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Concepts of Spanish Art Crafted through Exhibitions in Spain, the UK and the US from 1800 to 1939.

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Abstract

Spanish art has traditionally been associated with specific artists, mainly the Spanish Old Masters. When scholarly publications studied the construction of this traditional concept of Spanish art, they based their studies on historiography and other texts that contribute to the elaboration of this artistic concept. However, historiography is not the only variable that influenced the creation of artistic concepts: the art market and museum collections also contribute to these concepts. This thesis aims to add another layer of complexity to the study of the consolidation of the concepts of Spanish art by examining exhibitions in which Spanish artists were displayed from 1800 to 1939. Aiming to discover patterns and the evolution of exhibition dynamics when displaying Spanish art, this study focuses on three countries: Spain, the United Kingdom, and the United States.

After collecting 336 exhibitions, using one of the few official primary sources—catalogues—the analysis consists of a combination of traditional and computational methodologies. This has allowed me to move from local to global perspectives. This means that, instead of only discovering general patterns, it also allows an understanding of the different local contexts. The type of analysis chosen for this study is network analysis, specifically a graph model based on co-exhibition, which allowed me to map and visualize the invisible connections generated when artists were displayed in the same exhibition.

This study enhances both art historical research and computational methodologies by illustrating the application of network analysis, particularly co-exhibition networks, as an effective tool for revealing patterns and analysing exhibition dynamics. By translating and adapting terms and specific metrics from graph theory, such as degree centrality, betweenness centrality, and modularity class, into art historical research contexts, it establishes a robust framework for exploring and understanding the human-made connections formed when artists are exhibited together from a macro-perspective. This broader approach highlights the evolution of exhibition dynamics and the need for further research on women artists' roles and their position within the co-exhibition network.

Spanish Art, Exhibitions, Artistic Concepts, Nineteenth Century, Network Analysis, Digital Art History, Computational Humanities, Complex Cultural Systems, Graph Theory

Summary for Lay Audience

When you are asked to think about examples of art from a specific culture, some come to mind easily; many of these examples will be shared across people, and it seems that organically, as a society, we have decided that some artists are more representative of a specific culture than others. But why is that? Is it really an organic process? In this thesis a case study is used to focuses on these questions for Spanish art. Until now, permanent collections in fine arts museums worldwide fill their Spanish art collections with artists such as Murillo, Velázquez, or Goya while countless other Spanish artist are less represented. How did these artists become the norm? And why? To investigate further, this thesis analyses exhibitions as the object of study. Exhibitions are made at a specific moment and for a specific audience, and they can thus be used as a window to a specific time and society. Exhibitions only have limited room; therefore, a selection of artists was needed. To study the concepts of Spanish art built in exhibitions, I decided to explore the very first temporary exhibitions connected to art institutions, and for that, I focused on the nineteenth century. Moreover, to get a better understanding of the dynamics shown in exhibitions across cultures, I selected three different countries: Spain, the United Kingdom and the United States.

I collected the data from 336 exhibitions from archives, often by visiting in person when information was not otherwise available. To be able to analyse and map the information in all these exhibitions, I opted to mix two approaches: a data-driven methodology based on network analysis which allowed me to study all the exhibitions collected at a glance, and a traditional approach, analysing each one of these exhibitions in depth. The analysis conducted by mixing both approaches contributes to understand how exhibitions offered a broader concept of Spanish art including more contemporary artists. Furthermore, this study also demonstrates how the display of Spanish artists in exhibitions evolves over time and varies from country to country, eventually leading to a more complex scenario where esteemed Spanish artists from previous centuries are exhibited alongside painters from the nineteenth century.

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Chapter 1

1 Introduction

The production of knowledge in art history has helped settle diverse standards and canons over time (Feldman, 2016). When developing theories about art, artistic styles, or specific periods, it is customary to illustrate them with a curated list of artists or artworks. The creation and use of these canons have perpetuated a history of art in which diverse narratives have been traditionally silenced (Jansen, 1989; Nochlin, 1988; Parker & Pollock, 1982). Cannons or artistic concepts have been mostly formed through historiography, in other words, by textual sources (Vermeylen et al., 2013). This conceptualisation arises from the human need to explain, label, and define cultural phenomena as an attempt to articulate the characteristics and aspects that define them. The term "canon" has been used in art history to refer to a set of rules and principles that exemplify how an artistic movement or style should be (Langfeld, 2018). However, this is not the only term used to conceptualise specific art-related terms. During the nineteenth century, the concept of "artistic schools" was established, as a method of labelling or defining art from a specific nation, such as "the Spanish school," or about specific artists, such as "the school of Rubens." Continuing in this line, the term "concept," as used in this dissertation, refers to a collection of characteristics, artists, and artworks that exemplify a specific type of art. The difference with canon is that a concept is not a fixed norm or rule; it is subject to change depending on the scholar. These three terms (canon, artistic school, artistic concept) are human-made constructs designed to label, study, and produce knowledge about art.

However, historiography is not the only means through which humans craft and consolidate knowledge. Permanent collections in museums or exhibitions also play a crucial role in this process. These art collections are often organised by artistic style, nation, or time period. For example, it is common practice in North American museums to label a collection containing art from various European countries and time periods as "European Art". Moreover, the artists and objects selected for permanent collections or exhibitions exemplify the prevailing norms of what is considered valuable to display.

Exhibitions, permanent collections, and historiography books focused on selected artists and artworks, generating a dichotomy between what would be part of history and what would be silenced. However, not all the concepts and theories crafted through historiography and exhibitions persist over time, some of these artistic concepts consolidate and prevail, and others do not. These prevailing concepts have become part of the global imaginary. Scholarly approaches such as feminist, queer and decolonial studies have been working towards a deconstruction of these artistic concepts and narratives that excluded systematically part of the population.

This research aims to explore the use of computational methodologies to study the conceptualisation of artistic concepts in exhibitions. Specifically, I focus on the concept of Spanish art. his research aims to explore the use of computational methodologies to study the conceptualisation of artistic concepts in exhibitions. Specifically, I focus on the concept of Spanish art. I investigate how graph theory and network analysis contribute to understanding the creation of artistic concepts through exhibitions. I explore the construction of what constitutes Spanish art, using the term "concept" and the verb "to craft" in the title and throughout this research to align with the terminology used by art historians when analysing the construction of the idea of Spanish art. For example, the art historian Javier Portús uses similar terminology in his book “El concepto de Pintura Española. Historia de un problema” (2013). Additionally, the verb "to craft" refers to the study published by art historian Francisco Calvo Serraller titled “La invención del arte español: De El Greco a Picasso” (2012), where he uses the word "invention." Therefore, my research not only contributes to their research line but also inherits some of the conceptualisations already in use. Moreover, the use of the label of Spanish art is still very pertinent to study since nowadays art collection within a fine arts museum labelled as Spanish art typically includes works by renowned artists such as Velázquez, Murillo, Zurbarán, and Goya.

However, the trajectory of Spanish art history extends far beyond the Golden Age, with new artists emerging and achieving success as diverse artistic styles evolved. Nonetheless, the prevailing concept of Spanish art centres particularly around the legacy of these Spanish Old Masters. The term "Old Masters" can be traced back to the

eighteenth century when it was used in sales catalogues to label artists whose artistic production occurred from the thirteenth to the seventeenth century (Haskell, 2000). This conception of Spanish art, illustrated by the Old Masters, is still consistently reflected in contemporary exhibitions. For instance, in 2023, the Royal Academy of Arts in London curated the exhibition “Spain and the Hispanic World: Treasures from the Hispanic Society Museum & Library" (Kientz & Salter, 2023). Similarly, during the same year, the Metropolitan Museum of Art in New York (MET) showcased "Juan de Pareja: Afro-Hispanic Painter in the Age of Velázquez" (Pullins & Valdés, 2023). Preceding these, in 2022, the Art Gallery of Ontario (AGO) hosted "Faith and Fortune: Art Across the Global Spanish Empire," while the exhibition "El Greco to Picasso" was on display in the Kunstmuseum in Basel (Giménez & Helfenstein, 2022).

These exhibitions represent just a few examples of recent museum exhibitions where the link to Spanish art is represented by the continued focus on a specific period of time in the Spanish history of art. They crafted narratives that introduced new perspectives and added layers of complexity to the concept of Spanish art and its context. Narratives in exhibitions refer to the research that vertebrates the exhibition, some of these narratives reflect on artistic concepts, themes depicted, or the artistic production of artists (MacLeod, 2012; Forrest, 2014). Exhibition narratives can theorise about what constitutes Spanish art and how it has been perceived, as seen in one of the articles in the catalogue of the exhibition "El Greco to Picasso" displayed at the Kunstmuseum in Basel (Giménez & Helfenstein, 2022). However, not all of them focus on the conceptualisation of art; exhibition narratives can also bring new perspectives to the forefront. For example, the exhibition curated by the MET about Juan de Pareja contextualised the role of enslaved people in art workshops during the Spanish Golden Age. Another example is the exhibition organised at the AGO, which explained colonial dynamics and the exchange of artistic objects and provenance between Spain and its territories in Asia, the Pacific, and America. Even though these narratives display not only well-known artists, they still connect the concept of Spanish art with the Old Masters by choosing these topics or selecting their objects to be displayed. At what moment did the concept of Spanish art become hermetically sealed?

This research focuses on understanding the variety of artistic concepts crafted in exhibitions when exhibiting Spanish art, as well as achieving a better understanding of how these concepts were built and evolved over time. I selected exhibitions as the main source of information because nineteenth-century art exhibitions were large events that showcased hundreds of artists. In contrast to historiography, where theoretical books use only a short list of artists as examples, nineteenth-century exhibitions were more akin to artist dictionaries, presenting long lists of exhibited artists. These extensive lists provide us with the opportunity to understand the various concepts of Spanish art displayed in exhibitions, alongside mainstream artists such as the Spanish Old Masters.

Based on that, the research questions guiding this investigation revolve around understanding the different concepts of Spanish art displayed and their changes and dynamics during the nineteenth century and the first three decades of the twentieth century. Who were the other Spanish artists, besides the Spanish Old Masters, who contributed to the creation of different concepts of Spanish art? What are these other parallel but almost buried concepts built over time in exhibitions? How was the concept of Spanish art based on the Old Masters constructed in exhibitions?

This introduction is structured into various sections that provide context for the object of study: exhibitions and Spanish art, the chosen time frame (from 1800 to 1939), and the socio-historical context of the selected geographical locations: Spain, the United Kingdom, and the United States of America. This approach aims to enhance our comprehension of the circumstances surrounding the development of the concept of Spanish art in the nineteenth century and the first decades of the twentieth century.

1.1 Exhibitions as Catalysers

Exhibitions are an essential part of the life of museums and galleries, not only from an economic perspective, increasing the affluence of visitors, but also because they offer the opportunity to redefine artistic objects showcasing them in new contexts or under new narratives. These ephemeral artistic events congregate a diverse series of agents such as artists, objects, collectors, and institutions and orchestrate their display under a specific narrative (Baiao et al., 2019; Greenberg, 2019). Exhibitions are a product of their time, as

they reflect the interests and tastes of that particular period of time. They usually mirror the way art and artists are depicted and perceived by art historians and art critics, as well as by cultural institutions, i.e., museums (Portús, 2012).

These narratives are connected to society since one of the goals of these artistic events is to increase the affluence of visitors; therefore, the topics are aligned with public interest. The first exhibitions held in museums and art institutions focused on showcasing the work or trajectory of a specific artistic style, school, or artists. These exhibitions crafted and solidified artistic concepts by displaying specific types of artwork under the label of Spanish art or the Spanish artistic school. Throughout the twentieth century, exhibition narratives became increasingly intricate, incorporating more research-based approaches. Today, exhibitions revolve around complex topics or theories, redefining artistic objects under new narratives to uncover different layers of meaning. For example, “Slavery,” the exhibition held and organised by the Rijksmuseum in 2021, highlighted objects from its collection that were directly related to the country's history of slavery. The narrative of this exhibition gave the objects a different layer of complexity by presenting them with a narrative that is not the most common. The inclusion of these perspectives in exhibitions is directly connected to the context and society in which the exhibition was conceived and presented. Part of the idiosyncrasy of contemporary exhibitions is linked to the ephemerality of the event itself. The exhibition catalogue is the only official document that permanently records the artistic event. As with the exhibition narratives, the complexity of the organisation and information in exhibition catalogues increased at the end of the nineteenth century, evolving from a checklist of objects, artists, and lenders in the eighteenth century to a more elaborate publication that included essays about the exhibited artists, objects, or the exhibition narrative.

Exhibitions started their journey as part of museums and private galleries during the nineteenth century. Even though art exhibitions have been part of the European cultural arena since the seventeenth century, as was the case of the Salon of Paris that started in 1667, it was in the nineteenth century when they became a recurrent event in art institutions (Mainardi, 2019). The nineteenth century was the zenith of the creation and consolidation of museums and art institutions, and with them, exhibitions became a more

common event (Baetens & Lyna, 2019). Exhibitions and the opening of private art collections were significant and impactful in the art sphere since they were one of the few visual resources to see the artists' work. During the nineteenth century, exhibitions were one of the visual links between artworks, artists, and visitors. This cultural event was one of the few opportunities for visitors to see artistic objects in person. Despite the popularity of resources such as engravings that granted the possibility to see selected paintings in a portable and affordable format, exhibitions opened up the possibility of showing visitors a wide diversity of artistic objects every few months. This fact contributed to making exhibitions a vital source for educating visitors' taste and creating, promoting, and perpetuating artistic narratives.

Hence, this research uses exhibitions to study and explore the creation of artistic concepts and cannons, concretely the concept of Spanish Art during the nineteenth century. To map out as many exhibitions as possible to study the construction of the concept of Spanish art at a glance, this project advocates for a data-driven approach. I collected data from 248 exhibitions that exhibited Spanish artists. The selected exhibitions were not exclusively devoted to Spanish artists but also displayed Spanish artists with artists from other nationalities. The exhibition corpus focuses on three countries, Spain, the United Kingdom, and the United States of America, from 1800 to 1939.

Selecting the nineteenth century and the first decades of the twentieth century, as a period to study the construction of artistic canons through exhibition has been based on the historical relevance of this time for the dissemination of Spanish art abroad, a phenomenon that increased over the years until the beginning of the twentieth century (Gaya Nuño, 1958). Before the nineteenth century, Spanish art had not been highlighted extensively internationally. However, some Spanish artists, such as Bartolome Esteban Murillo, were already well represented in the royal collections, for example, in France or the United Kingdom (Tinterow & Lacambre eds, 2003; Japón, 2018). But, for instance, other now significantly well-known Spanish painters, such as Diego de Velázquez, did not yet have a representation in international art collections. In 1906 *The Burlington Magazine for Connoisseurs*, published an article titled “The Bodegones and Early Works of Velazquez” which explains this situation:

> *The fame of Velázquez had [...] become overshadowed and seemingly diminished by that of a compatriot of his own. Murillo in the earlier seventeenth century, perhaps it may be said during the greater part of it, had usurped the palace of his far greater contemporary townsman.*

Other artists, such as Francisco Zurbarán or el Greco, were utterly unknown outside Spain before the first decades of the nineteenth century (Tinterow & Lacambre, 2003). Due to these changing phenomena, historiography and scholarly publications have traditionally considered the nineteenth century as a decisive moment for the international projection of Spanish art and culture, a projection that instigated the movement known as Spanish Fever, Hispanomania (Lundstrom, 2008; Kagan, 2019; Powell & Macartney, 2021) or *La Fièvre Espagnole* (Saint Gaudens, 1913; Lundstrom, 2008; Kagan, 2019).

The introduction of Spanish art to the international public was preceded by the extended theory of the foreign depiction of Spain as a belated nation anchored in the past. The renowned "black legend" was popular among Italians, Germans, and Dutch people over the seventeenth and eighteenth centuries (Keen, 1961; Schmidt-Nowara, 2001; Swart, 1975). The black legend projected an image of Spain as an archaic, barbaric, and obsolete country differing from the new socio-political dynamics and scientific advances from the Enlightenment that other European countries were taking part in (Schmidt-Nowara, 2001). This vision of Spain was widely extended and it impacted the creation of certain international scholarship about Spain. For example, the French Enlightenment philosopher Denis Diderot did not include Spanish art in his *Encyclopédie* as one of the eight artistic schools he identified (Tinterow & Lacambre, 2003). The nineteenth century and the first decades of the twentieth century can be considered a moment of "openness" and international recognition for Spanish art (Keen, 1961). However, although the black legend was popular internationally, it did not suit what was happening in the country during the nineteenth century (Juderías, 1914; Doyle, 1925).

