



# Comparative systems and the functioning of networks: the Caribbean and Indo-Pacific models of trade. XVII and XVIII centuries<sup>1</sup>

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**ABSTRACT:** All commercial networks operating during the First Global Age in the Atlantic and Indo-Pacific systems had a number of common elements, although it is also true that in these two areas of study, very different dynamics emerged. In both areas, the strategies implemented by networks were designed to make them extremely cooperative, very dynamic, with a nonlinear structure and multifunctional. In contrast, noteworthy among the most significant differences is the high degree of participation of native traders and commercial networks in the Asia-Pacific, with Europeans taking part and learning alongside them, while the Atlantic, and the Caribbean in particular, were essentially European in nature.

**KEYWORDS:** First Global Age; mercantile system; cooperation; collaboration; Philippines.

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**RESUMEN:** *Comparación de redes y sistemas: los modelos comerciales del Caribe y del Indo-Pacífico. Siglos XVII y XVIII.*- Todas las redes mercantiles que operaron en la primera Edad Global en el sistema Atlántico y en el Indo-Pacífico tuvieron una serie de elementos comunes, aunque también es cierto que en las dos áreas de estudio se crearon dinámicas muy diferentes. En ambas zonas las estrategias que implementaron las redes estuvieron configuradas por una cooperación muy elevada, un fuerte dinamismo, una estructura no lineal y polifuncional. En cambio, entre las diferencias más significativas destacaría la elevada participación en Asia-Pacífico de comerciantes y redes mercantiles nativas junto a las que participaron y aprendieron las europeas, mientras que el Atlántico, y el Caribe en particular, fueron básicamente de índole europea.

**PALABRAS CLAVE:** Primera Edad Global; sistema mercantil; cooperación; colaboración; Filipinas.

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## INTRODUCTION

Attempting to analyze the dynamics of networks and the functioning of sea and ocean ports during the early modern period can be a highly arduous and complex undertaking. It is not then surprising that several specific conferences on this subject—the sea and its dynamics—have been organized. Noteworthy among these are “El Mar en la Historia y la Cultura” (“The Sea in History and Culture”) in December 2012. This event included ex-

tremely valuable papers, including one by Laura Barba and Ascensión López titled “Viajar por el Mediterráneo, viajar por el Atlántico” (“Travelling the Mediterranean, Travelling the Atlantic”); “El lago español y la armada del mar del Sur” (“The Spanish Lake and the Navy in the Pacific Ocean”) by Cristina Aguda (thought the concept ‘Spanish Lake’ should be revised since it was not a reality, but a desire of the Court); and Jesús Martín’s “El legado de una familia de marinos: los Lazaga” (“The Legacy of a Family of Sailors: the Lazagas”). Another

interesting conference held in Alcalá de Guadaíra in 2008 studied the connections between fortifications and the sea. The international conference “Sociedades Ibéricas y el mar a finales del siglo XVI” (“Iberian Societies and the Sea in the Late 16<sup>th</sup> Century”), organized by the State Society for the Commemoration of the Fifth Centenary of Philip II and Charles V, was undoubtedly an important milestone in analysis of the Atlantic. Also worth noting for its great significance and contributions from many researchers was the 10<sup>th</sup> scientific meeting of the Spanish Foundation of Early Modern History, which was held in Santiago de Compostela in 2008 on the subject of “El mar en los tiempos modernos” (“The Sea in the Early Modern Period”).

Given the numerous papers on the subject, many authors have explored the Pacific system in depth, as well as the Atlantic. Highlights among the latter are Vera Valdés with her work *De las minas al mar: historia de la plata mexicana en Asia, 1565-1834 (From the Mines to the Sea: History of Mexican Silver in Asia, 1565-1834)*. In 2008, Paul A. Van Dike published an extraordinary analysis of the port of Canton at the University of Hong Kong: *The Canton Trade: Life and Enterprise on the China Coast, 1700-1848*. This book presents the idea that Dutch and English trade in China was made possible, among other factors, by the very strength of Chinese trade in Southeast Asia. Hoang Anh Tuan discussed Cochinchina in *Silk for Silver: Dutch-Vietnamese Relations, 1637-1700*, reproducing some of the most interesting maps made by both the EIC and the VOC of the Tonkin area, Aynan, Quinan and Cambodia. Also in 2008, J. Jeyaseela Stephen released the volume *The Indian Trade at the Asian Frontier*, discussing Danish activity in Coromandel and Bengal. And Bhawan Ruangsilp gave us *Dutch East India Company Merchants at the Court of Ayutthaya: Dutch Perceptions of the Thai Kingdom, c. 1604-1765*. As we cannot list every work, to conclude we will mention one of the most iconic scholars of the Asia-Pacific region, Om Prakash, and his 1975 classic *Surat and Its Trade in the Second Half of the 17<sup>th</sup> Century*.

