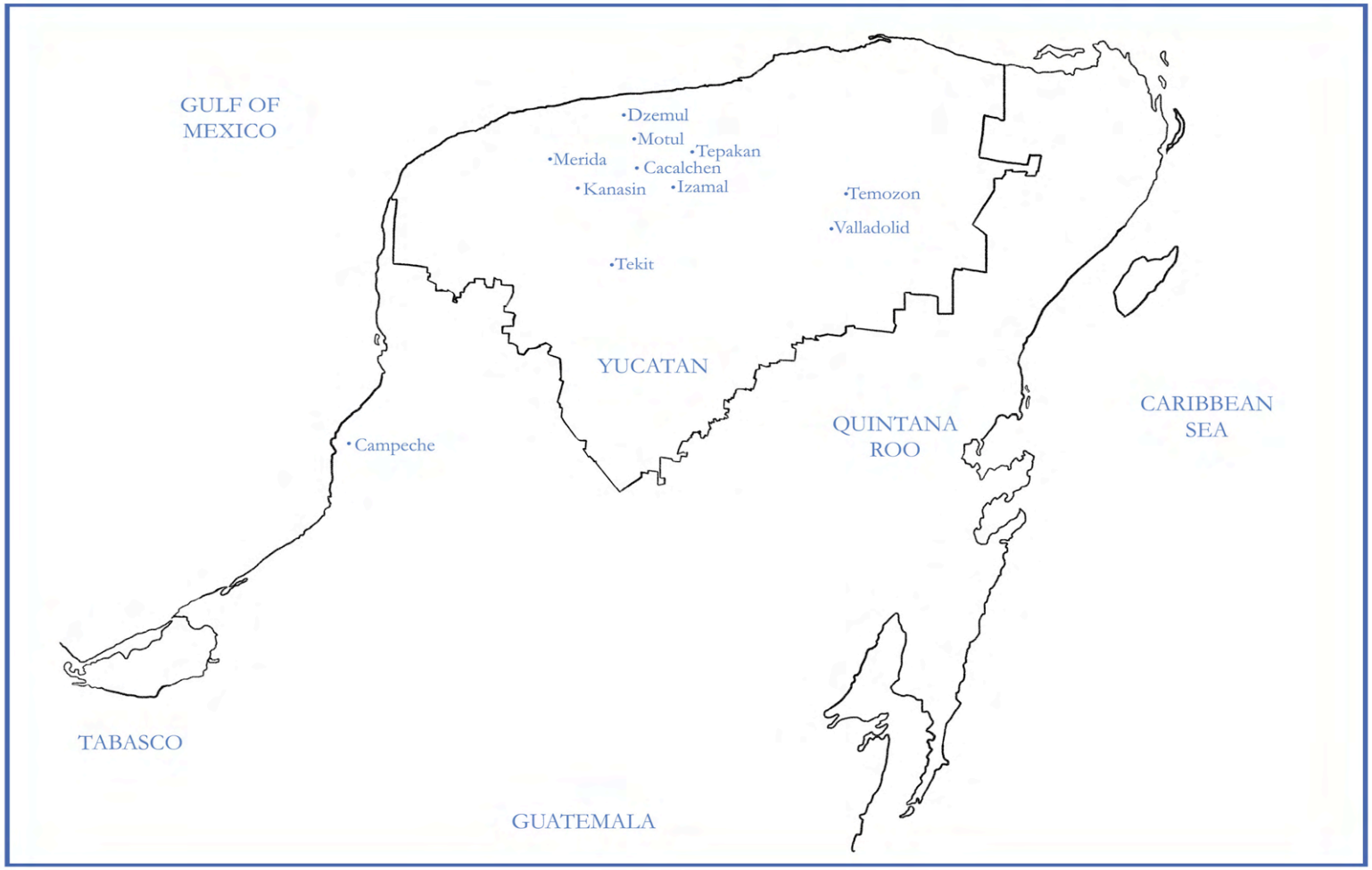


Fig. 3: Anonymous: *Woman begging with two children* (mid-17C). Oil on Canvas. Canesso Gallery, Paris.



Fig. 4: Anonymous: *Woman sewing with two children*, (mid-17C). Oil on Canvas. Fondazione Cariplo, Milan.