At the end of the nineteenth century, Spanish intellectuals like Emilia Pardo Bazán (1899) emphasised the term "legend" instead of "history" to describe the antiquated,

pessimistic, and humiliating view of Spain. By using "legend," Pardo Bazán highlighted that such narratives as the so-called black legend, were not truthful, underscoring that history is human-made and that the portrayals by others did not objectively describe what Spain was during the nineteenth century (Pardo Bazán, 1899). The Spanish novelist alluded to how the concept of Spain as a nation and of Spanish culture changed with the artistic movement Romanticism. Romantic turnaround switched the negative connotations of the Black Legend into a halo of mysticism and archaic religiousness (Saglia & Haywood, 2018). Romantic travellers' attraction to the mystified Spanish society and culture changed the implication of this legend from disputable to alluring (Pardo Bazan, 1899; Saglia & Haywood, 2018). Romanticism promoted an influx of travellers, connoisseurs, and art historians to Spain, which added to the historical events that fostered the movement of Spanish art objects outside the country, and fed the so-called Spanish Fever.

1.2 Nineteenth-century and the International Diffusion of Spanish Art

The nineteenth century is a crucial time in the diffusion of Spanish Art abroad, theoretically and physically. During the previous century, the government of King Charles III of Spain, and concretely the chief minister Count Floridablanca, approved an official royal decree “Real Orden de 7 de octubre de 1779”, against the sale of art from Andalucía such as paintings by Murillo to international buyers. (Japón, 2018; Garbardon, 2017) This movement to protect national heritage was later on erased by Bonaparte’s government, followed by the consequent Peninsular War and Spanish confiscations.

In the first half of the century, Spain was defined by the French invasion and the installation of the so-called regime of Joseph Bonaparte, supported by his brother Napoleon Bonaparte, and the consequent Peninsular War from 1807 to 1814. The French domination significantly impacted the Spanish cultural heritage for two main reasons: the purpose of creating a national museum of the French government in Spain and the looting that is intrinsically attached to wars (Puyol Montero, 2020; Castillo Olivares, 2010; Baticle & Marinas, 1981). The French Enlightenment promoted the public display of

royal art collections, which was closely followed by the cultural pursuits of the Bonaparte Empire.

The project of creating a national museum of Bonaparte's Empire was fulfilled with the inauguration of the Louvre Museum in 1793 (Mainardi, 2019). Joseph Bonaparte, who was in control of Spain, decided to imitate this cultural program in Spain by outlining the Museo Josefino, a national museum in which every artistic "Spanish school" should be represented (Puyol Montero, 2020; Castillo Olivares, 2010; Brown, 1995). This ambitious project required travel around the country to find the most remarkable artworks and bring them to Madrid, where the museum would have been emplaced. The military marshal in charge of this work was Jean de Dieu Soult, with the advice of the French connoisseur Frédéric Quillet, who selected artworks from private collections, churches, and monasteries, mainly from Andalucía and sent them to the Spanish capital. Marshal Soult looted artworks for Bonaparte's museum project and his private collection (Lipschutz, 1972). In 1852, after Soult's death, his art collection was auctioned in Paris, and documents from these proceedings show that the majority of it was Spanish art, specifically art from Andalucía (Cano Rivero, 2016; Lipschutz, 1972; Alberich, 1987). European museums saw this auction as an opportunity to include Spanish Baroque and Renaissance art within their collections. For instance, the Louvre Museum acquired "La Inmaculada Concepcion" by Murillo with the depiction of Nicolas I, czar of Russia, and Isabel II, queen of Spain (Cano Rivero, 2016). Another example of an art institution that acquired Spanish art during this period was the Gemäldegalerie in Berlin (Stockhausen, 1997). Additionally, private collectors took advantage of this opportunity to include artistic objects from Spain in their collections. An illustrative exhibition of the systematic purchase of Spanish art coming from French military members, titled "The Collection of The Marechal Soult, Duc de Dalmatie, and Other Celebrated Galleries" was held at the Gallery in London in 1840. This exhibition showcased purchases made during this sale, bought by British collectors, such as William Buchanan, a Scottish lawyer and art dealer, who acquired portraits of Velázquez and "San Agustín" by Murillo, which were displayed in this exhibition.

The dimension of the Spanish cultural heritage looting can be inferred from the more than 1500 carriages filled with artworks, archives, and documents sent to Paris by Joseph Bonaparte when the war's ending was nearing (Siegel, 2010). Most of the artworks confiscated by Bonaparte's government belonged to private collections, religious orders, cathedrals, or churches. However, not all of these carriages arrived in the French capital. Part of the British army that was fighting against the French intercepted a small number of these carriages. Led by the Duke of Wellington, the Spanish artworks intercepted were sent to his brother in London in 1813. After the war, the Spanish Government conceded the paintings to the Duke of Wellington as a gesture of gratitude for his help during the war (Kauffmann, 1982; Gaya Nuño, 1958). This looting resulted in an abundance of previously unknown Spanish Renaissance and Baroque artworks to an emerging international art market that would prove crucial in elaborating the concept of Spanish art. However, these were not the only occasions on which Spanish art was sent abroad during the nineteenth century.

Another aspect of the government of Joseph Bonaparte to consider in order to understand the movement of Spanish artworks abroad was the enactment of decrees to suppress religious orders. As a result of this, the artistic heritage of religious orders was confiscated by the government (Siegel, 2010). These confiscations were not new in Spain. At the end of the eighteenth century, the politician Manuel Godoy promoted the first confiscations within the country. After the Peninsular War, when the Spanish government reclaimed its sovereignty over the country, the promotion of national confiscations continued. Both in the eighteenth and nineteenth centuries, confiscations were one of the solutions to address the lack of funds and land faced by the Spanish government. Two significant confiscations were promoted by the Spanish prime minister Juan Álvarez Mendizábal in 1838 and by the Spanish marshal Baldomero Espartero in 1844. In these confiscations, the artistic heritage, properties, and lands that belonged to the Catholic Church, the crown, and the royalty were seized and publicly auctioned (Campos y Fernández de Sevilla, 2007). The government absorbed parts of the expropriated cultural heritage, and others were sold to private collections both within Spain and abroad.

Most of the historical buildings confiscated, such as small churches or monasteries, that were still too big to be sold or to be moved effortlessly were abandoned due to the lack of an established central conservation or preservation system. Furthermore, with respect to the architectural heritage that was sold to foreigners, often only specific parts of the buildings would be brought to their home countries. In contrast, the rest of the buildings were abandoned. The two direct consequences of these decrees significantly impacted the promotion of Spanish art nationally and internationally. Firstly, the confiscation of cultural heritage and the auctions thereof directly contributed to the circulation of Spanish Art abroad, now not only in private collections, museums, and private galleries but also within the international art market. Secondly, these decrees promoted the creation of provincial museums and libraries to keep and conserve that heritage (Castillo-Olivares, 1998).

1.3 Spanish Historiography and the National Cultural Heritage

Meanwhile, the aftermaths of the Peninsula War and the subsequent confiscations diminished the cultural heritage in Spain. However, the actual effects on this heritage could not be accurately assessed, as no official and systematic record of Spanish cultural heritage previously existed. The only way to understand what constituted Spain's cultural heritage was through books written by art historians, which often featured non-systematic cataloguing and a subjective approach to the subject. Two examples of these books were “El parnaso español pintoresco” by Antonio Palomino, published in 1724 and “Viage a España” by Antonio Ponz, published between 1772 and 1792. Both publications record and study the life and artistic production of a selected group of Spanish artists, highlighting figures such as Diego de Velázquez and giving him a preponderant position in the Spanish cultural arena. The selection of determined artists also brings with it a list of non-chosen or unselected figures. In this case, these two publications did not mention artists such as el Greco, who centuries later would become one of the most important painters contributing to the concept of Spanish art by historiography in Spain and abroad.

In 1800, the Spanish painter and historian Juan Augustín Ceán Bermúdez published “Diccionario histórico de los más ilustres profesores de las Bellas Artes en España”, where he compiled detailed information about Spanish artists. However, following the other mentioned publications, this book is not a systematic catalogue of the Spanish cultural heritage but a study and compendium of Spanish artists. It was not until the end of the nineteenth century when Facundo Riaño, the director of the Real Academia de Bellas Artes de San Fernando, promoted a project to catalogue Spanish cultural heritage. This project aimed to create an official inventory of the Spanish cultural heritage and contribute to its diffusion and preservation (López-Yarto, 2012). In 1900 the Spanish government accepted the project, and the first systematic cataloguing of the Spanish cultural heritage started. The project was not as successful as expected since the results varied regarding inclusion and completion depending on the person in charge throughout the years the project lasted.

Aside from historiography and official cultural heritage records, the other sources to build a Spanish art concept within Spain came along with museums. While Joseph Bonaparte was governing in Spain, one of the key aspects of his cultural policy was the establishment of a national museum. Known as the Museo Josefino, its purpose was to showcase an example of every single artistic style. To achieve this goal, the French army moved hundreds of artistic objects from all the Spanish geography to Madrid (Castillo-Olivares, 2010). As part of the aftermath of the war, the reinstated Spanish government had to find a place for all these objects, adding to them the rest of the cultural objects acquired by the government during the confiscations. The Museo Josefino was the seed of two public museums: the Museo del Prado and the Museo de la Trinidad. Both museums showcased cultural objects with different provenance. The Museo de la Trinidad exhibited the objects acquired through the confiscations, while the Museo del Prado focused on part of the royal collections.

King Fernando VII of Spain promoted the creation of the Museo del Prado as part of his new modern regime. The Museo del Prado aimed to be the nation's main institution for Spanish art. To achieve this goal, King Fernando VII loaned the royal collection to the museum. However, the royal collection, far from being just an example of Spanish artists,

had an extensive part of Italian and Flemish schools. In fact, when the museum opened in 1819 for the first time, the main space in the gallery exhibited the Italian school. The main goal of the Museo del Prado was to be a reference for Spanish art, therefore, and committed to this purpose, King Fernando VII continued collecting Spanish art pieces, mainly from France. In 1826, the museography of the museum changed, giving the main gallery to the Spanish school (Portús, 2012). Even though the Spanish art collection at the Museo del Prado was growing and creating a more complex concept of Spanish art, it was in 1872, when the Museo de la Trinidad and Museo del Prado combined their collection, and the concept of Spanish art exhibited increased by the number of objects but also its complexity. The first catalogue published by the Museo del Prado about their permanent collection described 130 artworks that belong to the Spanish School / Spanish artists. The catalogue published in 1872 demonstrated how the collection of Spanish art of the museum had grown considerably, counting 516 objects catalogued within the Spanish School and adding the artwork coming from the Museo de la Trinidad, that is, 52 artworks by Spanish artists. Thus, the Museo del Prado positioned itself as the museum with the largest collection of Spanish art.

1.4 The Exported View

The irruption of a big flow of Spanish objects in the international art market promoted the so-called Spanish fever. Moreover, it is also crucial to understand the social context that absorbed and gained ownership of these artistic pieces. The desire for Spanish art escalated with the increase in the number of travellers to Spain, as the ensuing publications of their travel books contributed to the attention given to Spanish art by the French and British general public (Glendinning et al, 2010). While the nature of these publications could be based on existing scholarly descriptions (Vázquez, 2001), the final results were descriptions primarily based on taste, feelings, and the general sentiment of the authors' experience in Spain (Ortega Cantero, 2002).

The English travel writer Richard Ford wrote one of the most popular travel books about Spain, titled "A Handbook for Travellers in Spain and Readers at Home*",* published in 1845. In this book, Ford highlighted Velázquez and mentioned his underrepresentation in

painting galleries above other painters, such as Murillo, who was the most famous painter abroad before the nineteenth century. Ford distinguishes a difference between Murillo's and Velázquez's manner, defining Velázquez as a painter of masculine and intellectual scenes, while Murillo's artistic production was devoted to women, graceful, and religious subjects. The English traveller also includes Goya as one of the highlighted Spanish artists in his books, creating a list of selected Spanish painters and an early hierarchy for the English speaker since his work was written in English.

Funded by the French journal Le Presse, the writer Theophile Gautier published his travel book "A Romantic in Spain*"* in 1840, where he praised the work of Velázquez and criticised the Museo del Prado for the lack of representation of Spanish artists such as el Grego or Zurbarán. Nevertheless, not all the publications from these travellers described Spain's art and culture. Some of them inspired fictional stories. For example, Washington Irving was one of those travellers whose numerous visits to Spain inspired a few of his books, such as the renowned "The Alhambra: A Series of Tales and Sketches of the Moors and Spaniards", published in 1832. With his books, Irvine aligned with the Orientalist tastes of the time (Stevens, 2007), a scholarly practice that emerged in eighteenth-century Europe, where Mediterranean, Asian, and what are known today as Global South cultures, were viewed through a romanticised lens. He promoted a vision of Spain as a mystic and exotic nation based on its Arabic cultural and artistic heritage.

However, not only writers travelled to Spain. Following the Hispanophilia, the French painter Edouard Manet visited Spain and exchanged letters with Charles Baudelaire and Henri Fantin Latour about his impressions of Spain (Portús, 2012). The visit of Manet to Spain in 1865 has been considered to be of great importance for the institutionalisation of three significant painters as the personification of the discourse of Spanish art: Velázquez, Goya, and, to a lesser extent, el Greco (Calvo Serraller, 2013; Tinterow & Lacambre 2003; Portús, 2012; Giménez & Helfenstein, 2022). The passion that Manet expressed in his letters and the artistic reminiscences of the Spanish painters mentioned above were passed on to a generation of American artists such as Thomas Eakins, John Singer Sargent, and Merritt Chase (Kagan, 2019). These travels and related publications contributed to the promotion of Spanish art abroad. Moreover, the subjective analysis of

artworks and artists that these Romantic travellers described consolidated the importance of some Spanish artists unknown to the great international public until that time.

1.5 New Roles in the World of Art

The incipient creation of private galleries and museums supported by governmental funds dedicated to including Spanish artworks in their collections promoted the flow of art pieces into the market. These new cultural institutions were accompanied and supported by an emerging middle class that was taking shape in Europe and was thriving in the United States. This middle class was economically robust and educated, which enabled it to run, invest and take part in the artistic scene, not only within the art market and the purchase and sales of art pieces but also in the institutional sphere, sponsoring museums and art institutions, by being the donors of art pieces or as lenders lending their artistic object for exhibitions.

The emerging middle class funded private art galleries and promoted artists within their social circles, such as the Hispanic Society of America (1903), the Isabella Stewart Gardner Museum (1903) or the Frick Collection (1935). This new socio-cultural panorama produced a diversity of more specialised figures that took part in the art sphere during the nineteenth century until their splendour in the first decades of the twentieth century. The figure of the connoisseur and collector started to be more influential over this century. Between these two figures, other minor roles in the world of art became more present and professional over the years, such as agents, who, most of the time, were painters sent by collectors to buy high-quality objects in diverse countries.

Even though art collectors existed earlier than the nineteenth century and there is a history of collecting Spanish art internationally at the end of the eighteenth century focused on the figure of Murillo, it is during the nineteenth century when collectors flourished and assembled more curated collections (Japón, 2018; Glendinning et al, 2010; Kent, 2020). Collectors were the curators of their own private collections, and they decided, based on their personal taste but also the taste of their social context, what to add to their art collection (Vázquez, 2001). The transformation of taste influenced private collections and, ultimately, exhibitions. This was partly due to the reliance on private

collectors who contributed to the exhibitions by lending art pieces that supported the exhibition narrative. However, these new roles were not fixed; a case in point is Mary Cassatt, the American painter who developed a significant appreciation for Spain until she became a specialised art dealer in Spanish art and started promoting it to their friends and patrons (Kagan, 2019).

Apart from collectors, other figures in the cultural panorama started to be more relevant. For example, *scholarly agents* emerged as figures who did the work who later on would be of dealers and were widely promoted by collectors in England (Herrmann, 1991). These scholarly agents were in charge of discovering new artists or art pieces to buy and add to their collections. This figure settled the basis for the position of art dealers in the artistic arena. Art dealers started to be the connection between sellers and buyers. They were part of the wealthy middle class and positioned themselves within the elite to improve their contacts and connections and ensure a reputable and trustworthy status (Fletcher & Helmreich, 2018; Vázquez, 2001; Garb, 1994). With the professionalisation of roles in the world of art during the nineteenth century came a new perspective on the artist's identity. Artists became promoters of their own work, changing their identity to a more corporate one and establishing some distance from the perception of artists of the Renaissance.

The nineteenth century was also a time when women’s presence increased in the cultural arena Despite this apparent societal change, women's roles did not significantly evolve. Women were still perceived and portrayed as having volatile characters, akin to infants, which prevented them from holding important professional positions (Facos, 2011). In this new emerging middle class, women were still supposed to live a domestic life (Sánchez, 2019; Prieto, 2001). However, this wealthy middle class gave fortunate women the opportunity to join the cultural arena, for example, as collectors such as Isabella Steward Gardener (Docherty, 1999) or as dealers such as Mary Cassatt (Corey, 2017). In some cases, women also took over the position of artists. Even though there have been great women artists throughout history, during this time, unions of women painters started their path in order to gather, support and create a community among them. Moreover, women artists became more interested in the arts as a profession and not as

part of their education (López Palomares, 2002). For example, during this time, women worked producing copies of paintings held in art institutions (Briefel, 2006). The exhibition of women artists during the nineteenth century increased, although their presence was not balanced with male artists (Spies-Gans, 2018; Jensen, 2015). For example, in Spain, after decades of women artists participating in the annual Exposición Nacional de Bellas Artes that started in 1856, it was not until 1941 that the first women artist achieved one of the awards. Moreover, as part of women holding relevant roles in art institutions, it is important to highlight that women were not usually part of the organisation committee for exhibitions nor held distinguished positions in cultural institutions such as committee members or museum directors (López Palomares, 2002; Wolf & Seed, 1982).