Among many others, noteworthy works that study the Atlantic include Carlos Martínez Shaw and José María Oliva's *El sistema Atlántico español: siglos XVII-XIX (The Spanish Atlantic System: 17<sup>th</sup>-19<sup>th</sup> Centuries)*. In 2005, Renate Pieper, Horst Pietschmann and Peer Schmidt published *Latin America and the Atlantic World*. In 2002, Horst Pietschmann released one of his most iconic works: *Atlantic History: History of Atlantic System, 1580-1830*. Douglas Catterall and Jody Campbell coordinated the 2012 work *Women in Port: Gendering Communities, Economies and Social Networks in Atlantic Port Cities: 1500-1800*. And lastly, we highlight the work by Ana Crespo titled *Mercaderes atlánticos: redes del comercio flamenco y holandés entre Europa y el Caribe (Atlantic Merchants: Flemish and Dutch Trade Networks Between Europe and the Caribbean)*, from 2009.

However, the list is shorter for those who have attempted to relate the emergence and glory of the First

Global Age with the interrelationships forged from the connection between the two oceans, and the global consequences of this intersection. In 1990, David Washbrook published an in-depth article on the subject: “South Asia, the World System, and World Capitalism”. Milo Kearney explored the issue in his work *The Indian Ocean in World History*. And to conclude our list, we should make special mention of the compilations put together by Rila Mukherjee: *Networks in the First Global Age, 1400-1800*, from 2010, and *Oceans Connect*, from 2012, which deal with the systemic connection between the Asia-Pacific and the Atlantic from a global perspective.

## THE NETWORK AS A SYSTEM

Throughout the first Global Age (1400-1800) was brewing an extremely dynamic system driver while the capitalism, which followed the physical laws of the emergence of complexity. Everything somehow was connected and the sum of the parts was far greater than the whole. A new way to participate, cooperate, collaborate as the common objective of the networks was the accumulation of profits and buy and sell those beyond producing the seas was hatched and accumulating information

European commercial networks, from the sixteenth century, but especially during the XVII and XVIII created commercial networks that united the two major areas of world trade, thereby creating a global system based on two subsystems (Atlantic-Mediterranean) and (Indo-Pacific). Recall that a network is a heterogeneous and organized to meet strategic functions, commercial, administrative, and associative business structure that aims to increase its activities and results through improved dissemination and distribution of acquired knowledge, which boosts the effects of benefits.

The trading networks established in the Pacific and Atlantic had many common elements and were of course connected, making up a single global system which would change the economy of the Old World significantly. Europe would experience spectacular growth in international commerce, driving the definitive consolidation and expansion of capitalism. As Chaudhuri clearly demonstrated in *The Trading World of Asia and the English East India Company: 1660-1760* (1989), these interrelationships make it impossible to understand how the European economy took off without comprehending the dynamics of trade in the Asia-Pacific region. This work, together with the critical review by A. G. Frank (1998), became benchmarks for the new historiography which studied intersystemic relationships and the shaping of highly active global commerce with a number of very particular characteristics.

Beginning with the work of Stanley Milgram in the 1960s, and continuing with Nicolas Carayol, Pascale Roux, John Holland, W. Brian Arthur and Phillip Anderson, among others, we have learned about the structure and dynamics of networks, and by extension, of trade networks. Basically, these had a set of common organizational ele-

ments which made them highly cohesive: there were complex, nonlinear, self-organizing, dynamic, cooperative and collaborative. While most networks exhibited these traits, the fact is that in certain geographic areas, in the most important hubs of the global system, some featured other parameters which made them incredibly efficient. These included their transnational make-up, multi-functional nature and involvement in the two different aspects of trade (legal and illegal). They were extremely versatile, which also led them to develop unanticipated practices determined by their effectiveness, survival and/or significant benefits. However, it is worth noting one of the basic principles of networks: a network is much more than the sum of its parts. In this case, the whole goes beyond the meaning of individuality itself. What is more, the effectiveness of these networks is measured using two basic parameters: the number of central hubs and the number of connections between secondary hubs. If a network is extremely centralized, the collapse of its core will cause the entire network to break up and disappear. A greater number of primary hubs means greater effectiveness, as if one or more of these disappears, the exchange of information and cooperation among the others can continue along alternative routes. In terms of secondary or peripheral hubs, a larger number of these facilitates greater yields of every variety (economic, information, etc.).