Fig. 2.1 Map: Indigo Producing Areas of Yucatan, c.1576 *



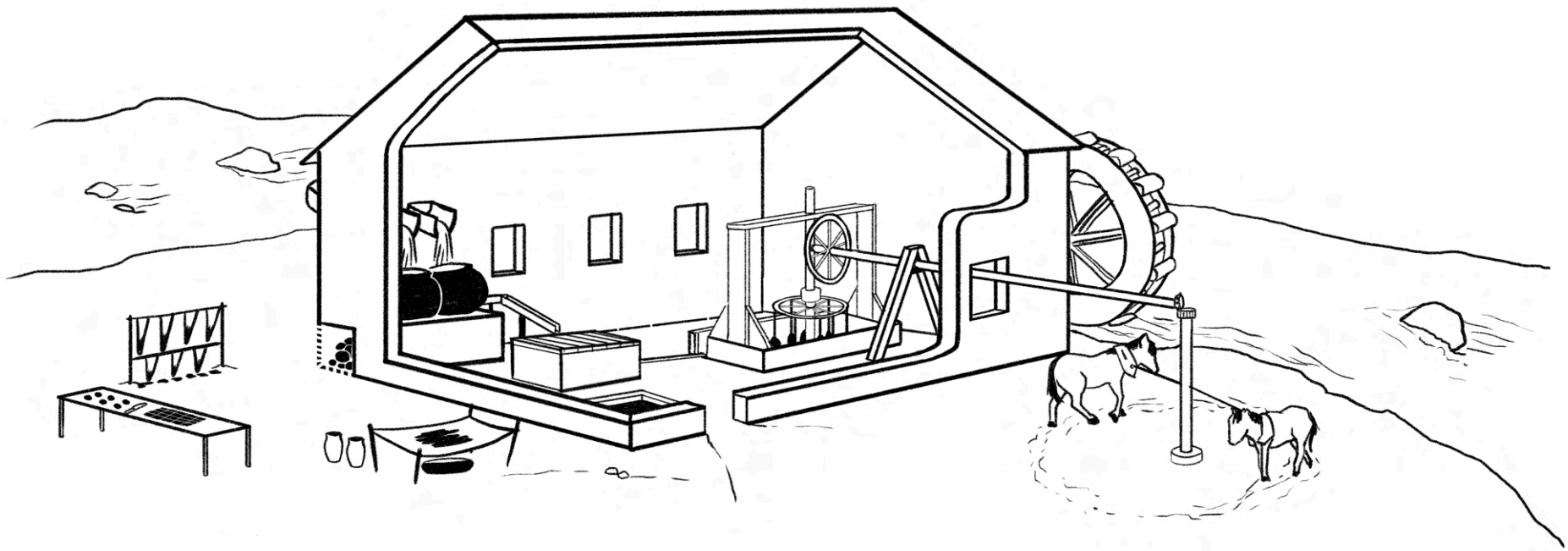


Fig. 2.2 Approximation of an indigo works in Yucatan, c.1577 *

Fig. 2.3: Variations on the beating process *