1.6 Case Studies: Spain, the United Kingdom, and the United States of America from 1800 to 1939.

The time frame used in this study extends from 1800 to 1939. From 1936 Spain was engulfed in a civil war that ended in April 1939. After Francisco Franco's victory and the subsequent forty years of dictatorship, the country was plunged into a profound change in the cultural dynamics and international relationships (Bozal, 1995). Globally, the first thirty years of the twentieth century were marked by the social upheaval that negatively impacted the art market's growth. The First World War struck the international economy, and another economic shock followed it, the Wall Street Crash of 1929. This post-war financial situation affected the private galleries that had become exceptionally popular within the art ecosystem. The ensuing Second World War (1939 - 1945) drastically stopped the international dynamics economically, politically, and artistically. The devastating years of war were followed by a polarisation based on economic systems. Due to all these contrasting and diverse factors, this research stopped data collection in 1939, considering that after this date, the national situation in Spain and the global one changed substantially (Avery-Quash & Pezzini 2020).

This research focuses on three countries as three different case studies: Spain, the United Kingdom, and the United States of America. The historical context previously mentioned

and explained highlights the importance of the nineteenth century as a time where Spanish art had a notable impact and was placed in international public and private art collections. The countries studied are selected due to their strong connections with the collection and representation of Spanish art abroad.

The interest of British collectors in Spanish artworks started in the late eighteenth century, with Murillo (Japón, 2018; Glendinning, 1964 & 1989; Glendinning et al, 2010; Kent, 2020). After that, a historical event as the Peninsular War and its aftermath brought a substantial number of paintings to that country. During the war, a member of the British army, the Duke of Wellington, sent to his brother in London over 200 paintings that the French military was exporting to Paris. The Duke of Wellington's art collection was exhibited in Apsley House in London. In 1853, specific parts of the Apsley House were opened to the public, allowing visitors to see the Spanish art pieces (Gibbs Smith & Percival, 1959). However, this was not the only place where Spanish art was displayed. During the nineteenth century, the annual exhibitions of Old Masters, held first by the British Institutions and subsequently by the Royal Academy of Art, exposed visitors to Spanish art. The other demonstration of the impact that Spanish art had on British society during the nineteenth century can be seen in the organisation of significant exhibitions devoted solely to Spanish Art, such as the “Exhibition of Spanish Paintings” organised by the Royal Academy in London in 1920. With less ephemeral characteristics, in nineteenth-century London, society witnessed the establishment of two art galleries with more enduring characteristics. The Spanish Art Gallery specialised in selling Spanish art, while the Colnaghi Art Gallery focused on art from before the seventeenth century, including Spanish Old Masters.

The United States has a very particular idiosyncrasy when it comes to how art institutions were initially built in the country. Part of the collections exhibited in the first national museums in Europe came from the Royal families, but the United States did not have this resource. The creation of the first art institutions happened following a different path since there was no public / national / governmental art collection. At the beginning of the nineteenth century, there were two major models when consolidating art institutions: for-profit organisations, such as art galleries, and non-profit organisations, such as those with

trustee boards (Dimaggio, 1982). American art institutions began collecting art and curating their own collections, often starting from scratch. The emerging American middle class, which was also forming their own art collections, primarily acquired European art. However, this was not solely influenced by their tastes but also by the dealers and art galleries that mediated the art market. European art dealers and galleries played a significant role in the American art market; for example, Knoedler Galleries was founded as a branch of the Adolphe Goupil art gallery. Therefore, American institutions did not have to manage a royal art collection and could curate from the very beginning what they deemed worthy of inclusion in their private collections and institutions.

The selection of the United States for this study also sprung from the impact of Spanish Art and culture during the American Gilded Age and the influence on the taste of the time. American collectors had an increasing interest in adding Spanish art to their collections, purchasing overseas alleged Spanish Old Masters paintings (Kagan, 2010; Boone, 2007). The taste for Spanish art in American society grew during the nineteenth century, and as it happened in the United Kingdom, there were art institutions devoted to Spanish art but created in the last decades of the nineteenth century and beginning of the twentieth century, such as the previously mentioned Hispanic Society of America, or the Frick Collection, a private collection of Henry Clay Frick that opened to the public in 1935.

Contrasting these two socio-cultural contexts, Spain is part of this study to analyse how Spanish art was built within exhibitions in its own territory. In this case, even though the art market can impact access to specific artworks, museums and galleries count on a rich wide range of artists. The objective of including Spain in this study is to understand what the exhibition dynamics were showing in Spain, which artists were exhibited, and what type of discourse Spain was creating about its own art in exhibitions during the nineteenth century, in contrast with the narratives abroad. Moreover, Spain is significantly important due to the differences in the art institutions and exhibition dynamics between the two previously mentioned countries. For instance, the first temporary exhibition collected by the National Museum of Spain, the Museo Nacional del Prado, was at the beginning of the twentieth century, followed by monographic

exhibitions of el Greco in 1902 and Francisco de Zurbarán in 1905. Before that date, the Museo del Prado had not held any temporary exhibitions. The other examples are the annual exhibitions of fine art. These exhibitions hosted hundreds of contemporary artists and became more professionalised and curated over the years. They were an example of how the nineteenth-century Spanish artistic arena looked every year.

1.7 Crafting the Concepts of Spanish Art through Exhibitions. A Computational Study.

In this introduction, I have contextualised the historical and societal background, providing the necessary support to understand the decisions related to the time frame and geographical contexts that I have taken in this research. The next question is how I aim to study and answer these research questions. To examine three different cultural ecosystems over 139 years, the use of computational methodologies is not only necessary but also a new path to explore. The last decades, part of the scholarly publications in the humanities field have also focused on the intersection between computational methodologies and humanities research. Scholars such as Franco Moretti (2007; 2002) and Bruno Latour (2005) have highlighted the need for computational methodologies to provide suitable tools for analysing cultural phenomena from a macro/global perspective. Subsequently, many publications and research projects have built upon this foundation. By employing data-driven methodologies, this study maps how exhibitions have crafted different concepts of Spanish art from both micro and macro perspectives. The approach used in this study combines traditional archival research with digital methods to map and study a large number of exhibitions and the emerging concepts of Spanish art proposed in them.

This study not only contributes to the field of art history by addressing important research questions but also through the introduction of a new methodology and a specially created dataset. The methodology chapter focuses on the dataset derived from a corpus of exhibition catalogues. This chapter details the information extracted from the catalogues (metadata), their organisation (data model), and also highlights other information available in the catalogues that was not included in the dataset. This section is crucial for

understanding the analysis and subsequent results. In line with best practices for interdisciplinary projects in digital humanities, this research does not solely use the data extracted but also a detailed study of each one of the exhibition catalogues. This dataset will be made available online following the FAIR principles, allowing other researchers to reuse it. Additionally, the methodology chapter discusses the computational tools employed, specifically network analysis. The application of network theory to the study of exhibitions has been used previously in various cases (Fraiberger et al., 2018; Papenbrock & Scharloth, 2011). This study aims to translate and interpret network metrics and statistical analysis to reveal patterns when exhibiting Spanish art. The analysis and discussion of the study have been divided into three chapters. These final three chapters collectively aim to answer the main research question: What concepts of Spanish art were crafted in exhibitions?

Chapter Four, titled "The Diversity of Concepts," addresses the question, "What concepts of Spanish art were showcased in exhibitions?" This chapter analyses the co-exhibition networks of Spanish artists to reveal patterns in their exhibition. It also includes a sub-chapter dedicated to Spanish women artists.

Chapter Five, "The Evolution of Exhibition Dynamics from 1800 to 1939," conducts a chronological study to map the patterns and changes in exhibition dynamics over time. This chapter covers the 139-year span of the study to provide a comprehensive understanding of how these dynamics evolved.

Chapter Six, "From Global to Local: Study of the Exhibition Dynamics in the Three Geographical Contexts," answers the question, "How have exhibition dynamics represented Spanish artists both within Spain and internationally?" This chapter focuses on the specific contexts of Spain, the United Kingdom, and the United States to provide a localized analysis of exhibition dynamics.

Through these chapters, the study aims to offer a nuanced understanding of the various layers of complexity in how Spanish art was conceptualized and presented in different cultural settings.

Chapter 2

2 Exhibition Data

The overview of the evolution of the concepts of Spanish Art and its gaps detailed above has focused on a systematic literature review. When an exhibition was organised, it had a list of selected artists that were going to be displayed. Particularly, during the nineteenth century, exhibitions were large events that sometimes numbered hundreds of artists. Even though artists such as Velázquez or Murillo were extremely popular throughout the century, their artistic production was limited, and furthermore, fewer of their artworks were outside of Spain. Thus, these famous artists were not enough to fill out exhibitions that displayed hundreds of artworks. Other artists who participated consistently in exhibitions, while perhaps not as popular, were nevertheless supporting and being part of these crafted concepts of Spanish art. With the goal of mapping and uncovering other parallel concepts of Spanish art, this thesis analyses 336 exhibitions from 1800 to 1939 in Spain, the United States and the United Kingdom.

A single exhibition would already be a rich source of information for understanding the socio-historical context in which it was exhibited, the institution that had organised it and the narratives crafted within it. However, to investigate patterns and evolutions within the exhibition information, a macro-approach is required to extrapolate the information from the corpus of exhibitions. This research employs a combination of both macro and micro approaches. To create and craft the dataset, I manually read and studied each catalogue mentioned. Although I only selected, for the dataset, specific information about these exhibitions, this process allowed me to gain detailed knowledge of every catalogue collected and subsequently of every exhibition. Exhibitions, as an object of study, are ideal for utilising both approaches to study a cultural phenomenon, in this case, Spanish art.

Exhibitions are a rich source of information, and depending on the research questions of the study, the process of datafication, as well as the methodologies applied, differs. Data-driven studies have used exhibition data to investigate the tastes in artistic genres of

society during a specific period of time (Jung, 2021), to study the popularity of artists in exhibitions and their impact on the greater public (Braden & Teekens, 2020), to understand the participation of women artists in exhibitions (Spies-Gans, 2022; 2018) or focused on exhibitions as a data source in order to explore the links and impact of the cultural production to the socio-economic context, such as for instance, uncovering connections between genres and art market (Greenwald, 2021). Moreover, a more micro approach to the cultural phenomena studied is achieved through an individual study of exhibitions. These scholarly publications demonstrate how the use of computational methodologies, supported by a micro approach or more traditional bibliographical studies, can reveal new patterns and conclusions.

Nonetheless, in addition to quantifying the number of exhibited artists and analysing the frequency, this study extracts the list of exhibited artists in each exhibition and visualises the invisible created connections between them whenever and wherever they are exhibited together. These connections work as invisible nexus as in social relationships. Whenever two people meet, an invisible connection is created, and this connection can be visualised through a network. However, these connections are not always meaningful, and for that the study of complex systems and graph theory and analysis would be crucial to filter and understand how these connections between exhibited artists are more productive, than others.

Network analysis and graph theory are part of methodologies previously used in scholarly publications when working with exhibition data to study the connections between artists and institutions, artistic or social influences, relationships or even to highlight global communities (Braden & Teekens, 2020; Suárez et al., 2011; Fraiberger et al., 2018; Fletcher et al., 2012; Van Ginhoven, 2019; Lincoln, 2016). Network analysis, as part of the methodology for this project, brings to light these invisible connections created when artists are displayed together. Apart from visualisation, network analysis offers a different approach to the study of cultural dynamics by giving different metrics, for instance, analysing the formation of communities or understanding how the information travels through the nodes of a network.

2.1 Corpus

This study mainly uses an exhibition corpus created by *ex profeso*. This corpus includes 336 exhibitions and 2747 artists covering a period from 1800 to 1939. The exhibition information has been collected from primary sources, specifically exhibition catalogues and any official documentation produced and published by the organising institution, e.g., checklists or short promotional material. The decision to use only primary sources, information officially published or made available by the institutions comes after an extensive search of scholarly publications and sources . Even though information about exhibitions is sometimes included in newspapers or specific magazines, for example, promoting a specific exhibition or critiques from art specialists, these types of information do not include all required information, such as an exhaustive list of the name of the exhibited artists. Including this source would result in a corpus with information that has been mediated by a third party. While this information is very interesting, as it for example could offer hints as to which artistic names would attract more public, the investigation thereof is outside of the scope of this study. As such, with the primary goal of mapping other concepts of Spanish art crafted through exhibitions and achieving a better understanding of exhibition dynamics, I have decided to use only the information contained in official primary resources, in this case exhibition catalogues.

Even though this project relies on primary sources for data collection, these primary sources, exhibition catalogues, do not have the same level of granularity. As a result, the created dataset does not contain identical data for each exhibition. In other words, depending on the organising institution and the time period, the information about the exhibition contained in the catalogues varies significantly. During the nineteenth century, exhibition catalogues did not show any consensus on what information to include or even how to structure the information in the catalogues. Some of the collected catalogues include a wide range of information, such as lenders or a description of the artwork, and some of them only include the titles of the exhibited objects. Regarding the organisation of the catalogue, some of the publications organise the information by artists, first, the name of the artists and then a list of all the exhibited artworks, and other catalogues are organised by the title of the exhibited artworks. By the end of the nineteenth century, it

was more common to find an introductory text about the exhibition or the displayed artists in the catalogue. These texts explained the exhibition and even highlighted some artists exhibited there. However, not all of the catalogues have introductory texts, and the purpose of the catalogue can change depending on the exhibition or the institution (some of them have information about prices since it is part of an exhibition that sells artistic objects).

The exhibition corpus is a multilingual dataset that contains information in Spanish, English, and Catalan. Each exhibition data was added in the language of the catalogue. Moreover, the names of artists or institutions are recorded in the dataset in their original language. For instance, if the exhibition was in London, UK, but the artists were Spanish, even though the name that appears in the catalogue sometimes had an English spelling, the Spanish spelling prevailed.

2.2 Building the Dataset

The research methodology follows the steps to develop data science projects in the context of digital humanities: research context, data collection, preparation, modelling, cleaning, analysis and visualisation. In order to make this dataset reusable by other researchers in the future and follow the FAIR (Findable, Accessible, Interoperable, and Reusable) principles, this section includes a description of the exhibition dataset.

2.2.1 Collecting Information

One of the handicaps of applying data-driven methodologies to cultural heritage information is the general lack of datasets. The information is not always digitised, or the digitisation has been done with different processes (creating a digital image or applying optical character recognition techniques) and released and published in different formats, for instance, .jpg, .txt, .pdf. Therefore, when a project aims to analyse cultural heritage or historical data, one of the first work tasks is to build and create a dataset. However, this is not a problem exclusive to humanities projects dealing with historical data. The analysis of contemporary cultural phenomena can also be challenging because it relies on data collection from art institutions and the release of datasets, throughout an API, which are not available in all institutions.

Exhibitions are part of the life of art institutions. However, not all institutions organise and share their data similarly. The information that each institution shares publicly is arbitrary, as well as, their selected data model to structure and organise their data. Moreover, the collection manager software in art institutions changes depending on the institution or country. Therefore, understanding the collection of information and sharing later depends on them. For this thesis, a considerable part of the time during my PhD program has been spent collecting information, manually imputing the data and cleaning and processing of data.

Nineteenth-century exhibition data adds another layer of complexity due to the historical aspect and the availability of sources.The first stage of this research focused on archival work, and a process of direct data collection took place during the fall of 2019 in the archives of the following institutions: the National Art Library in the Victoria and Albert Museum (London, United Kingdom) and where Mediterranean, Asian the Museo Nacional Centro de Arte Reina Sofia (Madrid, Spain). When in 2020 the COVID-19 pandemic started, it directly affected in-person work. Hence, I had to rely on a systematic search of digital libraries/archives (Hathi Trust and Archive.org) or the digital collection of art institutions (Museo del Prado, Museum of Modern Art and The Royal Academy of Arts).

The exhibition catalogues were available in three formats:

A. Fully digitised by the institution. These catalogues were digitised by the holding institutions, which made the data fully available. These catalogues give users access to their information in digital text format. These are easier to consult and analyse as their text is entirely readable by software.

B. Digitised as images taken by the researcher. The institutions did not digitise these catalogues but were manually captured photographically. An optical character recognition method was applied to the images to extract the textual information to access the data.

C. Manually transcribed. The remaining catalogues were not available for photographic capture due to copyright restrictions of the library and archive. I

extracted the information manually, including any metadata required for classification.

One significant challenge in building this exhibition data corpus was automating the extraction of information from the catalogues. The lack of a systematic structure in catalogues during the analysed period of time and across countries made it impossible to automate this process, having to input the information manually.