### The Asia-Pacific system

Despite the fact that a wide range of merchants from very different kingdoms, cultures and religions interacted in the Asia-Pacific region, we can sum the most important up in seven major groups: Indian traders (Knaap and Sutherland, 2004); Armenian merchants (Baladouni and Makepeace, 1998); the first global European companies, both the VOC (Mulder, 1992; Omrod, 2003) and the EIC (Erikson and Bearman, 2004); the Portuguese (Newitt, 2005); the Spanish (Chaunu, 1960; Yuste, 1984); and especially, the Chinese (Cheong, 1997; Keong, 1983), who engaged in considerable and extensive activity. Each one of these groups had its own organization and its own network. However, as we have already mentioned, it is worth nothing that in most cases, they also used connections, strategic partnerships and temporary ventures to achieve specific aims. In our case, we will analyze some of those which we believe may represent their evolution and general dynamics. The massive arrival of Europeans in Asian markets caused two major changes in the dynamics of the whole system. The first of these the enemy powers had completely changed the guidelines for industrial production, leading to an extreme fragmentation of the production process. Apparently, Manila received news—confirmed by several sources—that both the Dutch and English were having their products made in Canton ‘with the same brands and sizes as those of Europe’. After acquiring those articles in China in large quantities and at a lower price, they were sold in Europe bearing the names of the manufacturers in Holland and Eng-

land. Those goods were subsequently distributed throughout Europe under English and Dutch brand names.

And the second: At the end of the seventeenth century, this system was severely altered by new circumstances spurred by European demand. It became important to manufacture far greater volumes, faster and at lower prices. This naturally distorted the production rhythm of the artisans, yet it also entailed the entry of a large number of inexperienced peasants in the production chain. The end result was a complete loss of quality, with countless ‘... complaints about the quality of the items from China and Canton that are not of the same quality as those traded in the past...’ the goods were of such poor quality that they did not last long: ‘... Philippine commerce has degenerated so greatly because the goods traded are of incomparably lower quality than those that were brought from Europe and which are generally supplied by them for a longer duration...’ It is true that the prices were maintained or even lowered—. An example of these purchases in China, Purchases Chioqua the great Chinese merchant who sold it in the Philippines in 1680 and were of poor quality, that affected the transpacific trade were:

Manufacturer	Product	Packages
Chiangching	Blankets	106
Choudingua	Blankets	107
Guaschigcong	Blankets	115
Tigua	Blankets	560
Techin	Canvas	1544
Timan	Blankets	300
Endiguigui	Blankets	340
Endiguigui	Combs	6000
Guangen	Combs	2600
Druxum	Blankets	380
Chinling	Blankets	2500
Enaig	Combs	2000
Tian Tin	Silk	6000

But that European impact has some points to be clarified. First of all, we will discuss the example of the port and trade connections between the major global companies (EIC and VOC) and the Portuguese and the Spanish. The Dutch commercial network had a single central hub, Batavia. It was therefore extremely sensitive to a breakdown in communications between its agents and the main headquarters. It was not until the late 17<sup>th</sup> century that another central hub was established in Ceylon. Throughout the 17<sup>th</sup> century, Batavia was linked to most of the main ports in the region, and especially to Hirado, Japan. It was at this trading post where aspects of collaboration and cooperation between agents of the VOC and the EIC were found, with trade extending to China, Cochinchina and Korea. For its part, the EIC had several central hubs in the

Asia-Pacific region. Its network was therefore much stronger and more effective than the Dutch. The English operated in the Indian Ocean from their trading post in Surat, which connected them with ports in Africa, the Red Sea, the Persian Gulf, inland Persia and India. In Indonesia, from their headquarters at Bantam they had connections with Coromandel, Bengala (Mukherjee, 2006), Siam, Cochinchina and Indonesia. And from the Pacific and their main headquarters at Hirado, they had connections not only with major inland areas of production but also with China. From their headquarters at Bantam, via Banta, they traded and had contact with the Portuguese and Dutch, as well as the Chinese, Armenians and naturally, the Spanish (see Figure 1).

The Portuguese, for their part, not only engaged in heavy trade with Africa, but they also spread rapidly into the Arabian Sea (Barendse, 2002), and to India, Siam, Malaysia, Cochinchina, Indonesia, Japan and China. As regards the Spanish, the Manila-Acapulco connection did not end at the market in the latter port. Instead, as we will see later, the leading merchants of New Spain supplied Asian products not only to New Spain, but also to the Caribbean. From Manila, there were connections to ports in strategic areas for keeping hold of the archipelago (Coromandel, Bengal, Siam, Cochinchina, Indonesia), especially with China—with extensive activity in Portuguese Macau—and to a lesser extent, Japan (see Figure 2). Chinese trade spread throughout the Asia-Pacific region, from Japan to India, with high returns in areas producing primary goods (Siam, Malaysia, Indonesia, Cochinchina, etc.). The trading networks of major traders in Canton, Ching and Amoy covered a wide arc in their own hinterland, as well as the cities themselves, where they obtained articles which they then exported throughout the Pacific.