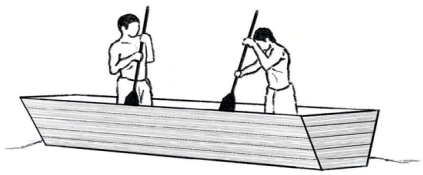


Fig 1.1

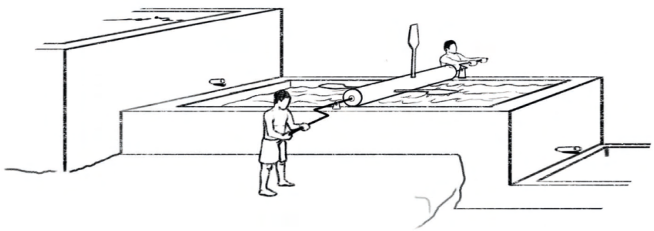


Fig 1.2

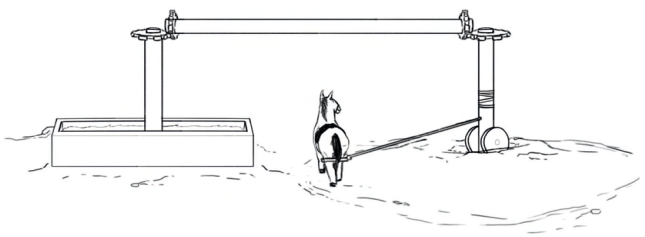


Fig 1.3

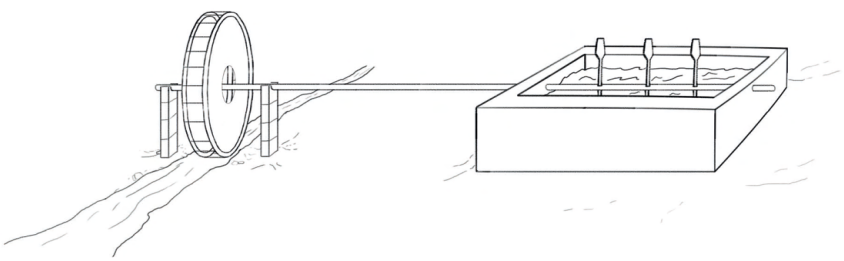