2.2.2 The Dataset

Once the process of information collecting was completed, the next step was to build the data set. Information was manually added to the *Expofinder* database (Rodríguez Ortega & Cruces Rodríguez, 2019). For the purpose of this research, I cleaned and restructured the data exported from *Expofinder*. For the data enrichment step, only the artists were taken into consideration. I normalised and linked the artists' information using the controlled the vocabularies Union List of Artist Names Online (ULAN) from The Getty Research Institute and Wikidata.

Dataset	
exhibition_id	Unique identifier of the exhibition. It is a numeric field.
title	Title of the exhibition given by the catalogue. It is a string.
starting_date	Starting date of the exhibition. It is a date.
ending_date	Ending date of the exhibition. If this date is unclear or cannot be found, the starting and ending dates will be the same. It is a date.
org_institution	The institution that held and organised the exhibition. Some exhibitions could be organised by a few institutions, in this case, institutions will

	be collaborative institutions. It is a string.
artist_id	Unique identifier of artists. It is a numeric field.
artist	The artist' name. In this case, I tried to keep the spelling of the painter's language, e.g. instead of adding “Antonio Moro” as this Netherlandish painter would appear in Spanish catalogues, I added “Anthonis Mor” to the database. The writing option first appears last names and then names, separated by a comma: Mor, Anthonis. It is a string.

2.2.3 Bias in the Data

As with every existing database and dataset, the dataset created for this thesis is biased. This dataset has been created to find answers to the research questions of this thesis, however, there is existing information related to these exhibitions and their catalogues that have not been collected and that future users will have to take into consideration when using the dataset.

2.2.3.1 Exhibited Objects

The dataset created for this thesis does not contain information about the object exhibited. The scope of the research questions did not included the displayed objects, but different types of agents as described in the first section of this chapter. Moreover, nineteenth-century exhibitions were large events with hundreds of objects displayed. Due to time constraints, it was not feasible to include exhibited objects. Another encountered problem-related to exhibited objects is the difficulty of linking and tracing objects across exhibitions. The information contained within nineteenth-century catalogues varies. Some catalogues include long iconographic descriptions of the objects, while others might only include usable titles, or titles at all. For instance, in the case of the Spanish art exhibited during the nineteenth century, we can find multiple “Virgin with Child” works painted by Murillo in different exhibitions, but without individual archival and scholarly

research of each of these art pieces, it is not possible to confidently and automatically match these objects in the database, even if they were actuality the same. Also, in the specific case of Murillo, we would have to consider the historical forgery of Old Masters artworks sold in Europe to the United States (Dotseth, 2008; Méndez Rodríguez, 2008).

2.2.3.2 Lenders

Some catalogues contain detailed information about lenders or even previous lenders. However, this information is not part of this dataset.

2.2.3.3 Exhibition Organisers

The current understanding that curators have in the institutions did not exist in the nineteenth century. Nonetheless, exhibitions were designed and organised by people from the institution, and some catalogues include a list with the names of the committee members.

2.2.3.4 Collaborative Institutions

There were exhibitions co-organised with different institutions. These institutions can provide funding, lend objects or even space for the exhibition. However, this information is very uncommon to be found in exhibition catalogues in the nineteenth century.

2.2.3.5 Catalogue information

Exhibition catalogues are an extremely rich primary source. Catalogues are the only perdurable . However, only some of the information contained is related to the exhibition per se. Catalogues also include information on the print process. For instance, some catalogues have information about the printing place, the press company, or the printed edition. Some of the catalogues also include advertisements directed to the exhibition visitors.

2.3 Methodology

The study of complex systems as it is the exhibition ecosystem where many different entities collaborate and converge together, requires for different approaches. This thesis

research started with these main research questions: What are the concepts of Spanish art crafted in exhibitions from the 1800 to 1939? What are the patterns and evolutions that these concepts follows over time?

2.3.1 Conceptual Graph Model

Intending to be able to visualise the drafted artistic concepts in exhibitions, I opted to think about exhibitions as a hub of connections. Invisible connections link all the entities participating in exhibitions: people, objects, institutions, and textual material [FIG 1]. The ‘people’ related to exhibitions can be the workers of the organised institutions, from the organised committee, curators, designers to any other worker involved in the exhibition project. These people are responsible for creating, designing and developing the narrative to guide the exhibition and display. The other ‘people’ involved in the exhibition are artists when their artworks are selected to be displayed. The lenders' figure is also essential as part of the ‘people’ connected through the exhibition. The lenders are the current owners of the objects, however, they are not always a person, they can be an institution. The public that visits the exhibition is part of these connections. The visitors are the ones exposed to the narrative of the exhibition.

Figure 1. Important variables to take into consideration when studying exhibitions.

The other element are the objects, they are the visual part of the narrative. Objects connect artists and lenders with the exhibition organisers, the visitors, and the textual material. The textual material of the exhibition is the support for the visual part. One of

the essential pieces of the exhibition is textual: the title. The title is the linguistic representation of the narratives and ideas that orchestrate the exhibition. Furthermore, the text is part of the exhibition space in labels or descriptive information on the walls and part of an official publication, the exhibition catalogue. These catalogues materialise all the research, concepts and ideas developed for the exhibition.

In this study, I chose to use network analysis to visualise these invisible connections generated by exhibitions. Additionally, network analysis provides measures to analyse and understand the dynamics within the exhibition connections.

Network analysis is the study of the relations between different entities. Scholarly publications have used network analysis to study and visualise human social interactions. These interactions result in the creation of communities, countries, and significant and long-lasting elements of humanity, such as culture. Network analysis has been one of the methods to study cultural interactions on a big scale (Schich et al., 2014). In our case. exhibition entities are connected through the event, not through people, in other words, visitors and artists do not have to meet in person to generate a relationship between them, but when visitors see the artists' objects displayed in an exhibition, a connection is created, generating a cultural network. Cultural networks are a type of network where the connection between entities is mediated by cultural objects (Suarez et al., 2015; Suarez et al., 2011).

From all the diverse entities that participate in an exhibition, this study focuses only on connections between artists. For this thesis, the conceptual model of the network uses exhibitions as the cultural object that links entities together, in this case, artists [Fig. 2]. These artists do not have to be coetaneous, and sometimes they have never even seen the cultural production of the others, e.g. Velázquez is not a contemporary of Goya, however, they are frequently exhibited together. The type of relationship between artists is one of co-occurrence, i.e. two or more artists that are exhibited within the same exhibition, generating a "co-exhibition network" (Fraiberger et al., 2018; Papenbrock & Scharloth, 2011). In co-exhibition networks, the nodes represent the exhibited artists. The nodes are linked to each other if they are displayed in the same exhibition. The weight of the edges

or links is based on the number of times they are exhibited together, and it is visible by the thickness of the lines between the nodes.

Figure 2. Conceptual graph model for co-exhibition networks. Artist A has a connection to artists B mediated by the exhibition as the cultural event.

The connections of the artists created through an exhibition are human-made, which means a third party, the exhibition organisers, creates these connections when selected artists are displayed in the exhibition. This is why it is interesting to analyse exhibitions as cultural phenomena, because the generated connections are purposely made and mirror the interests of the organisers, which can be a committee, a curator or an institution. Moreover, this cultural phenomenon happens in a very specific context, a brief period of time and is held physically in an institution in a determined country, and a specific society sees it.

2.3.2 Data preparation, analysis and visualisations

The other important pillar of this project, besides building and sharing a FAIR dataset, is the reproducibility of the experiments. For that purpose, all the software used in this research to process, analyse, and visualise the data are open-source. To clean, enrich the dataset and prepare the data for the graph, this project has processed all the data using Python. As a researcher part of the computational humanities community, I have also created Jupyter notebooks with a detailed explanation of each steps, in Spanish and English, not only for committing to the goal of reproducibility of this experiment, but also for other researchers to use them with their own data [Fig. 3].

```
#Eliminar algunas columnas. Delete some columns
df25_1_Artists = df25_1_Artists[['id_expo','value']]
#Separar en una misma columna números de letras. Separate in the same column numbers and letters.
value = list(df25_1_Artists['value'])
id_artist = [x.split(':')[0] for x in value] #number
artist_name = [x.split(':')[1] for x in value] #name
```

```
#Generar dos columnas diferentes con números y nombres. Generate two different columns with names and numbers.
df25_1_Artists['id_artist'] = id_artist
df25_1_Artists['artist_name'] = artist_name
df25_1_Artists = df25_1_Artists[["id_expo", "id_artist","artist_name"]]
```

Figure 3. Example of a section in one of the Jupyter Notebook created to analyse the data and it is openly shared.

Each notebook correspond with one of the steps of the process of cleaning and preparing the data to create a graph. The graph visualisation was created with Gephi. Gephi is an open-source network analysis and visualisation software. However, one of the handicaps of this software is the non reproducibility of the same visual image, which means that even though the data imputed is the exactly the same, and even if the same network layouts are applied do not ensure that the shape of the network would be exactly the same, since it is randomised every time. The reproducibility with Gephi comes with the statistical analysis that they are the same. Moreover, the results of this statistical analysis are attached in the appendix section of this dissertation as tables. The rest of the documents, regarding the Jupyter Notebooks and the final dataset are openly accessible in GitHub.

Chapter 3

3 The Concept of Spanish Art. A Literature Review

3.1 Spanish Art and Exhibitions Studies

There is no unique concept of Spanish art; in other words, Spanish art has not been officially defined by any kind of overarching artistic characteristics or artists. However, the continuous association perpetuated over time, where specific names constantly exemplify the Spanish School or Spanish art, contributes to a global visual image of Spanish art. Bartolomé Esteban Murillo, Diego de Velázquez, Francisco de Zurbarán, José de Ribera, followed afterwards by Francisco de Goya and el Greco, are the essential names in any art collection presumed to be labelled Spanish art until nowadays (Portús, 2012; Calvo Serraller, 2013; Gaya Nuño, 1940; Glendinning et al., 2010). This canonical view of Spain showcased an artistic concept represented primarily by the Old Masters. Artists who were active in the sixteenth and seventeenth centuries, with the exception of Goya. This canonical concept of Spanish art was conformed to and settled over the nineteenth century and until today, as mentioned by the examples of different exhibitions in the last few years. Even though the narratives add new layers of complexity to these concepts, Spanish art is mostly still continuously related to them. This period also saw the promotion and consolidation of artistic terms, such as artistic schools (Baetens & Lyna, 2019). This concept of Spanish art had a posterior impact, having an influence over decades in the approaches to collecting art, in the collection of art institutions, art critique, and historiography. How was this concept of Spanish art based on the Old Masters forged? To answer this question, there are two aspects to take into consideration. The first one regards the geographical focus of this artistic construction. In this research, I am exploring the construction of the concept of Spanish art by the Western world, and for that, I want to go back to the eighteenth century when the first art pieces of Murillo were sold abroad.

The *Murillo mania* of the eighteenth century (Kent, 2020) prepared the international artistic arena to absorb the artworks of other contemporary Spanish Old Masters, such as

the previously mentioned Velázquez or Zurbarán (Braham, 1981; Tinterow & Lacambre, 2003; Portús, 2012; Giménez & Helfenstein, 2022). Hence, the canonical concept of Spanish art outlined from the beginning of the nineteenth century drafted a view based on religious art, representations of biblical scenes, virgins and saints. Apart from religious art, portraits of the Spanish monarchy and royalty were also part of this concept. The Baroque style led this canonical view, followed closely by the Renaissance and the late Gothic. Even though the Old Masters were the most popular artists with a high impact on the Western international art market during the nineteenth century (Tinterow & Lacambre, 2003; Roglan, 2016; Kagan, 2019), the concept of Spanish art built in this time included contemporary artists such as Goya.

Francisco de Goya was one of the nineteenth-century painters that aroused considerable interest abroad. Goya's impact was based on his artworks' social themes and versatile style (Gil Salinas, 1996). Goya depicted in his paintings and engravings the transition of his society in the Peninsula War and a critique of the political and social Spanish context during the first decades of the nineteenth century. The realistic representation of society followed the European artistic tendency during the nineteenth century of exploring and criticising the socio-political context of that time, as in the case of painters such as Jaques Louis David (Tomlison, 1992). Goya's engravings and paintings rapidly found their place in all the major Spanish collections, thus firmly establishing Goya as an integral figure in the conception of Spanish art during that period. However, not only were contemporary artists added to this traditional concept of Spanish art, el Greco is an example of a painter closer in time to the Old Masters but a big unknown until that time.

El Greco, Domenikos Theotokopoulos, was a Greek artist who developed most of his artistic production in Spain over the seventeenth century. Over the first part of the nineteenth century, el Greco was not exhibited as part of the Spanish Old Masters in Spain and abroad. The problem surrounding the Greek painter and his transcendence in Spanish art history is based on historiography and how art historians did not consider or value his art, relegating him to anonymity. For Instance, Antonio Palomino, in his "El Museo Pictorico y Escala Óptica" published in 1715 described the *maniera* of el Greco as petulant or ridiculous:

> *Pero él viendo, que sus pinturas se equivocaban con las de Tiziano, trató de mudar de manera, con tal extravagancia, que llegó a hacer despreciable y ridícula su pintura, así en lo descoyuntado del dibujo como en el desabrido del color.*

The historical context previously mentioned, such as the movement of Spanish artworks abroad or the popularisation of Spain as travellers preferred destiny, benefited from unveiling the figure of el Greco in the second half of the nineteenth century (López Yarto, 2015). During the second half of the nineteenth century and the first decades of the twentieth century, el Greco became crucially in demand within Spain and abroad (Kagan, 2019; Portús, 2012; López Yarto, 2015). Thus, the Greek painter was included promptly as part of the canonical concept analysed here. Thereby, in 1902, the Museo del Prado organised the first solo exhibition of el Greco (nationally as well as internationally). The prologue of the catalogue, written by Salvador Viniegra, deputy director and principal conservator of paintings at the museum, emphasised the importance of the figure of El Greco for the concept of Spanish art. He also acknowledged the historical banishment of the Greek painter and his artworks from the narrative of seventeenth-century art history of Spain. However, aside from increasing his value and positioning el Greco as one of the greatest Spanish painters, this catalogue exposes the lights and shadows of the popularisation of Spanish art abroad. The catalogue of the artist's first solo exhibition adds a caveat about how the popularisation of the Greek painter generated the sudden appearance of artworks attributed to him or his workshop. As part of this caveat, the museum reiterated that the fact that these pieces were exhibited there did not mean that the museum endorsed their authenticity. The truth is that over the nineteenth century, a considerable number of paintings that were sold, especially Old Masters, were also forged (Briefel, 2018).

This concept of Spanish art, based on the Old Masters, crystallised over the nineteenth century, and while new artists have emerged during this time, the only ones included within this narrative were Goya and el Greco. However, as private art collections started to grow and new art institutions (public and private) settled down the variety of concepts of Spanish art grew.

Over the last decades of the nineteenth century, contemporary Spanish artists increased their presence in the art market and collections abroad. Even though the concept of Spanish art based on Old Masters, el Greco, and Goya was still very popular, contemporary artists such as Joaquin Sorolla or Federico Madrazo y Kuntz found their space in the international art market. In that regard, the interest in Spanish art of art institutions, galleries, and art collectors in the United States played a key role. Even though there was still an interest in Spanish Old Masters, as is demonstrated in the exhibition organised by other New York galleries such as the Elrich Galleries, what is being sold over this time is not as much Renaissance and Baroque Spanish painters as it was nineteenth-century painters. In this artistic arena, private collectors played a significant role in integrating nineteenth-century painters into the concept of Spanish art that would be displayed in exhibitions. Figures like Johnson and Widener, the Havemeyers, and Frick, among others, curated their private collections and galleries, engaging with contemporary Spanish art at the same time as with painters such as Murillo and Velázquez (Reist, 2012).

Evidence of this shift in taste is evident in the private collections that were subsequently transformed into art institutions or contributed artworks to exhibitions. In the United States, one of the institutions that contributed to consolidating a more updated concept of Spanish art, not restricted to the Spanish Old Masters, was the Hispanic Society of America in New York. The Hispanic Society of America was funded by the American philanthropist and Hispanist Archer Milton Huntington, and one of the ultimate goals of the institution was to exhibit his private art collection (Kagan 2019; Gaya Nuño, 1963).

One of Huntington's objectives when creating his collection was to build a comprehensive Spanish art collection with a representation of the principal artistic periods and Spanish national schools (Codding, 2019). The Hispanic Society collection included artists such as Goya, Velázquez, and Zurbarán, but the collection still focused on contemporary Spanish artists such as Raimundo Madrazo, Ignacio Pinazo, Ramón Casas, López Mezquita, Hermenegildo Anglada Camarasa or Joaquín Sorolla. In 1909, the Hispanic Society organised the first solo exhibitions of Sorolla in the United States. The impact of Huntington's art collection on the construction of the concept(s) of

Spanish art is significant since it was one of the collectors and, later on, institutions that exposed the American art market, collectors, and the general public to contemporary Spanish artists.