As regards commercial networks, the connections that were established between the different areas described, we should first discuss the two basic types. First, there were those based on strategic relationships, essential for supplying certain markets. This was the case of Manila and the activities of its governor, Diego de Salcedo, in response to the paralysis of Chinese trade, in order to obtain competitive items necessary for the life of the city, the economic activity of leading Manila merchants and the Spanish presence on the archipelago. Through his agents, Salcedo was connected to four different regions. In Siam, he had close ties with Hacun Sinijat Sunqua, while the latter facilitated trade with the company formed by Jacinto Ródenas and Pedro Vázquez. In Ternate, Salcedo (Picazo, 2013) opened the door to the alliance with the Dutch, which was of course criticized and in the end cost him his freedom. He had contact with Craan Leenderiz, an independent business agent; Jacobo Greel, merchant; and Anthony Van Voorst, governor of Ternate. To speed up the arrival of certain products, he had a good collaborative relationship with Portuguese Antonio de Oliveira in Goa, and arranged journeys from Macau for the company formed by Julio Gomes Payba and Nicolás Mendes, both Manila-born. The second type was based on trade of products to supply the American market through the leading merchants in Canton and Amoy. In the 1680s, the many transnational relationships and links between networks grew stronger. Chioqua, a leading Canton trader (Chang, 1934), bought goods produced in city's hinterland, the rural area, as well as the city itself. Through an extensive network of business agents and ship captains, he expanded his dealings with Java, Macassar and Cochinchina. For example, he had a trade representative in Manila, Quequa. He in turn transferred Chinese products to his own agents in the market (Tenqua,



FIGURE 1: Network of the East India Company. Closeness Centrality

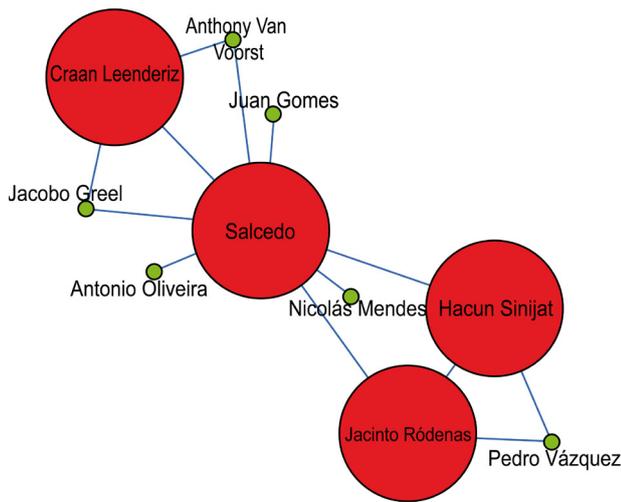


FIGURE 2: Network of Manila's port connections. Closeness Centrality

Chenqua, etc.), simultaneously supplying the native markets on the islands and the Spanish. During this same period, we find business between Quequa and the mixed company formed by Spaniard Matias Portelo, Portuguese Domingo Vasques and the king of Macassar to provide that kingdom with certain items, while at the same time supplying the Philippine market.

### The Atlantic system

The fact is that much has been written, and written well, about the Atlantic system. The Indies Route (*Carretera de Indias*) has been especially well covered by authors such as Antonio García-Baquero, Fernando Serrano, José Antonio Caballero, Esteban Mira, Carmen Sanz and Lutgardo García. English trade and its interests in the Caribbean were studied by Hector R. Feliciano and Jean O. MacLachlan. And relations between the English economy and trade were covered by Kenneth Morgan. Regarding the Dutch, it is worth highlighting Ana Crespo's in-depth analysis of Dutch Guiana and the study by Cornelis Christiaan Goslinga. On the subject of Portuguese trade with the Indies, special note should be made of the work by Linda A. Newson on the slave trade. For our part, we will focus less on speaking of what has already been discussed, and more on emphasizing the development of illegal trade networks in the Caribbean Sea. In another area of conflict, it also highlights the work of Santos Pérez and Cabral de Souza (2006).

It is true that legal trade was incredibly important. However, it is also true that illegal trade, deriving from invisible, covert networks, also exhibited a very high level of activity. It also complemented—and in some cases exceeded—legally recognized trade.

One of the problems with this alternative trade is the lack of documentary resources which allow us to evaluate its scale, establish the relevant connections with

sending areas and determine the most important receiving areas. Illegal activity of this kind required this, making the researcher's work significantly more difficult. However, there are alternative sources which can shed some light on these unknown areas. The fact is that it is only possible to measure a very limited percentage of all of this traffic. However, even a partial analysis perfectly illustrates—with every possible nuance—the routes followed, stakeholders involved, sending areas, receiving areas, products transported, international networks and rate of development. One of the most effective methods to determine the scope of ship seizures for smuggling is to study court cases. In these, it is also possible to analyze the network of which the ships were part, at least somewhat.