Fig 1.4

Fig. 4.1: Map: Trade Routes of Central American Indigo, XVI-XVIIC. *

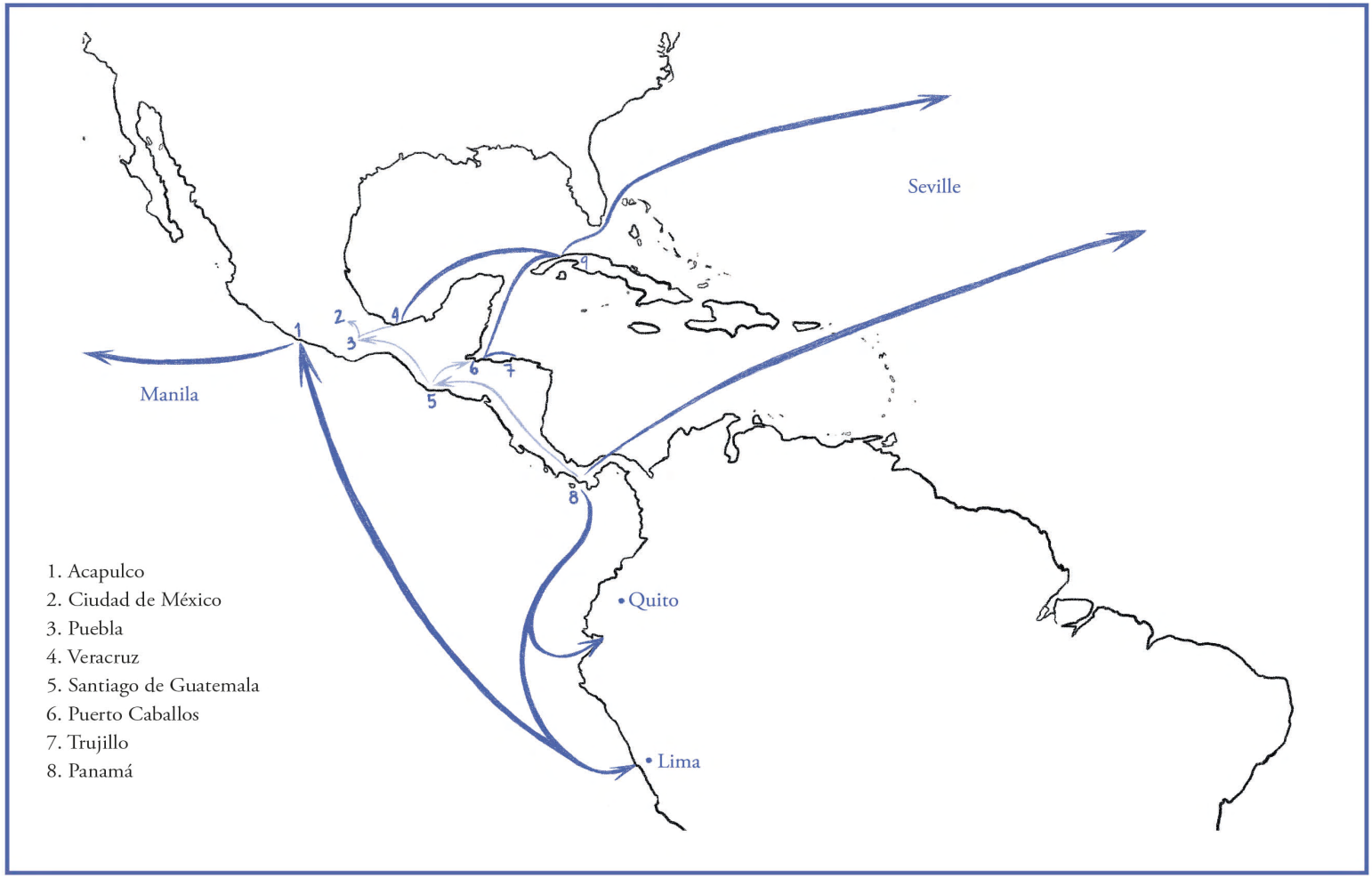
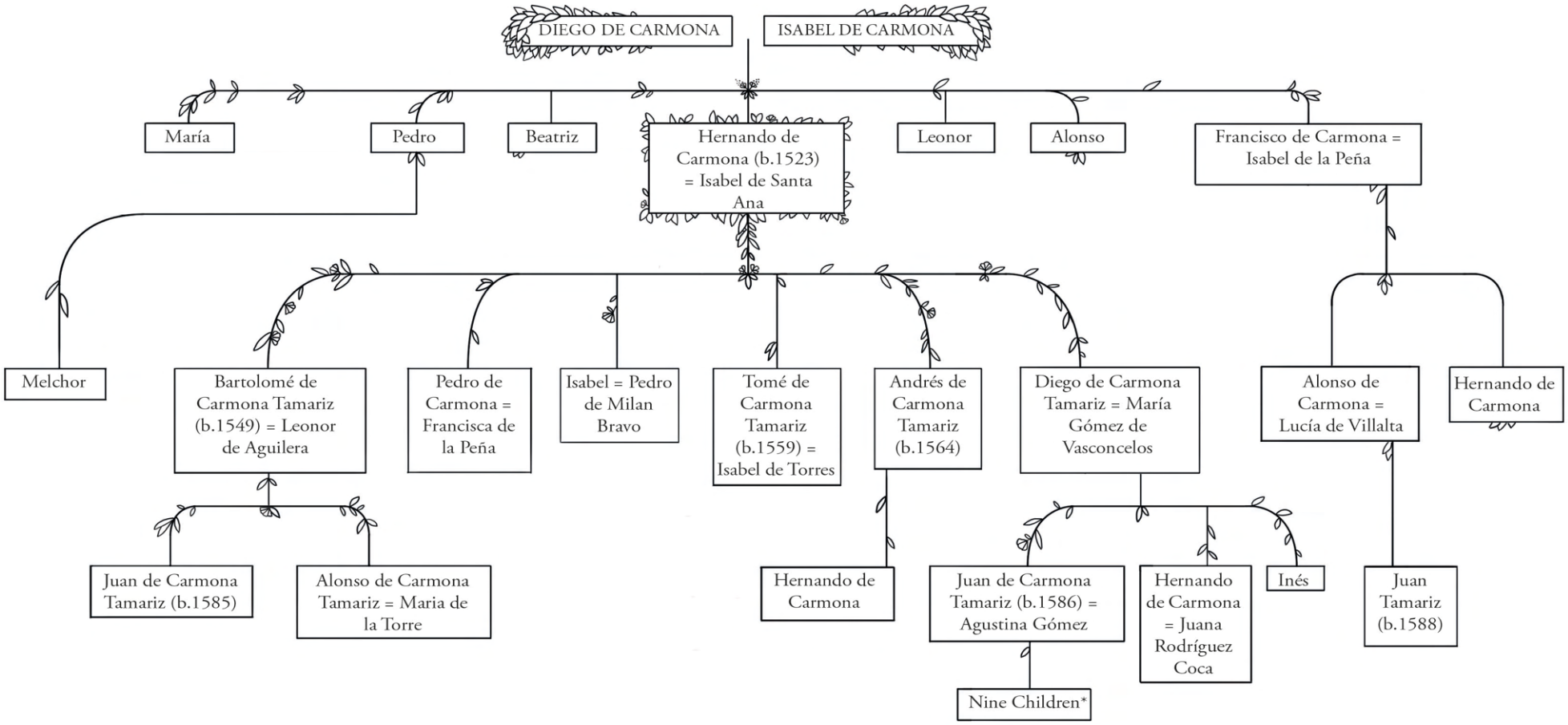
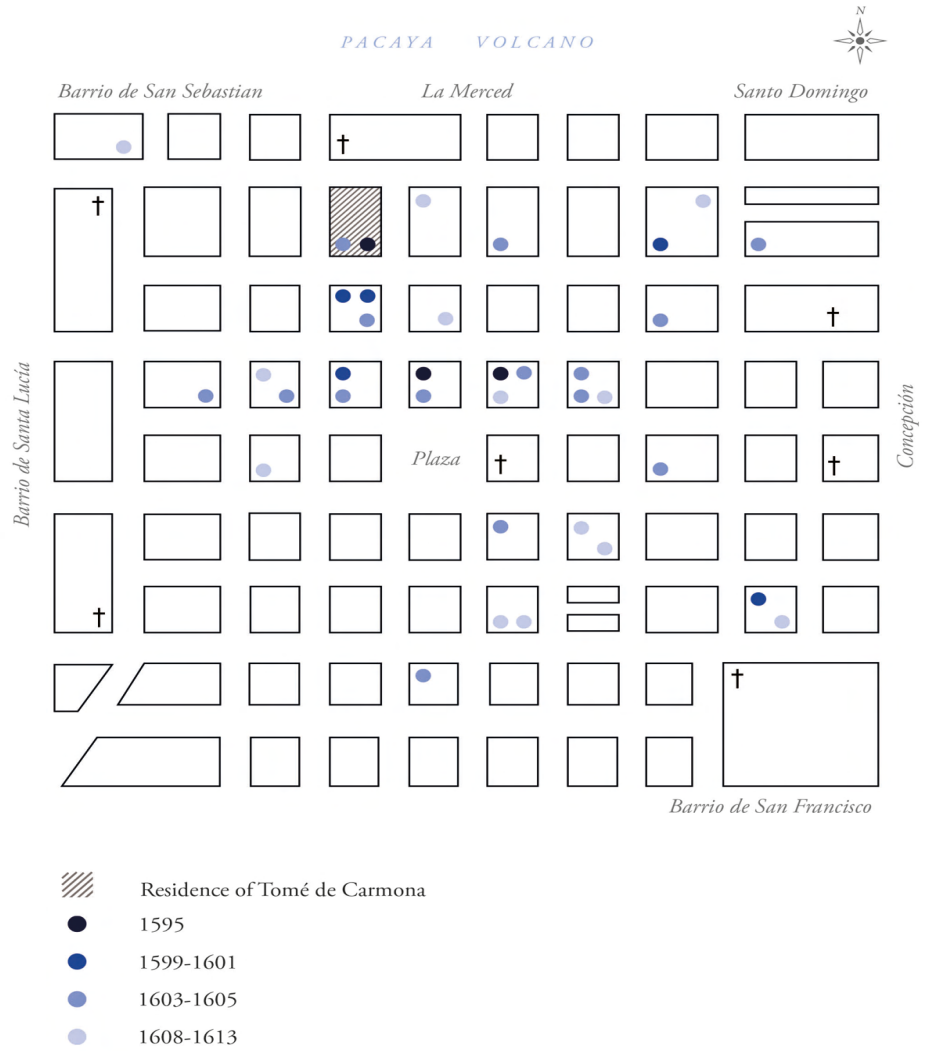