Huntington added the label “Hispanic art” to an art collection that included not only Old Masters but also contemporary painters, mainly nineteenth-century painters. The concept of Spanish art displayed in the permanent collection and through the temporary exhibitions of this American institution corresponds to a representation of living artists who were actively painting. This concept of Spanish art goes beyond the traditional Old Masters and still has a big representation of them.

As the analysis of the concept of Spanish Art dives into the twentieth century and the emergence of the avant-garde, critic highlights new Spanish artists. Spanish artists such as Joan Miró, Juan Gris, Salvador Dalí, and Pablo Ruiz Picasso achieved international fame (Gudiol, 1964). However, due to the political upheaval in Spain with the dictatorship of Primo de Rivera (1923 - 1930) and the Civil War (1936 -1939), most of these artists resided abroad. Artists like Pablo Picasso spent part of his adult life in France, where he created most of his cubist artefacts. Because of this, it is customary to see Picasso labelled in exhibitions as a French painter instead of a Spanish one. For instance, in the exhibition, “European Paintings From Carnegie”, organised by The Art Institute of Chicago in 1931, Pablo Picasso appeared in the section of French Painters and not the one of Spanish artists. The international popularisation of new generations of artists and the appearance of new artistic movements have been changing the concept in order to fit this broader diversity. However, in historiography, the concept of Spanish art did not fully include these new generations of Spanish aritsts (Giménez & Helfenstein, 2022; Portús, 2012).

But how was this concept of Spanish art built? There are many factors, as we saw previously, such as the availability of pieces, the art market, and, subsequently, collectors and art institutions, which take an important role. However, there is an important variable to take into consideration: historiography. Spanish art has been extensively studied in academic scholarship both within Spain and abroad. However, there is a notable scarcity

of texts explicitly dedicated to Spanish art or Spanish artists, particularly those written by the artists themselves. For instance, the painter Pacheco is known for his studies and publications on painting techniques, materials, and painters. One of his most famous and influential works is "El Arte de la Pintura," published in 1649.

Historiography shapes artistic discourses through text, often assigning importance to certain artists over others. The collection of artists' names and their artistic objects legitimate them a place in history. However, historiography has not focused on conceptualising what Spanish art is. The process of selecting representative artists of an artistic style, period, or nation comes from the continuous explanation and analysis of the art and artists of the time. This involves choosing certain artists to be studied and using their work as examples to support various theories. One of the first books to consolidate a compendium of artists in Spain is the book of Antonio Palomino, “Museo pictórico y escala óptica”, published in Madrid between 1715. Palomino gathered information for painters and sculptors before and during this time. In 1800, Juan Agustín Ceán Bezmúdez published the dictionary "Diccionario histórico de los más ilustres profesores de las Bellas Artes en España", which include information of Spanish artists up to date. Both of these publications function more as dictionaries collecting information about artists instead of elaborating a central theme, such as a more theoretical art theory. However, the construction of artistic concepts does not always follow this specific format. Much of the artistic historiography consists of discourses focusing on particular periods of time, individual artists, or artistic styles. When historiographical publications do construct a discourse around a specific artistic style, they often highlight various artists as a way of illustrating their theories. Naturally, this type of publication results in a curated concept of Spanish art with a shorter list of artists and artistic objects mentioned.

For example, when the art historian Manuel Bartolomé Cossío published a revision of the figure of el Greco in 1908, proclaiming him one of the essential artists of Spanish art by making a revision of his art production and aesthetic and the similarities and differences with his contemporary peers. This revision, together with the solo exhibition mentioned before, are just two examples of how historiography and exhibition contributed to repositioning el Greco. Another example of historiography of Spanish art is the art

historian Juan Antonio Gaya Nuño, who authored numerous books on Spanish art, such as "Historia del arte español" in 1940 and "El arte español en sus estilos y formas" in 1949. These studies provided a wider overview of the evolution of Spanish art over the yeast than a formulation of a theory about a unique concept of Spanish art. However, historiography indirectly consolidates concepts without having to actually theorise about the concept of Spanish art, but by giving examples of some aesthetic characteristics of specific artists instead of others, comparing some artists with others. As Spanish art gained popularity throughout the nineteenth century, art historians began to analyse, study, and create discourse about Spanish art and its most representative artists.

By the end of the twentieth century, scholarly discourses concerning Spanish art remained robust, with several predominant approaches emerging among researchers, particularly in the examination of Spanish art, with a particular emphasis on the nineteenth century. What was of primary interest in this research was the construction of the concept of Spanish art, and many researchers have pointed to the nineteenth century as an inflexion point for Spanish art and its diffusion in the Western world (Hopkins, 2020; Fernández García, 2019; Lundström 2018; Calvo Serraller, 2013 among many others that are part of this literature review). Therefore, I focus on this socio-cultural context during the nineteenth century and how it was a critical moment for the concept of Spanish art to be constructed abroad, selecting the nineteenth century as the catalyst moment.

It was not until the 90s and the first decades of the twenty-first century, that art historians started to analyse the creation of this traditional encapsulated concept of Spanish art based on the Old Masters, and the inclusion of few artists over the years, as Goya or el Greco. Art historians such as Javier Portús and Francisco Calvo Serraller have theorised about the creation and consolidation of Spanish art from different perspectives. This dissertation follows these research lines and aims to contribute to their studies. “El concepto de pintura española: historia de un problema”, published by Javier Portús in 2012. The publication, which also highlights the nineteenth century as an essential moment, covers the historical complexities surrounding the consolidation of an artistic concept. It critiques the persistence of the notion of Spanish art predominantly based on

Old Masters and Renaissance and Baroque art, highlighting its continued presence in museum collections. “La invención del arte Español: de el Greco a Picasso” published in 2013. Calvo Serraller follows the same lines as the one Portús outlining the creation of the concept of Spanish art with a slightly more emphasis on the avant-garde and also highlighting the nineteenth century as the moment in which the conceptualisation of Spanish art from a foreign gaze started to be built. Moreover, the author includes in his study a section devoted to the figure of Picasso and his inclusion in this traditional concept of Spanish art. This repositioning of Picasso through the years is not a theorical framework exclusively studied and developed by Calvo Serraller; Spanish art historians have been making connections between Picasso and a wide range of Spanish artists through different scholarly publications. However, this is not the only mechanism that contributed to repositioning artists and consolidating different concepts of Spanish art; the art market, museum collections, and exhibitions are also different facets to take into consideration when exploring the creation of the concept. Continuing the example of Picasso, exhibitions such as the previously mentioned "El Greco to Picasso" organised by Kunstmuseum in Basel in 2022 (Giménez & Helfenstein, 2022), “De el Greco a Picasso el Tiempo la verdad y la historia”, held in the Guggenheim in Bilbao in 2006 (Giménez & Calvo Serraller, 2006), or “El retrato español. Del Greco a Picasso” by the Museo del Prado in 2004, are just examples on how historiography and exhibitions narratives parallel work in similar topics. My work expands upon Portús and Calvo Serraller's approach, adding another layer of complexity to their studies analysing what are the concepts of Spanish art build beyond historiography, in exhibitions.

When discussing particular artists, it invariably involves the legitimisation of certain figures within narratives. Renowned artists like Velázquez, Murillo, Goya, and el Greco have been the subject of countless scholarly papers, books, and studies, often examining their lives and artistic output from various perspectives (Vincent-Cassy, 2022; Valdivieso Rodrigo, 2016; Priem, 2009; Tomlinson, 1992; Gil Salinas, 1996; Pérez Sánchez, 1991; Harrys et al., 1980, among many others). Many scholarly publications focus on iconography, dissecting specific paintings, while others offer broader insights into the artists’ careers. This section also includes scholarly publications that provide an overview of Spanish art in general, as well as, those focusing on specific types of Spanish art or

artistic styles, often featuring a curated selection of artists as examples (Faxedas Brujats, 2018; Storm, 2016; Marías, 2009; Hagen, 1948; Gaya Nuño, 1966; Pompey Salgueiro, 1940, these are just a few examples, but there are numerous other publications that adopt a similar approach to the study of Spanish art). However, a recurring issue with such scholarly publications is their tendency to emphasise well-known artists systematically. Through the creation of monographs or by exemplifying specific theories, these publications often reinforce the prominence of particular artists while unintendedly marginalising others. While these resources are invaluable for understanding how historiography shapes and perpetuates artistic concepts, they present challenges for further study when not that well-known artists are overlooked or omitted from the historical narrative.

One of the most significant research in recent decades concerning the compilation of a critical dictionary of Spanish artists is the project "Spanish Artists from the Fourth to the Twentieth Century: A Critical Dictionary." This initiative was launched by The Frick Collection in New York, building upon a preliminary database established between 1993 and 1996 (https://research.frick.org/spanish). This project mapped almost 5,000 Spanish artists from more than 200 bibliographical records published until 1990.

The analysis of historiography and its contributors form a substantial part of Spanish art scholarship. Many studies rely on the writings of art historians to understand the evolution of Spanish art discourse over time. Scholars analyse how historiography has become integral to comprehensive studies (García López, 2014). Additionally, there is a critical exploration of specific historiographers' descriptions of Spanish art or artists, aiming to uncover overlooked aspects or evaluate the structure and selection of information (Lopera, 1987). This critical approach studies catalogues, dictionaries, or any other type of publications, analysing their perspectives on Spain and Spanish art while contextualising the publications and the authors to uncover any biases in shaping these concepts of Spanish art (Ortega Cantero, 2002; Crespo Delgado, 2008; Pajarín Domínguez, 2020; Bermejo Tirado & Mañas Romero, 2012). Furthermore, this examination of art historical writings also analyses foreign publications about Spain, which leads to the next highlighted theme (Gilbert, 1945; Shaw, 2008; Bolufer, 2016).

This other approach involves studying Spanish art from a broader perspective, examining how the concept of Spanish art was solidified and identifying critical nuances crucial to its study. The studies focus on writings by foreigners, such as travellers, connoisseurs or historians, about Spanish art or Spanish culture, where they promoted this romantic view of a country anchored in the past that was reinforced visually by the Orientalist painters (González Moreno & González Moreno, 2010; Coenen, 2013; Gifra-Adroher, 2000; Lundström, 2007; Tinterow & Lacambre, 2003). Moreover, this approach also includes scholarly publications that analyse, in general, the growing interest in Spanish art over time (Cabañas Bravo, 2003; Roglan, 2016; Glendinning, 1989; Tomlinson, 1996, among many others). While the nineteenth century is often highlighted as the peak moment in the intersection of Spanish art with the broader Western context, certain scholarly publications identify the eighteenth century as the cradle of this relationship (Kent, 2020; Glendinning et al., 2010; Japón, 2018). However, most of the studies about the impact and incursion of Spanish art abroad during the nineteenth century highlight the Peninsula War as the trigger to the interest of Spanish art abroad (Coletes Laspra, 2011; Valdivieso González, 2009; Campos y Fernández Sevilla, 2017; Jenkins, 2007; Redondo Cantera, 1992). The majority of Spanish artworks that were displaced outside of Spain during the war became integrated into the growing art market circuit of the nineteenth century. Significant collections of Spanish art amassed during this period by French high military officials or royalty were subsequently auctioned off in later years.

To better understand the impact of the movement of Spanish art within Spain and abroad during the nineteenth century, one essential aspect to study is the art market. The study of the art market not only showcases where these objects were, but also collectors, collections, and institutions. This facet of scholarship takes various angles, investigating specific time periods and locations within the art market and understanding the dynamics of selling Spanish art (Powell & Macartney, 2019; García Martínez, 2018; Jensen, 1988; Codding, 2018; Cowan, 2006). Research focuses on the strategies employed by private collectors in building their collections and acquiring objects (Reist & Colomer, 2012; Martínez Plaza, 2021; Avery-Quash & Huemer, 2019; Kagan, 2019; Vigara Zafra, 2018; Docherty, 1999; Brown, 1995, among many others). The interest in contextualising this research alongside the construction of artistic concepts is due to the impact that private

collections have in the institutionalisation of artistic concepts through the creation of museums and their permanent collections, but also when lending objects for exhibitions. As mentioned before, the art market during the early nineteenth century configurated a concept of Spanish art based on the Spanish Old Masters. Adding to it, the desamortizaciones put into circulation artistic objects from before the nineteenth century, promoting even more this view of Spanish art based on before nineteenth century art. By the end of the nineteenth century, the art market started to absorb contemporary Spanish painters such as Sorolla.

However, a common issue in historiography, the art market, and exhibitions that this research references and takes into consideration is the normalised and systematic omission of certain artists, particularly women, for example when compiling information of artist, or choosing examples to support an artistic theory (Diego Otero, 1987; Jansen, 1989; Nochlin, 1988; Parker & Pollock, 1981). In order to contextualise this study and obtain a comprehensive understanding of the nineteenth century, it is crucial to acknowledge peripheral narratives that may not align with the main discourses (Bezari & Olivera, 2023; Cruz de Carlos Varona, 2019; Rodrigo Villena, 2018; Muñoz López, 2009). Therefore, this research also incorporates studies that offer new perspectives and research questions, particularly those related to women as both artists and collectors (Lomba Serrano, 2023; Muñoz Sanz-Agero, 2023; Spies-Gans, 2022; Gaitan Salinas & Castro, 2019; Eczema Gil, 2019). These studies not only add another layer of complexity in comprehending the socio-cultural context of the period but also shed light on the challenges women faced in their position and professionalisation within the art sphere (Paz & Geerdink, 2018; Pérez Martín, 2017; Hadjiafxendi & Zakreski, 2016; Val Cubero, 2013).

Following a thorough analysis and contextualisation of the multiple nuances conditioning the formation of the concept of Spanish art during the nineteenth century, the subsequent step was to select the object of study. For this thesis, I opted to examine temporary art exhibitions as cultural phenomena. Exhibitions are ephemeral artistic events where numerous local, international, and multicultural agents, such as artists, artworks, curators, and cultural institutions intersect (Greenberg, 2019; Marincola, 2006). All these agents

are coordinated within a narrative or discourse, in other words, these agents are coordinated within an idea that orchestrates the exhibition. These ephemeral cultural events could not be replicated at different points in time, as the public or the socio-cultural context surrounding them will never be the same. The richness of the study of exhibitions relates to their power to disseminate, document, and promote institutional narratives, while these cultural events are created to communicate and hold them to the world (Baiao et al., 2019). This study approaches exhibitions inspired by Bourdieu's (1985) social-cultural theories, where he defines the field of cultural production as a holistic perspective of the hierarchy of social powers involved and related to material production. Exhibitions are the material production of their time, but they are also symbolic production that has value to society beyond the physical event. This value is transmitted to the society that consumes/visits the exhibition.

The study of exhibitions as a product with the intention of understanding cultural phenomena is popular within scholarly publications. For instance, studies analysed exhibitions in order to understand their influence on a country's national identity (Boone, 2015), to understand the relationship between painters (Cabañas Bravo & Murga Castro, 2015), and to trace the career of painters (Illán, 2020). Exhibitions are designed and displayed in a specific socio-political context, which means that the study of exhibitions has been linked to the study of the cultural and political ecosystem (Wulf, 2015; László, 2018; Pérez Segura, 2003; Dhaenens 2019). These studies focus on specific exhibitions, such as the World Expos or the Salons de París. Related to Spanish art and the nineteenth century, Kagan (2019) and Boone (2019) have previously analysed exhibitions to comprehend the context of taste and the positioning of Spanish art within the United States. Both scholarly publications focus on significant exhibitions, such as the universal or the centennial exhibitions, that gathered more artists and also more public for being a very well-recognised event within the society. The exhibitions that this thesis focuses on are temporary exhibitions that are regularly part of the program of art institutions, they can be bigger or smaller depending on the event per se, but also of the type of cultural institution.

Exhibitions, as a subject of study, offer a multitude of diverse elements, encompassing organisers, displayed objects, and participating artists. What makes exhibitions particularly intriguing is their capacity to be examined as singular phenomena, given their rich informational content and profound impact. However, to identify patterns, changes, and evolutionary trends over time, it is imperative for the exhibition corpus to expand, necessitating a global approach. Hence, the methodology employed in this thesis focuses on macro-level analysis, applying computational methodologies to extract data from exhibitions.

3.2 Computational Methodologies and the Art History Field

The application of computational methodologies in the cultural field or art history field has been very connected since the 80s (Zweig, 2015). This connection makes sense, given that art historians, historians, and archaeologists have dedicated substantial portions of their studies to systematically gathering information about artists, painters, historical events, or findings in archaeological excavations. The relationship between art history and computational approaches is more organic than one might expect, despite the growing separation between science and humanities that became more pronounced towards the end of the twentieth century. Moreover, this data-driven perspective stems from the necessity to examine cultural phenomena from a macroscopic viewpoint, inspired by Moretti's notion of distant reading (2000; 2007) and Latour's concept of local and global approaches (2005). Utilising large datasets contributes to a deeper comprehension of patterns. The underlying idea is to gather numerous individual cases (micro or local approach) and analyse them collectively from a global or macroscopic perspective, aiming not to comprehend each case individually, but to understand them collectively as a whole.