Throughout the 17<sup>th</sup> and 18<sup>th</sup> centuries, ship confiscations occurred fairly regularly, with an average of two ships a year, especially during the 17<sup>th</sup> century. However, there were periods of significant expansion for illegal trade, years in which the number of seizures stands out. This occurred in 1661, when the number shot up to no less than ten cases. Of these ten trials, eight were against Spaniards, while only two involved Dutch captains. Eight of these seizures took place in Havana, one in Puerto Rico and the other in Santo Domingo. Out of all of them, two were for trading in slaves. These were bought in illegally by Juan Estévez, owner of the ship *Santo Cristo de San Román* and by Cádiz native Sebastián Mejía, captain of the ship *Santo Domingo Soriano*, from which 30 slaves were confiscated. We would also like to highlight the discovery and subsequent trial of a network (Ibarra, and Del Valle, 2008) which involved government representatives on the island, including the judge Andrés Caballero, accountant and Treasurer Diego de Soria y Pardo, and Royal Treasury (Real Hacienda) accountant Alonso Xaque Carvajal. They were charged with participating in the unloading and subsequent purchase of slaves (Navarrete, 2007) from Dutchman Eduard Jansen, captain of the ship *Brasiliano*.

As was to be expected, the majority of boat seizures for transporting unregistered goods, or for being foreign, took place in the main hubs of Cuba and Puerto Rico, the majority by Spaniards. This led authorities to demand that ships from the Canary Islands, especially from Tenerife and La Palma certify that they were not carrying smuggled merchandise purchased from the Flemish and foreigners in Spain to the city of Havana.<sup>2</sup> However, it is also clear that smuggling took place in other secondary ports to avoid being detected by the Spanish authorities. And in this aspect, we have discovered two types of evidence. Firstly, there is the seizure of boats and ships on a mass scale, primarily in Havana. And secondly, there is the spread of alternative trade to the periphery of core areas (Bayamo, Guaira, Cauta, Realejo, Puerto Alde, Trujillo, etc.). Some of these latter seizures demonstrate associations between local authorities<sup>3</sup> and captains of foreign ships. For example, there is the case of a confiscation carried out in 1665 at Bayamo (Cuba). The ship seized was owned by the company formed by Reinaldo

Reinaldo, a Dutchman residing in Puerto Príncipe, and Diego Cordero, Spanish captain of the *San Jorge*. Their arrival was facilitated by local participants in this lucrative business: Francisco Vázquez Valdés Coronado, chief justice of Bayamo; Francisco Arceo, a Seville native residing in Bayamo; and Antonio Sologuren and Jerónimo Manuel de Téllez, town magistrates. All of them were prosecuted for having taken part in the illegal unloading at the small port of Manzanillo in Bayamo, located near Santiago, on the south side of the island, and as a result, easily accessible to the ships of other powers. But such activity also took place in the major ports. In 1666, the ship *San Fortunato*, commanded by Captain Juan de Arana, departed from Cartagena de Indias carrying goods owned by Ricardo Ortega and Juan Fernández Morera, residents of the city. The merchandise was seized in Havana for illegal entry.

Lastly, the seizure of the *San Pedro y San Pablo*,<sup>4</sup> owned by Juan Barroso del Pozo, is noteworthy. It had loaded a consignment of slaves in Curaçao, a major Caribbean smuggling centre (Santos, 1999) and slave depot, and “maliciously” unloaded them at Guaira.<sup>5</sup> Juan Barroso obtained some *asiento* contracts to supply Negroes, but as we will see, rivalry among networks caused him to suffer significant losses. In 1680, thanks to a petition lodged by his administrator general Nicolás Porcio, he obtained an *asiento* contract to supply 200 slaves<sup>6</sup> to Portobelo to be used in building the city’s fortifications. In 1681, the Council of War (Junta de Guerra) rejected the proposal and opted for a more affordable solution: buying them in Curaçao. As we will see later, this petition also involved another network led by the governor of Cartagena de Indias, Juan Pando de Estrada<sup>7</sup> and by merchants and *asiento* contract holders Baltasar Coymans and Juan Carcán. It would not be the only time, as action was also brought against Pando, Coymans and the Dutchman Beq for illegal entry of provisions and Negroes at Cumaná, Guaira and Maracaibo. In fact, at the head of this network we find three key figures, the hubs of this small system: Juan Pando, Baltasar Coymans and Baltasar Beq (the latter also being a partner of Peter Van Belle and Alejandro Scott). As secondary links we find Gregorio Laso, general treasurer; royal officials Antonio Farfán, Felipe Núñez de la Rioja and Francisco Valcárcel; sergeant major Alonso Cortés; and notary public José Blanco García. And so this network manoeuvred to block the *asiento* contract for Negroes which Nicolás de Porcio was negotiating with the assembly on behalf of Juan del Pozo Barroso. At the same time, several complaints were filed against the latter, making it possible to confiscate 102,000 pesos he had sent with Santiago del Castillo and Francisco de Torregrosa aboard a Dutch ship, which were seized in Cartagena.

The large network of Juan Pardo, Beq and their partners is also linked to the market at Veracruz. In 1687, Peter Van Belle, agent for the *asiento* contract for Negroes in Curaçao, sent a ship to Veracruz which was captured and seized. This demonstrates the involvement of Gaspar de Herrera; Fermín Sasoeta; Julián Salinas, justice of Ver-

acruz; Juan Lacarra, agent; Jacinto Pérez; Martín de Aranguti; Francisco Arias and Juan Francisco Herrera in illegal unloading.