Fig. 4.2: The Carmona Tamariz Family *



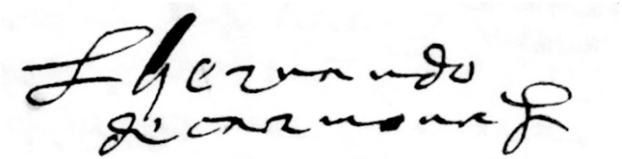
** Four of these are identified in Ida Altman, Transatlantic Ties in the Spanish Empire, p.25*

Fig. 4.3: Map: Residences of Consignees for Hernando, Bartolomé, and Alonso de Carmona Tamariz, 1595-1613.

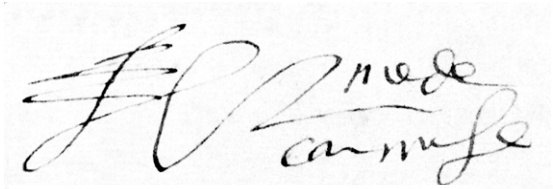


* From a map of Santiago de los Caballeros, Guatemala, in Jickling, 'Los vecinos de Guatemala en 1604.'

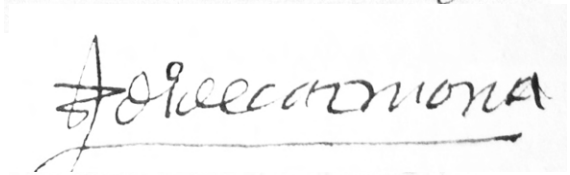
Fig. 4.4*:* Signatures of the Carmona Tamariz merchants



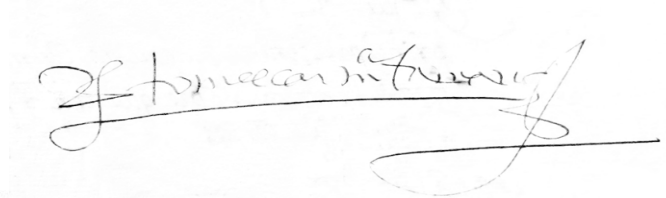
Hernando de Carmona Tamariz



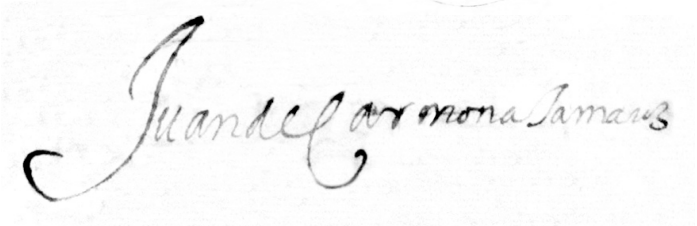
Bartolomé de Carmona Tamariz



Diego de Carmona



Tomé de Carmona Tamariz



Juan de Carmona Tamariz

Table I

CARGO RECEIVED AND AVERIAS PAID ON THE FLEET RETURNING FROM HONDURAS, 1602 (principal merchants only)

From AGI, Contratación 4412, N.1: 'Cuentas de Receptores de Averías' (1602)

	CARGO					**AVERIAS**			
	INDIGO				TOSTONES	INDIGO	TOSTONES	TOTAL	
MERCHANT	CRATES	QUINT.	POUNDS	TOTAL (in pounds)					
CARMONAS	172	33	500	21000	0	357.000	0	357.000	
Andres de Solorzano	89	10	100	10000	2167	170.000	17.704	187.704	
García de Escobedo	60	30	200	9200	146	156.400	1.193	157.593	
Manuel de León	4	0	0	400	15432	6.800	126.079	132.879	
Pedro de Mendoza	60	0	0	6000	2610	102.000	21.324	123.324	
Joan Feras	10	32	0	4200	0	71.400	0	71.400	
Theresa Rodriguez? de Solana	38	0	0	3800	0	64.600	0	64.600	
Fernando Mexia Farfan	0	24	0	2400	83	40.800	674	41.474	
Antonio de Villalpando	0	0	0	0	4127	0	33.718	33.718	
Totals for the fleet	499	255.5	3276	78726	41998	1.338.342	343.120	1.681.462	