Data-driven approaches in the humanities have been guided by diverse research inquiries and have manifested in various forms, united by the utilisation of cultural data, spanning from images to texts and encompassing many subfields within the humanities. This literature review focuses solely on studies within the field of art history, either due to the research questions posed or the objects of study examined. One of the fields that has

garnered considerable attention in terms of data-driven approaches is the art market. This is primarily due to the wealth of well-structured information available in sales catalogues (Fletcher et al., 2012; Van Ginhoven, 2019; Avery-Quash & Humer, 2019), as well as data pertaining to the tax files of art institutions (Shekhtman et al., 2023). Furthermore, scholarly publications have also delved into network analysis to elucidate potential trends related to artists, art schools, or art production across different historical periods (Lincoln, 2016; Suárez et al., 2013 & 2012). Additionally, the use of exhibition information has not been overlooked in this data-driven approach, with researchers employing a diverse array of methodologies ranging from network analysis (Braden & Teekens, 2020) to quantitative analysis (Spies-Gans, 2022; Greenberg, 2019).

These new approaches have evolved in recent years into a distinct subfield within Digital Humanities known as Digital Art History. But is Digital Art History a field *per se*? Despite computational methodologies and mathematical models aiding in the visualisation and understanding of trends and patterns, they also occasionally impede the emergence of new research questions. This aspect has been a focal point of critical scholarship on the subject, which identifies four primary issues with the use of computational methodologies applied to the art history field:

(1) The lack of new research questions arises from adhering to similar or more traditional ways of thinking, resulting in the repetition of existing research questions within the field, albeit amidst a larger volume of data (Drucker, 2013; Rodríguez Ortega, 2022 & 2019; Jaskot, 2019).

(2) Continuing with the exploration of research questions, another challenge arises in the realm of transdisciplinarity. This entails not just mastering coding, mathematical models, and a profound understanding of art history as an individual but also fostering collaboration among professionals from diverse fields. Such collaboration is essential to prevent oversimplified research questions or non-accurate conclusions within the field of art history stemming from a deficit in specialised knowledge.

(3) Similarly, another critique centres on the issue surrounding oversimplification and globalisation when analysing complex phenomena that might happen from studying large

volumes of data, where each individual piece of the puzzle is blurred within the macroscopic perspective (Love, 2019). Furthermore, the absence of contextualisation within the examination of a large number of events or diverse contexts can lead to a simplification and inaccurate analysis when applying preliminary conclusions extracted from the macro perspectives to specific contexts. Hence, feminist and queer studies emphasise the importance of considering intersectionality as a crucial aspect of research (Bordalejo & Risam, 2019).

(4) The issue is intertwined with the availability of sources. Not all the necessary sources for projects are digitised, and even if they are, the information may not be well-structured. Consequently, accessing complete and easily accessible data becomes challenging (Underwood, 2019). However, this challenge is not unique to digital approaches but is shared with traditional methods due to access to publications in various languages, often mediated through platforms like Google Scholar or other bibliographical repositories. Additionally, concerns arise about cultural or art historical sources related to bias. How can researchers propose new research questions when essential data, such as information about women, is lacking? How can research questions into intersectionality be addressed when data on aspects like race is absent? Moreover, researchers face the risk of perpetuating traditional perspectives if their study of the past relies on biased data from sources (D'ignazio & Klein, 2023).

(5) The generation of cultural data presents another challenge within this field. As mentioned earlier, not all information is digitised, and the process of digitisation and organising qualitative data into tabular datasets often occurs in various parts of the world, particularly in the global south, where this labour can be carried out at a lower cost (Le Ludec et al. 2023) or in university classes by undergrad or graduate students (Keralis, 2018). This situation creates a perception within Digital Humanities that the interpretation of information or data visualisation and the formulation of new theories based on those results are the only valuable aspects of research. However, this overlooks the crucial role of creating datasets and information, which can influence conclusions and results due to biases.

However, to end what seems to be a diatribe to Digital Art History, I wish to underscore the importance of embracing and studying the current landscape that we are living in within the humanities field. Computational humanities are not just about applying data-driven methodologies to the study of past events or objects but also about understanding new developments such as large language models and generative artificial intelligence and discerning the role of humanists in the twenty-first century. While this thesis does not focus into these issues, I strongly believe that it is important to advocate for a critical perspective without diminishing the importance of these new methodologies and contributions in the humanities field.

To conclude this literature review, I would like to emphasize that the research questions that vertebrate this research comes from traditional art history scholarship and aims to add another layer of complexity to the creation and consolidation of artistic concepts and exhibition dynamics when analysing exhibitions. The methodology proposed in this thesis, along with the open publication of not only the collected dataset but also the Jupyter notebooks, can be utilised by other similar corpora or even repurposed to pose new research questions. This research contributes to the study of the concept of Spanish art build in exhibitions during the nineteenth century and the twentieth century, contributing to these three main topics that I have covered in this literature review: historiography about the construction of concepts of Spanish art in the nineteenth century, the exhibition studies as a field and the use of computational methodologies, specifically, network analysis applied to the analysis of cultural phenomena.

Chapter 4

4 The Diversity of Concepts

Exhibition narratives involve research and design with visual and textual development. In the nineteenth century, exhibitions did not consistently adhere to thematic narratives, yet this did not diminish the intricate discourses they showcased. Nineteenth-century exhibitions served as a primary visual resource for the public to see artworks. Art historians, artists, collectors, the general public, and the upper-middle class only had the opportunity to see artistic objects if they were in museums, galleries, auction houses, or private collections. One of the few opportunities nineteenth-century visitors had to be visually exposed to artworks was through exhibitions and the permanent collection of museums and galleries, where sometimes these artistic objects that belonged to private collections and other institutions were displayed publicly.

When an art institution organises an exhibition, it crafts a narrative. Even if the exhibition lacks a theoretical research framework, the selection and curation of the artworks implicitly endorse a particular discourse about what is valuable and what visually represents a specific type of art. This thesis focuses on Spanish art, examining how institutions shape the perception of Spanish art through their exhibitions. These institutions provide tangible examples of what constitutes Spanish art by showcasing artworks from Spanish artists. We compiled a collection of exhibitions that featured Spanish art to analyse this phenomenon. This corpus includes monographic exhibitions focused exclusively on Spanish art as well as broader exhibitions that include works by Spanish artists. For instance, the Old Masters exhibition series at the Royal Academy of London features Spanish artists alongside their Flemish, Dutch, and Italian counterparts. Similarly, the annual exhibitions at The Art Institute of Chicago grouped artists and their artworks by nationality in their catalogues.

In the nineteenth century, a distinctive feature of some exhibitions was their display of a vast number of objects. These grand artistic events showcased works by hundreds of artists, but over time, the number of displayed artworks diminished. When, for example,

Spanish artists were featured in these large exhibitions, only a fraction of their works were included, as their artistic output was limited. This limitation was further compounded by the high demand for renowned Spanish artists like Bartolomé Murillo, Diego Velázquez, and Francisco Zurbarán. As noted earlier, Spanish artworks were scarce outside of private, religious, and secular collections.

Moreover, the international art market rarely had Spanish art pieces during the eighteenth century and the first decades of the nineteenth century, limiting access to them. Hence, when foreign institutions sought to include Spanish artists in their exhibitions in the nineteenth century, they often needed to showcase the works of less renowned artists. Exhibitions in the time frame studied are large events assembling a large number of artists. Even though the Spanish Old Masters were very popular during the nineteenth century, their art production was limited, and not all of it was available to be lent for a temporary exhibition. Therefore, exhibitions did not only display the Old Masters, but other Spanish artists contributed to showcase their art as Spanish art in Spain and abroad. However, the display of contemporary Spanish painters did not exempt exhibition dynamics to contribute to the crystallisation of a concept of Spanish art based on the Old Masters.

This chapter examines and maps the different concepts of Spanish art displayed in exhibitions. Were there other concepts or parallel narratives about Spanish art coexisting simultaneously? Which were these alternative conceptualisations? In pursuit of answers to these initial inquiries, I have refined the dataset to encompass Spanish artists exclusively. The preliminary step was determining criteria for categorising artists as "Spanish". Artists and their nationalities do not always align with their socio-cultural context. For example, complications arise when artists migrate to foreign countries during their childhood and develop their artistic production there, or in the case of nineteenth-century Spain, when artists were from the remaining territories overseas (colonies) of Spain. From 1800 to 1939, the period under study in this research, Spain still had Cuba and the Philipines as part of the Spanish overseas territories.

As part of the enrichment process of the dataset, I conducted a meticulous investigation focusing on bibliographic sources (such as artist dictionaries, books, scholarly publications and catalogues of exhibitions devoted to Spanish art), supplemented by reference to controlled vocabularies such as Wikidata and ULAN. This process categorised as “Spanish” artists born in Spain or other territories that were part of Spain at the moment of the exhibition. It also includes artists born in Spain who lived and worked primarily abroad, i.e. Pablo Ruiz Picasso. Moreover, not all the artists exhibited have been subjects of meticulous research, and for some, there is no information available in controlled vocabularies. In such cases, I relied on the information provided in the catalogues to determine whether they were Spanish. Consequently, after all the research, the resultant dataset comprises a roster of 1,186 artists classified as 'Spanish’. These 1,186 Spanish artists have been displayed at least once in the corpus of the exhibitions.

4.1 Understanding Exhibition Dynamics. The Centrality in Co-exhibition Networks

The centrality measure is one of the metrics used to understand the behaviours and dynamics of the actors in a network. Depending on their actors, nodes, and connections, edges, networks can be centralised[1] or decentralised[2]. In a centralised network, few nodes hold a high number of connections, giving these nodes a status of relevance or importance within the network (if we measure connections). A decentralised network

[1] In a centralised network information goes through one of the nodes / few nodes, creating a mediated communication between the rest of the nodes, which cannot contact to one another without an intermediary big node.

[2] In a decentralised network there are different hubs of connections with no big nodes that concentrate more of the connections but different groups with a more equal number of connections. In terms of information, the information is not always mediated by few nodes, but in decentralised network exists the possibility of connecting between one another.

does not have an importance ranking between the nodes based on the number of connections; all of them hold the same importance within the network.

In this thesis, and as explained in the methodology, the exhibition's network is based on a co-exhibition graph model. If we translate these connections in terms of centrality: a centralised network shows how some artists are exhibited with more artists than others but also in more exhibitions. If an artist is exhibited in a large exhibition, the number of connections for all artists displayed in that event is the same. For a node to have high centrality in a co-exhibition network, an artist must not only be featured in large exhibitions but also in many exhibitions. Art history has often highlighted certain artists, among others, elevating them as exemplars of a particular artistic style or period. Therefore, it is unsurprising that co-exhibition networks can be very centralised when analysing exhibition ecosystems.

The case of a decentralised model of a co-exhibition network would translate to more unified opportunities to be exhibited with different artists. In other words, artists would have been exhibited equally among each other. However, as art history has been constructed over the years, highlighting some artists above others makes it complicated and complex for this model to exist. This does not mean that all the co-exhibition networks are centralised ones; they are not one or the other model, there are nuances. The study of centrality measures, in other words how centralised or decentralised a network is, contributes to a better understanding of exhibitions' dynamics.

How does the analysis of a network's centrality translate into the creation of artistic concepts through exhibitions? The analysis of the centrality measures will retrieve artists that were exhibited with other, more important artists. A priori, a centralised network would lead to dynamics where few artists would be continuously exhibited in large exhibitions with many other artists. In contrast, others are exhibited with fewer artists (in smaller exhibitions or fewer exhibitions). A centralised co-exhibition network can also correspond to a scale-free network where only a few nodes hold most of the connections, and most of the nodes of the network have very few connections (Barabási, 2014).

A centralised network will likely perpetuate the type of hegemonic narratives that Art History has done. In a decentralised network, there are no prominent actors, creating a more equal and equitable artistic arena where all artists would have been exhibited the same number of times and with the same number of artists.

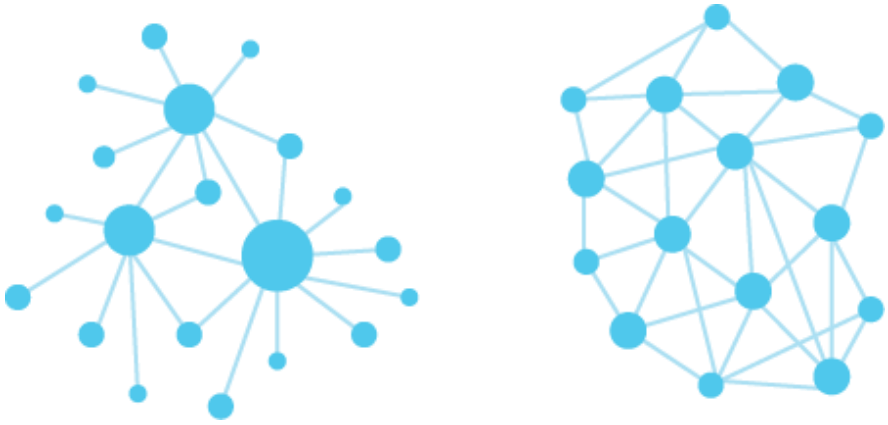

Figure 4. Centralised and decentralised network (from left to right).

The Spanish artists' network showcases a centralised model [Fig. 4]. However, it is not a dual option between centralised and decentralised, as I mentioned before, there are also nuances. Hence, the two measures of centrality analysed in this chapter are degree centrality and betweenness centrality, bringing to light how power dynamics in exhibition shape, rethink and perpetuate some narratives while parallelly drafting others.

4.1.1 Degree Centrality

The Spanish artists' network showcases a centralised model network. However, it is not a dual option between centralised and decentralised, there are also nuances. Hence, the two measures of centrality analysed in this chapter are degree centrality and betweenness centrality, bringing to light how power dynamics in exhibition shape, rethink and perpetuate some narratives while parallelly drafting others.

The degree centrality of a node is the number of direct connections with other nodes in the network (Metcalf & Casey, 2016; Golbeck, J, 2015), in this case, the number of times exhibited with different artists. If artists have a degree centrality score of 5, it means that it was exhibited with five different artists. The centrality degree does not quantify the

frequency of an artist's exhibitions with other artists but rather assesses the diversity of artists with whom the artist has shared exhibitions. For instance, if Velázquez were displayed in three exhibitions with Goya and in one exhibition with Murillo, both relations would have the same centrality degree score.

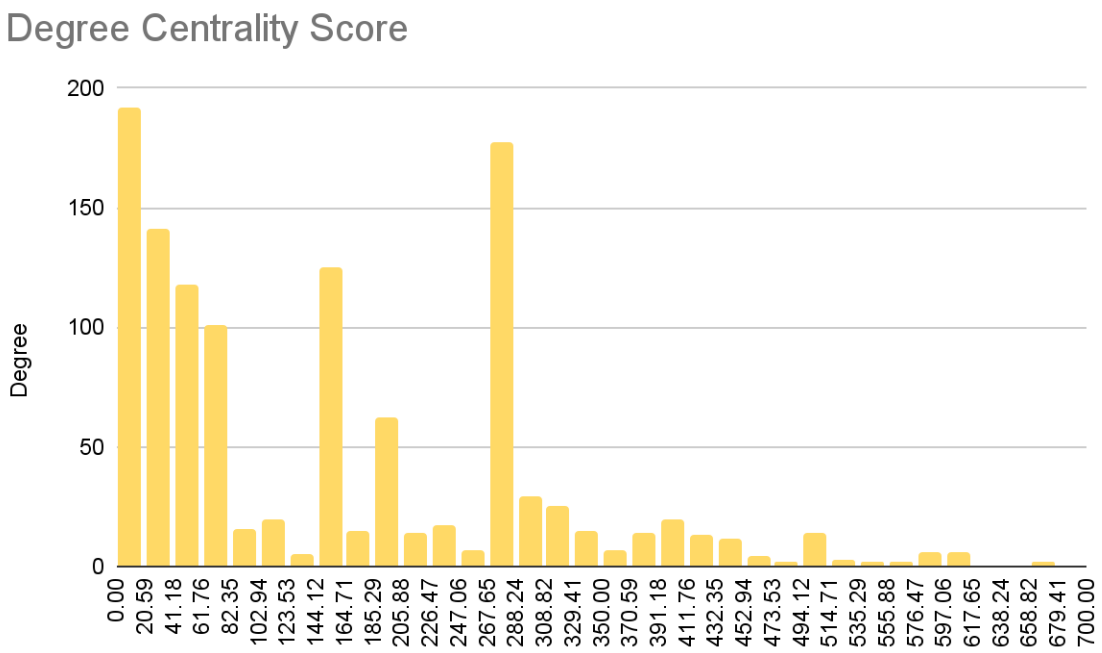

Figure 5. Degree centrality score of the Spanish artists of the network. Data analysed with Gephi.

A histogram of the degree centrality shows how only very few artists were the ones that were exhibited with a wide variety of artists; however, a big portion of them were exhibited with very few others. That can be read in different ways, the first option of analysis is that the artists with the highest score were exhibited repeatedly in different exhibitions, which gave them the opportunity to be exhibited with a wide range of artists. The second analysis is that these high-score artists participated in a few large exhibitions with hundreds of other artists. In the case of this network, the data reveal that these artists were not only part of big exhibitions such as Exposiciones Nacionales de Bellas Artes, but also that they were continuously shown across many different exhibits.