Regarding the formation of networks, the very system that made this invisible trade possible reflects two issues that must be taken into account. Firstly, there is the development of a network which involved interrelationships among Spanish authorities, as well as agents of various origins (Europeans born in the New World, Spaniards, Dutchmen, Englishmen, Frenchmen, etc.). Many of these were interconnected by the presence, at least, of a single agent who served and supplied the different networks. Secondly, it is worth noting a phenomenon typical of that First Global Age which is found in the networks: that of sharing agents, the momentary joining of networks by means of links to agents who worked in community with more than one, even if only temporarily. But we can also perceive how the networks clashed. Commercial rivalry is evident at some points, such as blocking active stakes in *asiento* contracts for Negroes and exchanging them for other, illegal, alternatives.

In short, commercial networks in the Caribbean functioned as subsystems integrated into much more complex systems. They were dynamic and exhibited the same conditions as any other network: the development of various hubs made it possible for the gravitational weight of its dynamics to change, which inevitably entailed a change in the market in favour of one and the resulting rivalry which immediately emerged. But how did an invisible network function? What were its dynamics? We will take the example of the network headed by Bartolomé Justiniano and Juan Pérez Barroso, which was broken up at Matanzas, Cuba. The former man owned a country estate on the banks of the River Canimar and the second was an engineer in the Matanzas area. Both were in regular contact with Dutch merchants operating out of Curaçao; among them captain Juan Bernardo Vuittier, who commanded two frigates owned by the major Dutch trading company, the WIC. The *modus operandi* was similar to what had been implemented in the Caribbean by Hawkins on behalf of the English one hundred years earlier. The ships that came into port needed provisions (biscuits, meat and water) and their captains were willing to pay for them with the merchandise they transported. In this case, they explained that they had approached the Cuban coast out of pure necessity, as they were operating as privateers against the English. And given that peace had been reached between the Hispanic monarchy and the United Provinces, they had decided to sail into port and request help. However, in 1662, it was discovered that the operations being conducted out of the port of Matanzas were a front for bringing in various products to the island, and the inquiries and formalities necessary to break up and prosecute the entire network were initiated. In 1662, two frigates arrived. They contacted Juan Pérez Barroso for the subsequent unloading of merchandise. After that, the ships were unloaded under the supervision of sub-lieutenants Pedro Bullones and Gonzalo Martín. Some of

the goods were distributed to the estates in the surrounding area, while the majority were hidden, to be later taken on a launch owned by Pedro García to Havana, where they were put on the market.

## CONCLUSIONS

To summarize the dynamics of the commercial networks which carried out their trading activity in the Indian Ocean and Pacific Ocean, we can say that for the most part, they were cooperative and collaborative, as there was no limit to participation in these networks. Their activities were able to extend to vast areas thanks to a large number of agents and significant ethnic diversity, in which origin or religion did not represent a problem for achieving the final aim: an increase in net profits. This cooperation and collaboration took place within a hierarchical and social structure similar to what might be found in the Old World, where stakeholders among the local elites took part with European stakeholders in a common undertaking: trade. The structure they exhibited was never linear, but was rather incredibly complex and open to temporary and strategic partnerships. Such was the case of certain governors of Manila, who did not hesitate to make use of this on several occasions. As a result, the networks in this area remained extremely dynamic throughout the entire 17<sup>th</sup> century. For example, their activity was not centred on trade which could be carried out only between two ports, or which linked a receiving port with a major hub port (Manila even tried to break up the monopoly which the Chinese in Canton had on their trade). Instead, they expanded their business into the entire region, trading with hub ports in the Indo-Pacific system, and even extended their networks to inland regions of areas of production (China, Japan, Cochinchina, India, Malaysia, etc.). In this regard, one of the elements of which the Europeans, especially the first global companies such as the EIC and the VOC, took full advantage was the need to accumulate information about the mechanisms of the market, understand it and completely assimilate how it functioned in order to then control it. And so it is worth mentioning the extensive learning process undertaken by many of the agents of these companies in collaboration with the native trading networks in the major Asian markets. The networks we have studied therefore continued to exhibit this dynamic and agile behaviour on a permanent basis. They had no problem using the financing provided by native elites, or engaging in business with the local oligarchy, with the leading merchants in the region. They sometimes even formed coalitions, which are interesting from a political perspective, and implemented and developed temporary partnerships which certainly contradicted the economic and political line established by central headquarters or European courts. Let us take as an example the EIC and the VOC, which were in obvious competition for the major Asian markets. The agents of the two companies operating in the Japan area built a temporary alliance to penetrate this market, control it and push out economic rivals (Spanish, Chinese, etc.). This

was also the case with the Spanish authorities in the Philippines, who despite conflict in Europe, did not hesitate to engage in trade with the Dutch and the English.