Table II

DISTRIBUTION OF MERCHANDISE RECEIVED BY THE CARMONA TAMARIZ MERCHANTS ON THE HONDURAN FLEET, 1602

From AGI, Contratación 4412, N.1: 'Cuentas de Receptores de Averías' (1602)

	SANTA ANA						SANTIAGO EL MENOR					
	INDIGO				HIDES	OTHER	INDIGO				HIDES	OTHER
	Crates	Quint.	Pounds	Total (in pounds)			Crates	Quint.	Pounds	Total (in pounds)		
Hernando de Carmona	69	9	0	7800	382	0	46	9	0	5500	195	0
Hernando y Bartolomé Carmona	14	6	500	2500	714	0	27	9	0	3600	237	0
Bartolomé de Carmona	12	0	0	1200	0	0	4	0	0	400	0	0

Table III

PRINCIPAL INDIGO IMPORTERS ON THE FLEET RETURNING FROM HONDURAS UNDER THE COMMAND OF CAPTAIN JUAN DE MONASTERIO VIDE, 1616.

From AGI, Contratación 2134: 'Registros de Venida de Honduras' (1616)

	INDIGO			**TOTAL**
MERCHANT	CAJONES	ZURRONES	ARROBAS	**(in pounds)**
Fernando de Palma and Juan de Sevilla	413	0	0	41.300
CARMONAS (Bartolomé and Alonso)	281	16	0	30.500
Cristóbal de Barrionuevo	201	5	6	21.000
Juan de Azula Amatiano	142	0	0	14.200
Pedro and Gabriel Pardo	56	0	0	5.600
Alonso Gutierrez	45	0	0	4.500
TOTALS (entire fleet)	1138	21	6	117.100



Fig.6.1. Baltasar J. Martínez Compañón, 'Yndios tiñendo ropa', *Trujillo del Peru* (1782-86). Hand-drawn manuscript. Real Biblioteca, Palacio Real de Madrid, Spain.



Fig.6.2. Baltasar J. Martínez Compañón, 'Yndia del Valles hilando en catre', *Trujillo del Peru* (1782-86). Hand-drawn manuscript. Real Biblioteca, Palacio Real de Madrid, Spain.



Fig. 6.3 Baltasar J. Martínez Compañón, 'Yndia hilando a torno', *Trujillo del Peru* (1782-86). Hand-drawn manuscript. Real Biblioteca, Palacio Real de Madrid, Spain.



Fig. 6.4: José Guiol Buenaventura, *De español e india nace mestiza* (ca. 1770-80). Oil on Canvas. Private Collection. ♦



Fig. 6.5: Luis Berrueco, *Cambujo con india, sale albarazado* (ca. 1740). Oil on Canvas. Private Collection. ♦





Fig. 6.7: Anonymous: *Casta painting* (ca. 1770-80). Banco Nacional de México, Mexico City. †

Fig. 6.6: Anonymous: *Casta painting* (ca. 1750). Private collection. (detail on right). ‡





Fig. 6.8: Denijs van Alsloot, *Skating Masquerade, or Carnival on Ice at the Kidporppoort Moats in Antwerp* (1620). Oil on panel. Museo del Prado, Madrid.

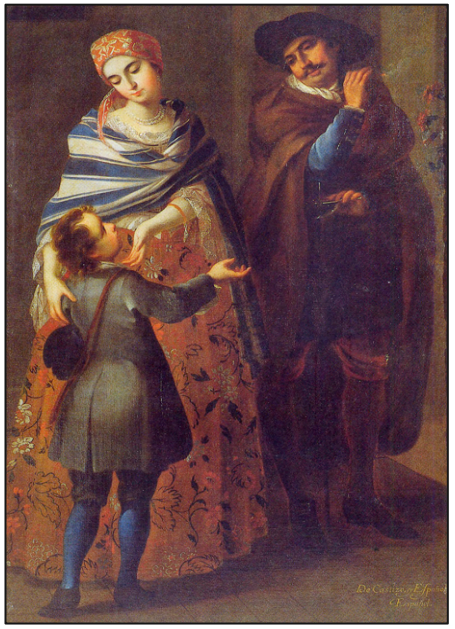


Fig. 6.9 (above, right): Jose de Ibarra (attrib.), *De castizo y española, español* (detail), ca. 1725. Oil on canvas. Museo de América, Madrid.



Fig. 6.10: Anonymous: *De mulato y albina, grifo* (ca. 1770). Oil on canvas. Private Collection. . †



Fig. 6.11: Baltasar J. Martínez Compañón, 'Noques de Tinte azul', *Trujillo del Peru* (1782-86). Hand-drawn manuscript. Real Biblioteca, Palacio Real de Madrid, Spain.