The graph also shows a high number of nodes with very similar degree centrality [Fig. 5], meaning that they were exhibited with the same number of artists. After a close reading of the exhibition corpus, the conclusion is that most of these artists were displayed in the Exposición Internacional de Bellas Artes in Madrid in 1892. In fact, some of these artists only appear once in this dataset and are in these exhibitions. This exemplifies how important exhibitions are as a hub of connections between artists.

If we focus on the section of the histogram that concentrates the biggest proportion of the exhibited artists, it is all under 100 connections. These artists were exhibited with less than 100 artists, contrasting drastically with the very few artists who have almost 700 connections. These less-connected artists were also part of exhibitions and contributed to showcasing Spanish art. However, as happens in historiography, the exhibition dynamics included them less frequently. Moreover, in this section of less-connected artists, they can also be non-identify artists / groups of artists described in the catalogues as: “Escuela espanola del siglo XVII” / “Spanish School seventeenth” or “Escuela de Jaume Ferrer” / “School of Jaume Ferrer”. That means that this very detailed descriptive name is less likely to appear again in another exhibition, for example, the same artwork can appear in other exhibitions under the name of the artists and not as part of a school.

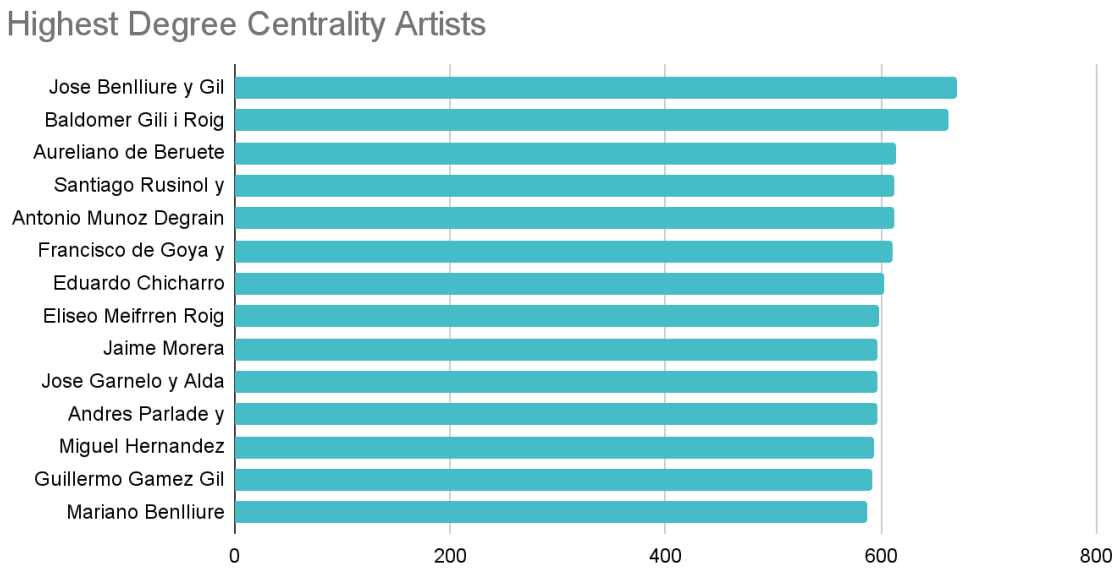

Figure 6. Name of the Spanish artists with the higher degree centrality score.

Who are these most connected artists? Does this correspond with the traditional concept of Spanish art, where artists like Velázquez, Murillo, and Goya were the representatives? In this network, the artists with the highest score in degree centrality are artists such as José Benlliure y Gil, Baldomer Gili i Roig or Aureliano de Beruete [Fig. 6], which means that the artists with more connections are nineteenth-century artists. However, they do not fit in the traditional view of Spanish art dominating in the nineteenth and twentieth centuries, where the Spanish Old Masters were highlighted. The degree centrality score of the traditionally highlighted Spanish artists is not low, but it is still not as high as the ones with the highest one, for instance, Velázquez score is 329, Murillo's 309, Zurbarán's 317, el Greco's 313, or Ribera's 312. Thus, the Spanish Old Masters were primarily exhibited with the same group of artists. In contrast, nineteenth-century artists were featured in a broader range of exhibitions with a more diverse set of peers. That means that since the very early stages in nineteenth century exhibitions, institutions worked towards crystallising hermetically a concept of Spanish art based on the Old Masters that did not mix with other contemporary Spanish artists. However, nineteenth century Spanish artists were exhibited with a wide range of other artists, giving ample opportunity for different concepts of Spanish art to develop. Therefore, the richness in which the different artistic trends and styles in Spain were flourished during the nineteenth century can be better captured in exhibition dynamics that display contemporary artists.

The degree centrality analysis showcases how this co-exhibition network of Spanish artists is a more centralised network. Regarding the concept's creation, the degree centrality analysis shows how the exhibition dynamics perpetuate the configuration of selected and closed artistic concepts where few artists are not widely connected with the rest.

4.1.2 Betweenness Centrality

In network theory, betweenness centrality describes the influence a node has over the flow of information within a network (see Neo4J reference). Nodes with high betweenness centrality connect different parts of the network (Hansen et al., 2020). These

nodes have a bridging function between clusters (groups of nodes highly connected among each other). In the case of a co-exhibition network, the higher score in betweenness centrality implies a higher number of clusters of artists an artist has been exhibited with. The reasons behind that depend on the exhibition dynamics of that time since artists can be exhibited with different groups of artists because they have a large artistic production on the market or in art collections, which facilitates the organiser institutions to get their artworks for the exhibitions. Adding to it, the popularity of artists during a period of time also can make them part of different exhibitions over time. Exhibitions are created by an institution, but they also respond to the socio-cultural context where they are exhibited. If an artist is popular at this specific moment, it is likely that this artist will be shown in an exhibition because it is what the public wants to see. There is another aspect that can explain a high score in betweenness centrality, and it is related to the versatility of the artists and how some artists can fit into different discourses proposed in exhibitions.

To understand and explain the high betweenness centrality of some of the nodes of the Spanish artists' network, this part of the chapter focuses on the versatility of artistic production of the artists.

The artist with the highest betweenness centrality score is Francisco de Goya y Lucientes (1746 - 1828), followed by Daniel Vázquez Díaz (1882 - 1969), Ángel Ferrant (1890 - 1961), and José Gutierrez Solana (1886 - 1945), Joan Miró (1893 - 1983) [Fig. 7]. Goya was an active painter at the end of the eighteenth century and the beginning of the nineteenth century. His art production, especially his engravings, was famous abroad while he was alive. One of his most famous artworks is "Los Caprichos" in 1799. This set of engravings had a robust international projection at that time. Nevertheless, his paintings were not included in important international exhibitions until he passed away in 1828 (Muller, 1996). British institutions such as the National Gallery or the British Museum did not own any Goya artworks until the middle of the nineteenth century (Glendinning, 1994; 1964).

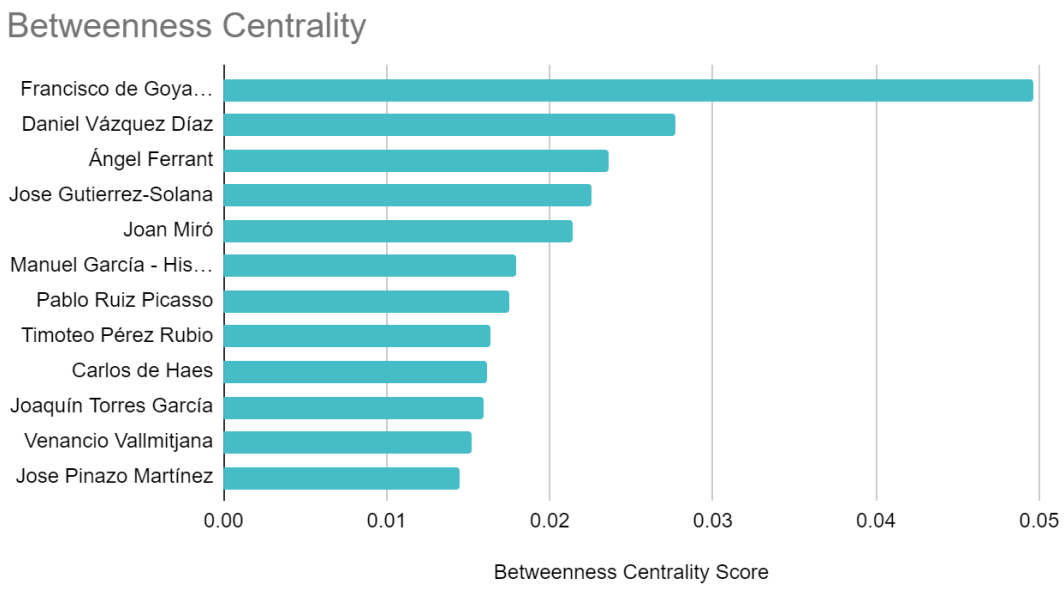

Figure 7. Artists with the highest betweenness centrality score in the Spanish artists graph. Data analysed with Gephi.

The versatility of Goya's artistic production helped it to be displayed with a wide range of artists. This versatility can be highlighted in two aspects. First, apart from the Spanish Old Masters, Goya was considered one of the most famous Spanish painters at the end of the nineteenth century. Secondly, the contemporaneity of the subjects depicted in his artworks aligned with what other artists were doing internationally, in other words, Goya's artworks had a social critic behind their paintings, which is something that artists such as Jacques-Louis David were doing at the same time. Thus, Goya was exhibited with other active nineteenth-century artists, but at the same time, the art critic and historiography included him as one of the greatest Spanish painters at the level of the Spanish Old Masters. Therefore, Goya was also exhibited with artists such as Velázquez or Murillo, even though their artistic production was not similar in the depicted subjects. Goya has been named a Spanish expressionist pioneer, making his artworks part of Avant-garde exhibitions (Bintaned Ara, 2017). Goya's high betweenness centrality derives from both his artistic production and its impact and the historiographical discourse that contextualises his persona with other consecrated Spanish artists. This discourse is translated and portrayed in exhibitions, offering the possibility to see Goya in

a wide diverse exhibition with different narratives and displayed with not only his contemporary peers but also with the Old Masters.

The case of Daniel Vázquez Díaz is similar to Goya's. The artistic production of Vázquez Díaz has been considered a reconciliation between the artistic tradition and avant-garde (Berruguete del Ojo, 2015; Lafuente Ferrari, 1983). The variety in his production made his artwork versatile enough to be displayed with diverse artists. Vázquez Díaz has been categorised as part of Noucentisme, a Spanish artistic style where classicism, symbolism, and modernism meet and merge into a more modern style of painting, but not to the extent of the Avant-garde, which was occurring all through Europe, The Noucentisme was a more modern artistic movement with two focuses, one in Madrid and the other in Barcelona. The fact that the artistic production of Vázquez Díaz was part of a movement that condensed different nineteenth-century artistic styles allowed him to be displayed in exhibitions with artists from different artistic styles. For example, Vázquez Díaz exhibited with Noucentisme artists such as Sunyer or D'ors (Berruguete del Ojo, 2015). Moreover, the Impressionist tints of his artworks positioned him in exhibitions with artists such as Sorolla or Gonzalo Bilbao.

Also, Vázquez Díaz's diligent participation in the Spanish annual national exhibitions influenced his position in the network. The Spanish annual national exhibition known as the Exposición Nacional de Bellas Artes" which took place every year between 1856 and 1968, exhibited a substantial number of Spanish artists. These events perfectly showcased the artistic production of active Spanish artists. However, some renowned artists, such as Picasso, Miró and Dalí, who were active during that time, did not participate (Arenas, 2012). These exhibitions showed a high number of artists and increased in size until the first decades of the twentieth century. These events provided artists with the opportunity to be exhibited with hundreds of Spanish painters in the same event. Regarding the current network study, the artists who participated in these exhibitions were co-exhibited with artists who have stronger connections with other artists or with artists from different artistic styles. Vázquez Díaz had been exhibited with artists from the Catalonian Noucentisme, with other impressionist Spanish painters, but also with a wide range of artists that were active at the same time as him with a wide variety of artistic styles. This

contributes to the idea that exhibition dynamics do not showcase one solo concept of Spanish art but multiple.

Ángel Ferrant is a Spanish Avant-garde sculptor related to Surrealism (Sisifo, 2010), yet he has also been exhibited with Noucentisme artists. His artistic production is also closely related to other artistic movements, such as the Avant-garde. Like Daniel Vázquez Díaz, Ferrant actively participated in the national exhibitions from Spain. Furthermore, he took part in the artistic scene in Catalonia, specifically in Barcelona, exhibiting in galleries such as Galería Syra (Doñate, 2009). Moreover, the surrealist influence of his paintings gave him strong connections with Avant-garde artists such as Dali and Picasso. Ferrant also had an international presence. Ferrant spent a year at the Akademie der Bildenden Künste Wien, in Austria, where he was in close contact with the artists part of the Vienna Secession (Cubero Ortega, 2009).

The versatility of Ferrant's artistic production and his national and international professional trajectory made him part of exhibitions with a wide range of Spanish artists such as "Modern Spanish Artists" in 1914, which was displayed in London and Brighton, where he was exhibited with Academicist, Impressionist, Modernist and Symbolist painters. This travelling exhibition showcased art from the end of the nineteenth century in Spain and well-known artists of that moment, such as Gonzalo Bilbao, Joaquín Sorolla, or Santiago Rusiñol. Ten years after this exhibition, Ferrant was part of the Sociedad de Artistas Ibéricos exhibitions in Madrid in 1925 and later in San Sebastian in 1931. The Sociedad de Artistas Ibéricos was an association of Spanish painters that positioned the avant-garde style in Spain. In these exhibitions, Ferrant was exhibited with Dalí, Miró and Maruja Mallo. Moreover, his consolidated career in Spain granted him a few monographic exhibitions in Madrid and Barcelona.

The case of José Gutierrez Solana aligns with Goya's. Like Goya, Gutierrez Solana was a painter but also an engraver, and most of his subjects had a social tint with a pessimistic and dark perspective (Box, 2020; Bozal, 1995). Gutierrez Solana focused on depicting current problems of the society of the moment, as other painters of his time did, such as Dario Regollos or Ignacio Zuloaga (Arroyo Fernández, 2010). The pessimistic point of

view and the depiction of sordid moments of his contemporary social context aligned their artworks to be exhibited with Goya or other contemporary painters like Timoteo Pérez Rubio. Moreover, his painting style leaned towards Expressionism (Sarriugarte, 2008), opening the possibility of being exhibited with avant-garde painters such as Picasso, Miró or Juan Gris.

Joan Miró has the fifth-highest betweenness centrality score in this network. The surrealist Catalonian painter had an international projection while he was actively painting. Miró's popularity increased drastically in Europe during the first decades of the twentieth century and later on in North America. His recognition in the international artistic arena made his artistic production part of many exhibitions with a wide variety of painters. This co-exhibition network reveals the position of Miró as an artist related to other Avant-garde painters with international recognition, such as Picasso or Dali. Furthermore, he has strong connections with other Catalonian Avant-garde and Nouvecentisme painters. The fact that Miró has extensive connections with other Catalonian painters contrasts directly with the idea of art critics and art historians who considered Picasso, Miró and Dali as non-Spanish artists (Calvo Serraller, 2013). Therefore, according to these theories, these artists should not belong to the concept of Spanish art. However, this network analysis has shown how Miró was not only exhibited with big international Avant-garde names but also with other Spanish painters, such as the Nouvecentist painter Eugenio d'Ors.

The betweenness centrality algorithm reveals in part the exhibition practices of that time. Essential artists for Spanish art historiography, such as Murillo, Velázquez, or Zurbarán, do not have a high betweenness centrality score, in other words, they were not exhibited with a diversity of artists. The Spanish Old Masters were not exhibited as much with other artists from different generations or artistic styles. Since the nineteenth century, exhibitions have showcased the Spanish Old Masters as a separate entity from other artists, contributing to the consolidation of this isolated traditional concept of Spanish art. The same happened in the case of nineteenth-century artists, for instance, Joaquín Sorolla, who was widely accepted by the international art institutions and the art market, but he was not as exhibited with a big diversity of artists. Nonetheless, the artists with a

high betweenness centrality score were exhibited in exhibitions with diverse artists and artistic movements. The display of figures such as Goya, Vázquez Díaz or Ferrant, with a diversity of artists, outlines the idea of how exhibitions were constructing broader concepts of Spanish Art than those based only on the Spanish Old Masters or a more Renaissance, Baroque and religious view of Spanish Art. To understand the drafted concepts, the subsequent analysis applied to this network is the modularity class algorithm, which will outline the different communities within the network.

4.2 Analysis of Communities in the Network

Community detection is one of the most applied measures in network theory. Community detection algorithms identify and highlight communities within a network. In social network studies, the term community names clusters of nodes. A cluster is a group of nodes that share strong or direct connections [Fig. 8].