In the other geographic area studied, the Caribbean, we discover how trading networks maintained a structure and at the same time, developed dynamics similar to those found in the Indian Ocean and the Pacific. However, in the entire Atlantic area, and the Caribbean of course, we can identify significantly absent elements found in the Indo-Pacific system, giving the latter a powerful dynamism, agility and efficiency: the complete non-existence of native merchants and limited transnational activity among European agents. In fact, in the Asia-Pacific, we find Europeans working with and engaging in business with Chinese, Japanese, Indians, Malaysians, Indonesians, Persians, etc., attempting to move away from the centrality of the network, completely diversifying suppliers and buyers, and seeking efficient partnerships. In the Atlantic and the Caribbean, trade connections between networks and agents were limited solely to Europeans.

An analysis of the networks studied, in this case, Salcedo and Vargas in the Pacific and Pando in the Caribbean, makes it possible to discern, among many other things, the impact of certain people on the network as a whole, and especially as regards our study, the speed with which information was transmitted via the network. In the first case (see Figure 3), we find a network with four major hubs that provide this micro-system with an extensive and rapid capacity for transmitting information. However, it is also true that the Salcedo network was extremely centralized. This obviously made it not very effi-

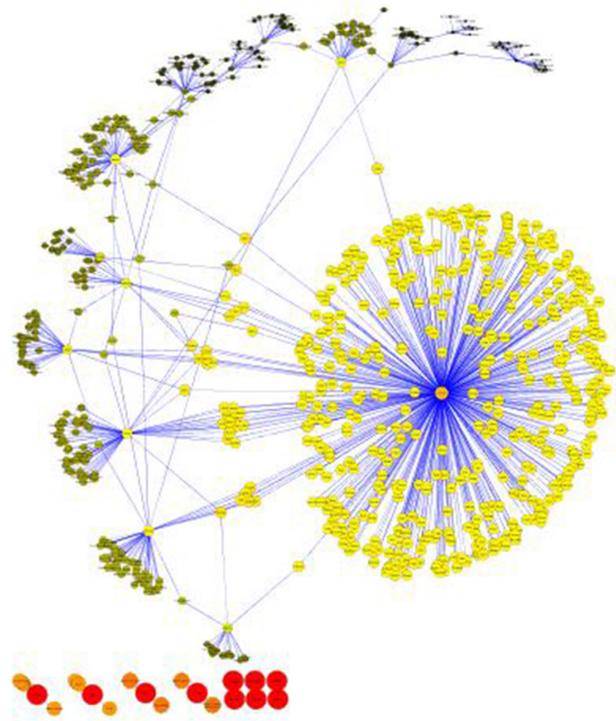


FIGURE 3: Network of Diego Salcedo. Closeness Centrality

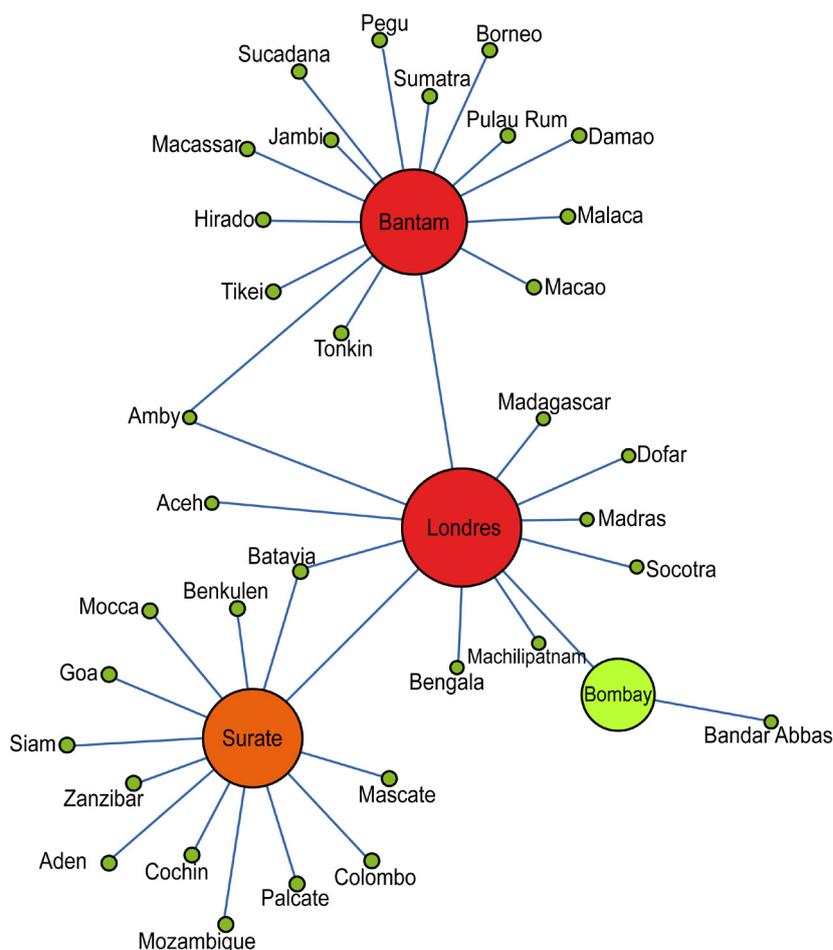


FIGURE 4: Network of Juan Pando. Closeness Centrality

cient, given that the disappearance of its central hub (Salcedo) would cause the entire network to collapse. In the case of Vargas, the network is basically centralized around a single individual and information is transmitted at great speed, although this is lessened by the structure itself, which is extremely hierarchical. Lastly, the third case studied, Pando, located in the Caribbean, shows us another different type of network or networks. In this case (see Figure 4), we can identify what in reality were two parallel networks which come together and share agents, one of the most common types of collaboration within merchant circles during this period.

**NOTES**

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2. Archivo General de Indias [AGI], Santo Domingo, 869, Legajo 5, f. 186 r.
3. Another example, the case against Salvador Barranco, governor of Santa Marta, unlawful admission of a Portuguese ship in 1685.

4. AGI, Escribanía, Legajo 340A.
5. Juan Barroso, in addition to carrying slaves, specialized in trading with cocoa from Venezuela.
6. AGI, Panamá, Legajo 231.
7. AGI, Contratación, Legajo 5793.