Fig. 6.12: Baltasar J. Martínez Compañón, 'Yndios tiñendo lana', *Trujillo del Peru* (1782-86). Hand-drawn manuscript. Real Biblioteca, Palacio Real de Madrid, Spain.



Fig. 7.1: Anonymous, *De chamizo e india, sale cambuja* (ca.1780). Collection of Malu and Alejandra Escaldón, Mexico. ♦



Fig.7.2. Anonymous: *Immaculate conception,* late seventeenth century. Mural painting. Ex-convent of Ozumba, Mexico.



Fig. 7.4. Anonymous: *Bernardino de Sahagún*, early seventeenth century. Oil on canvas. Museo Nacional de Historia, Mexico.



Fig. 7.3. Anonymous: *Ejemplar disciplina de Hernán Cortés*, late seventeenth century. Mural painting. Ex-convent of Ozumba, Mexico.



Fig. 7.5. Anonymous: *Retrato de fray Pedro de* Gante. Oil on canvas. Museo Nacional de Historia, Mexico. †



Fig. 7.6. Ramón Rodríguez Arangoity: *Retrato de Fray Martín de Valencia*, ca. 1874. Mexico, Fomento Cultural Banamex.



Fig.7.8. Ramón Rodríguez Arangoity: *Retrato de fray Pedro de Gante*, 1874. Museo Nacional de Historia, Mexico. †



Fig.7.7. Anon., *Retratos de los primeros doce*, eighteenth century. Mural painting. Church of the ex-convent of San Francisco, Puebla, Mexico. ‡



Fig. 7.9. Anonymous: *Triunfo de La Iglesia Americana,* 18thC. San Francisco Totimehuacán Parish, Puebla, Mexico. †



Fig. 7.11. Anonymous: *Retrato de fray Juan de Torquemada*, 18thC. Museo Nacional del Virreinato, Mexico City.



Fig. 7.10. Miguel de Cabrera, Retrato de fray Juan de Zumarraga, 18thC. Museo de la Basílica de Guadalupe, Mexico City.



Fig. 7.12. Anonymous: detail from *Scenes from the life of Fray Sebastián de Aparicio.* ca.1780 - 1800. Chapel of the Virgin of the Conquest, Puebla, Mexico. †



Fig. 7.14. Anonymous: *El arbol de San Francisco*, 1799. Mural painting. Church of Saint Francis, Toluca, Mexico.



Fig. 7.13. Anonymous: *Retratos de fray Gil y fray Paulicio de la Trinidad*, eighteenth century. Museo Nacional del Virreinato, Mexico.



Fig. 7.15. Anonymous: *Crucifixion (devotional tablet)*, 18thC. Private collection. ‡



Fig. 7.16. Anonymous: *Ballot box* (and detail) ca. 1779. Lacquered wood. Museo Franz Mayer, Mexico City. †



Fig. 7.17. Anonymous: *Hallazgo de la imágen de Nuestra Señora de Ocotlán,* 18thC. Oil on canvas. Tlaxcala, Mexico.



Fig. 7.19. Anonymous: *Labores masculinos*, 1760. Mexico, Temple of Santa Inés Zacatelco.•



Fig. 7.18. Anonymous: *Labores femeninas*. 1760. Mexico, Temple of Santa Inés Zacatelco. •



Fig. 7.20. Anonymous: detail from *Labores masculinos*, 1760.



Fig. 7.21. Anon.: *Reparo del Templo de Zacatelco*, 1797. •

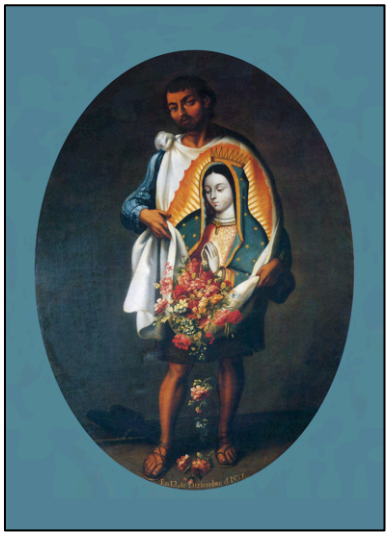


Fig. 7.23. Anonymous: *Virgen de Guadalupe de la 'Jura' o del Patronato*, 1737. Mexico City, Metropolitan Cathedral of Mexico.•



Fig. 7.22. Anonymous: *Dedicación de una capilla para san Sebastián con varios donantes*, ca. 1700. Mexico, Tepetlaoztoc. †



Fig. 7.25. Anonymous: *El arcángel San Miguel moviendo la roca que cubre la fuente milagrosa*, seventeenth century. Tlaxcala Mexico, Sanctuary of San Miguel.•



Fig. 7.24. Anonymous: detail from *Aparición del arcángel San Miguel del Milagro*, seventeenth century. Tlaxcala Mexico, Sanctuary of San Miguel.