**REFERENCES**

Baladouni, V.; Makepeace, M. (1998) *Armenian Merchants of the Seventeenth and Early Eighteenth Centuries*. American Philosophical Society, Philadelphia.

Barendse, Rene J. (2002) *The Arabian Seas: The Indian Ocean World of the Seventeenth Century*. Sharpe, New York.

Chang, Thien-Tse (1934) *Sino-Portuguese Trade from 1514 to 1644: A Synthesis of Portuguese and Chinese Sources*. Brill, Leiden.

Chaudhuri, K. N. (1989) *The Trading World of Asia and the English East India Company*. Cambridge University Press, Cambridge.

Cheong, W. E. (1997) *The Hong Merchants of Canton: Chinese Merchants in Sino-Western Trade*. Routledge, London.

Erikson, E.; Bearman, P. (2004) *Routes into Networks: The Structure of English Trade in the East Indies, 1601-1833*. Columbia University Press, New York.

Frank, A. G. (1998) *ReOrient. Global Economy in the Asian Age*. University of California Press, Berkeley.

Ibarra, A.; Del Valle, G. (coordinators), (2008) *Redes sociales e instituciones comerciales en el imperio español, siglos XVI-XIX*

- (*Social Networks and Commercial Institutions in the Spanish Empire, 16<sup>th</sup>-19<sup>th</sup> centuries*). I. Mora, México DF.
- Keong, Chin (1983) *Trade and Society: The Amoy Network on the China Coast, 1683-1735*. Singapore University Press, Singapore.
- Knaap, G.; Sutherland, H. (2004) *Monsoon Traders: Ships, Skip-pers and Commodities in Eighteenth-Century Makassar*. KITLV Press, Leiden.
- Mukherjee, Rila (2006) *Strange Riches: Bengal in the Mercantile Map of South Asia*. Cambridge University Press, Cambridge.
- Mulder, W. Z. (1992) *Hollanders in Hirado, 1597-1641*. Fibula-Van Dishoeck, Haarlem.
- Navarrete, M. C. (2007) “De las malas entradas y las estrategias del buen pasaje: el contrabando de esclavos en el Caribe neogranadino, 1550-1690” (“Of Bad Entries and Strategies for a Good Passage: Slave Smuggling in the New Granada Caribbean, 1550-1690”). *Historia Crítica*, 34: 160-183.
- Newitt, Malyn (2005) *A History of Portuguese Overseas Expansion, 1400-1668*. Routledge, London.
- Omrod, David (2003) *The Rise of Commercial Empires: England and the Netherlands in the Age of Mercantilism, 1650-1770*. Cambridge University Press, Cambridge.
- Picazo Muntaner, Antoni (2013) *Capitanes de Manila. Redes de poder en las Filipinas hispánicas (Captains of Manila. Networks of Power in the Spanish Philippines)*. Editorial Académica Española, Saarbrücken.
- Santos Pérez, S. (1999) “Los comerciantes de Guatemala y la economía de Centroamérica en la primera mitad del siglo XVI-II” (“Guatemalan Traders and the Central American Economy in the First Half of the 18<sup>th</sup> Century”). *Anuario de Estudios Americanos*, 2: 462-484.
- Santos Pérez, José Manuel; George Félix Cabral de Souza (2006) *El desafío holandés al dominio ibérico en Brasil en el siglo XVII*. Universidad de Salamanca, Salamanca.