Fig. 7.26. Manuel Caro: *El nacimiento del manantial,* 1781. Sanctuary of Our Lady of Ocotlán, Tlaxcala, Mexico. •



Fig. 7.27. Manuel Caro: *Hallazgo de la imagen de la Virgen*, 1781. Sanctuary of Our Lady of Ocotlán.



Fig. 7.28. Manuel Caro: *Procesión y traslado de la Virgen de Ocotlán.*



Fig. 7.29. Anonymous: *Diego Lázaro enfermo de cocolixtli*, 17thC. Sanctuary of Our Lady of Ocotlán. •



Fig. 7.30. Ramón Torres: *10. De albarazado y mulata, sale barcina*, ca.1770-80. Private collection. ♦



Fig. 7.33. Anonymous: *16. De lobo torna atrás e india, sale tente en el aire,* ca. 1780. Mexico City, collection of Malú and Alejandra Escandón.



Fig. 7.31. Ramón Torres: *8. De coyote e india, sale chamizo*, ca. 1770-80. Private collection. ♦



Fig. 7.32. Ramón Torres: *13. De cambujo e india, sale tente en el aire*, ca. 1770-80. Private collection. ♦



Fig. 7.34. Attributed to Juan Rodríguez Juárez: *De español y de india, produce mestizo*, 1715. Breamore House, UK.



Fig. 7.35. Anonymous: *De español e india, nace mestiza*, ca. 1785-90. Oil on canvas. Private collection. †



Fig. 7.36. Anonymous: detail from *Casta painting,* ca. 1725. Private collection.



Fig. 7.37. Anonymous: detail from *Ánimas del purgatorio*, 18thC. Parish of San Dionisio Yauhquemehcan, Tlaxcala, Mexico. •



Fig. 7.38 Anonymous: *Procesión del Santo Cristo*, ca. 1760. Hidalgo, Mexico, church of the Singuilucan ex-convent. •



Fig. 7.39. Detail from *Procesión del Santo Cristo,* ca. 1760. •



Fig. 7.40(a) Anonymous: *4. De mestizo e india, sale coyote*, ca. 1780. Collection of Malú and Alejandra Escandón, Mexico City. ♦

Fig. 70.40(b) Anonymous: *De español y castiza produce española*, ca. 1780.



Fig. 7.41. Anonymous: detail from *Casta painting,* ca. 1725. Private collection.



Fig. 7.42. Attributed to Juan Rodríguez Juárez: *Indios mexicanos*, ca. 1715. Hampshire, United Kingdom, Breamore House. ♦

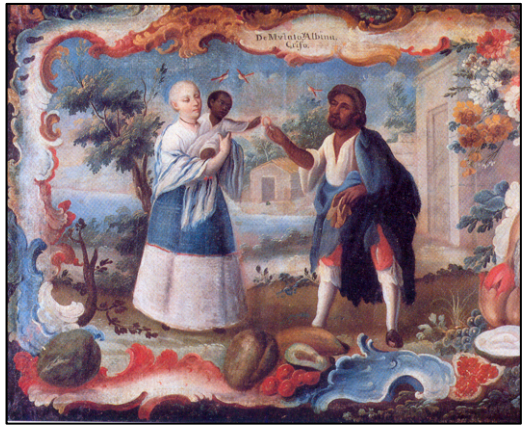


Fig. 7.45. Anonymous: *De mulato y albina, grifo*, ca. 1770. Private collection. ‡



Fig. 7.43. Attributed to José de Ibarra, *De negro e india, loba*, ca. 1725. Spain, private collection. ♦



Fig. 7.44. Attributed to Juan Rodríguez Juárez, *De español y india, produce mestizo*, ca. 1715. Hampshire, United Kingdom, Breamore House. ♦



Fig. 7.46. José Joaquín Magón, *De Indio y cambuja, nace zambaiga*, ca. 1770. Museo de Antropologia, Madrid.



Fig. 7.47. Anonymous: *Retrato de Felipe Antonio de Austria y Moctezuma*, ca. 1750. Collection of Isaac and Alicia Backal. •



Fig. 7.48 Anonymous: *Retrato de los donantes*, eighteenth century. Mexico, Temple of Oxtotípac. •



Fig. 7.49 (a) Luis Berrueco: *Cambujo con india, sale albarazado*, ca. 1740. Palma de Mallorca, Spain, private collection. ♦



Fig. 7.49 (b) Luis Berrueco: *Castizo con española, sale español,* ca. 1740.



Fig. 7.50 (a) Ramón Torres, *9. De chamizo e india, sale albarazado*, ca. 1770-80. Oil on copper. Private collection. ♦

Fig. 7.50 (b) Ramón Torres, *7. De español y albina, sale torna atrás*.