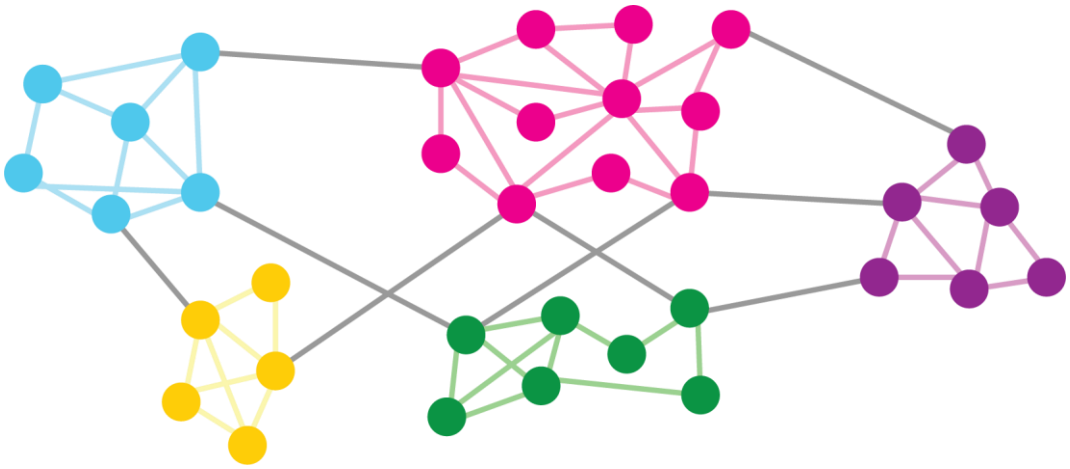

Figure 8. Example of community detection within a network.

These nodes have connections with more nodes in the network but are more connected to their group than the rest. In the case of co-exhibition networks, the connections between nodes are related to the number of times they are displayed together. If a set of nodes shares a high number of connections, it means that these nodes or artists were exhibited together repeatedly. The translation of this measure of community detection results in the creation, conformation, and perpetuation of artistic concepts, which is decisive for this

study. Suppose artists A, B and C were displayed together a high number of times. In that case, these artists have an invisible relation that grants value to each other and legitimises their position within the art history discourse. These artists would be connected by the narrative developed in the exhibitions but also more simple connections such as the sharing of similar topics depicted, the same artistic style or socio-historical context.

For example, during the nineteenth century, the Royal Academy of Arts in London organised annually an exhibition devoted to the Old Masters. These exhibitions were very popular, and as time went by, this British art institution included contemporary British artists in these events, displaying them together with the Old Masters. The show organised in 1883, “The Old Masters, and by Deceased Masters of the British School including a Special Selection from the Works of John Linell and Dante Gabriel Rosetti.” positioned two nineteenth-century British artists with other renowned artists, giving them a preponderant position, meaning that these British artists were as good as the Old Masters.

This thesis uses the modularity class algorithm from the software Gephi, to highlight the communities[3] in the Spanish artists' co-exhibition network. The modularity measures the density of connections of the nodes. In this co-exhibition network, the algorithm detected six communities at a 1.0 resolution [Fig. 9], identified within the graph visualisation by six different colours. Each detected community consists of clusters, i.e., nodes that share very strong connections, in other words, that were exhibited together on multiple occasions. The identified communities consist of large groups of artists. To discern the conceptualisation of Spanish art being developed by each community, the next metric to examine is the degree. These communities highlight the typical exhibition practices used when Spanish art was displayed. This analysis answers the question: Which artists were

[3] The term "community" here refers to groups or clusters of nodes that have strong connections with each other. When I mention communities in the following chapters, I refer to groups of nodes identified by the modularity class algorithm, and always in the context of network analysis, not in social or political terms. These communities of artists are algorithmically generated and often share common characteristics, but they do not necessarily align with the traditional social science or political science definitions of "community."

exhibited together most frequently? However, this does not mean that a specific concept of Spanish art is intentionally created by frequently pairing a few artists together. Rather, analysing the communities within co-exhibition networks provides a clearer understanding of exhibition dynamics, showing which artists were often exhibited together and how these patterns contribute to the formation of artistic concepts, particularly of Spanish art.

The most populous community, coloured in pink, encompasses 28.97% of the artists of the entire network. The artists with the most connections in this community are Bartolomé Esteban Murillo (1618-1682), Diego Velázquez (1599-1660), Francisco de Goya y Lucientes (1746-1828), José Ribera y Cucó, el Spagnoletto (1591-1652), Francisco Zurbarán (1598-1664), el Greco (1541-1614) and, Luis de Morales - Divino Morales (1510-1586). This community shows a conceptualisation of Spanish art based on what was and is known as Old Masters, as the most representative artists. This concept of Spanish art, based on the analysis of communities in a network of exhibitions, focuses mainly on religious paintings from Renaissance and Baroque artists. One series of exhibitions that supports this concept of Spanish art is the “Exhibition of the Works of the Old Masters”, an annual event that took place at the British Institutions and later at the Royal Academy of Arts in London during the nineteenth century. This community corresponds to a way of exhibiting Spanish Old Masters, that contributes to the consolidation of this traditional concept of Spanish art from el Greco to Goya, which remains in current museum collections (Calvo Seraller, 2013; Portús 2012; Glendinning et al, 2010).

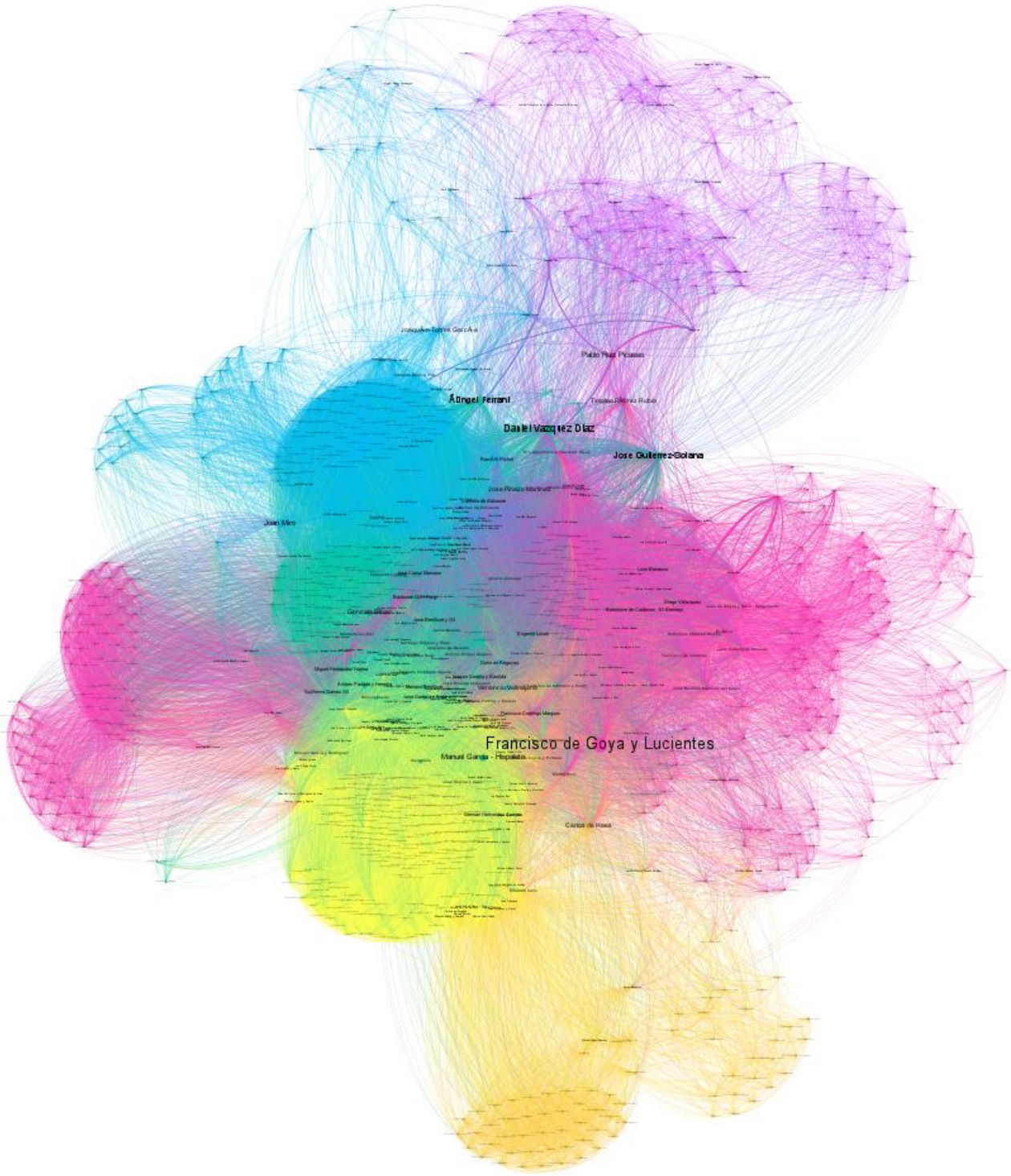

Figure 9. Spanish artists co-exhibition network (software: Gephi).

The second largest community encompasses 23,44% of nodes from the total network and is coloured in yellow. The artists with the most connections within this community are Mariano Fortuny y Marsal (1838 - 1874), Vicente López y Portaña (1772 - 1850), Eduardo Rosales Gallinas (1836 - 1873), Ignacio Leon y Escosura (1834 - 1901), Arcadio Mas y Fondevila (1852 - 1934) and, Nicolás Raurich (1871 - 1945). These artists were active from the mid-nineteenth century until the beginning of the twentieth century. This community showcases a concept of Spanish art framed in Academicist, Neoclassicist, and Romanticist art. This concept of Spanish art represents the nineteenth-century Spanish artistic context compared to the previous one. For example, Rosales' artworks are strongly influenced by Velázquez. Rosales even copied a few of Velázquez's artworks (Portús, 2012). This second most populated community do not focus as much on the Old Masters. However, these artists do not reflect a conceptualisation of Spanish art based on the Old Masters, but their artistic production is strongly shaped by their particular style or *maniera*.

The third community (coloured green) contains 15.29% of the network's nodes. The conceptualisation of Spanish art that the green community represents in the network involves a new generation of artists, not only the Spanish Old Masters. This community has Joaquín Sorolla Bastida (1863 - 1923), Daniel Vázquez Díaz (1882 - 1969), José Villegas Cordero (1844 - 1921), Eugenio Lucas (1817 -1870) and Gonzalo Bilbao (1870 - 1938) or Federico de Madrazo y Kuntz (1815 - 1894) as the most connected artists. Even though this way of exhibiting Spanish art can be very similar to the previous one, at least in terms of displaying nineteenth-century artists, the artists represented in this community can be described as Impressionist, Realist, and various other artistic styles related to the end of the nineteenth century. This concept moved further away from the religious genre and closer to the artistic movements that were popular in Europe in the second half of the nineteenth century.

The community coloured in blue, 15,29%, is in a shared third place as this community has an exact percentage of the entire network as the previous community; thus, the community has the same impact and influence on the network as the previous one. It is in this community where we find artists with more Avant-garde styles, such as Joan Miró

(1893 - 1983), Joaquim Sunyer (1874 - 1956), Darío Regoyos (1857 -1913), and Oleguer Junyent (1876 - 1956). This community left behind the Renaissance and Baroque painters and jumped on the new artistic movements of the twentieth century. However, the common characteristic among the artists of this community is not the Avant-garde style but the fact that most of them are from Catalonia. This community shows a concept of Spanish populated mainly by artists that belonged to artistic styles such as Impressionism, Noucentisme and even Avant-garde. It is important to highlight that Catalonia, specifically Barcelona, had a strong presence of art galleries over the nineteenth century and onwards (Rius Ulldemolins, 2012), which worked in favour of artists based in Catalonia to be exhibited there. Furthermore, this community has another interesting factor: the adscription of the artists to the artistic style Noucentisme.

The following community, in order of percentage, coloured in purple, contains 9.15% of the artists. The most connected artists within this community are Salvador Dalí (1904 - 1989), Antonio Rodríguez Luna (1910 - 1985), Benjamín Palencia (1894 - 1980), José Moreno Villa (1887 - 1955), Enrique Climent (1897 - 1980), Ángel Planells i Cruañas (1901 - 1989), and Maruja Mallo (1902 -1995). This community follows the previous one, showing a more modernist and up-to-date view of Spanish art. This is the first community where a woman, the surrealist painter Maruja Mallo, is part of the most connected nodes of the community. The concept of Spanish art drafted by this community has more artists who are representative of the avant-garde, especially of the surrealist movement.

The smallest community (7.85%) detected is coloured in orange. This community's most connected artists are Carlos de Haes (1826 - 1898), Mariano Salvador Maella (1739 - 1819), Manuel Cabral Aguado-Bejarano (1827 - 1891), Mariano de la Roca y Delgado (1825 - 1872), and Benito Soriano Murillo (1827 - 1891). This concept of Spanish art encompasses a diversity of artistic styles such as Romanticism, Realism and Academicism. This community is similar to the coloured pink, yellow or green communities in terms of a more traditional approach to Spanish art based on nineteenth-century painters, leaving behind the more religious genre predominant in the largest community.

After the different analyses applied to the co-exhibition network of Spanish artists, this study highlights conclusions in two different aspects: (1) the exhibition dynamics and curatorial practices, and (2) the creation of the concept of Spanish art.

Regarding exhibition dynamics and curatorial practices, this data indicates that most connections between nodes reflect not only the geographical proximity of artists (such as where they did most of their work, their birthplace, or their country of origin) but also the aesthetic similarities in their artistic output. These dynamics are characteristic of the nineteenth-century exhibition ecosystem and continue to persist and influence exhibitions up to the present day (see Exhibitum Analysis). It is important to note that not all the showcased exhibitions in this corpus are about the figure of the Old Masters or are dedicated to any specific artistic style. There are also annual exhibitions that display a small section about Spanish art but are not limited to a specific period of time or artistic style. This prompts an interesting reflection on how curatorial choices often lean towards showcasing artists with similar or closely aligned artistic styles or who share the same period of time. While there are instances where a select few artists break this pattern and are featured alongside a more diverse range of artists from different times or styles, the predominant trend reveals the formation of cohesive groups. But what does exhibition dynamics tell us about the concept of Spanish art?

The concept of Spanish portrayed by the co-exhibition network of Spanish artists showcases how the traditional view of Spanish art illustrated by the Old Masters is the most populated one, getting the most number of artists connected and related to it. This means that a view of Spanish based on Renaissance and Baroque artists with a more religious outline was the one that solidified over time. There are different concepts that pop up as time and artistic styles go by, and the concept seems to solidify according to their artistic styles, giving not much of a mix between artists coming from different artistic styles, except in the case of Goya. The consolidation and evolution of these concepts of Spanish art, to be explored in the subsequent chapter, shed light on the dynamics of change and consolidation over time.

Moreover, another important conclusion of this chapter, which I will repeat in this thesis, is that exhibitions, even though they helped and supported the consolidation of a concept of Spanish art based on the Old Masters as historiography did, also generated and created spaces for other artists to congregate, join, and display, showcasing different aspects of Spanish art.

4.3 Women Spanish Artists and Their Position in the Network

After a thorough analysis and mapping of how Spanish art was showcased through this corpus of exhibitions and spotting only the name of a single woman artist as part of the previous analysis, this section of this chapter focuses on how women artists are positioned in this co-exhibition network. The dataset in question comprises 1186 Spanish artists, with only 67 of them being women. These 67 women Spanish artists were active during the nineteenth century and the beginning of the twentieth century. Baroque or Renaissance Spanish women artists are not mentioned in these exhibitions. That does not mean that there were not that many Spanish women artists. In fact, there were Spanish women artists during the nineteenth century, and there is a long list of scholarly publications studying and highlighting their figures (Diego Otero, 2009; Illán Martín, 2022, 2018; López Palomares, 2002; Reguant Montiel et al., 2023; Cid Pérez, 2018). There have always been Spanish women artists. The problem is not their existence but the social system constructed around them. This social system did not help the inclusion of women artists into the cultural arena of that time. Not all women had the same privileges; only middle/high-class women could participate in the cultural sphere during this time. Even though the role of women was still intrinsically connected to motherhood, household and marriage, some of them were able to study and participate in the intellectual life of the Spanish society.

Spanish women were interested in the arts, not only as part of their education but as a profession, as shown in the case of letters and applications to art academies conserved in archives (López Palomares, 2002). However, art academies did not accept women as students until the last decades of the nineteenth century (Lomba Serrano, 2023). When

accepted, women could not count on the same opportunities as male students; for example, women students were not allowed in some of the courses that included the painting of life nude models until 1920 (Cabanillas Casafranca & Serrano de Haro, 2019; Cid Pérez, 2018). Their presence in specialised educational institutions was not as popular as males, but women's artistic formation was different.

Their gender conditioned their education as artists, and afterwards, their inclusion and participation in the cultural arena were not the same. Women artists were less exhibited than male artists (Illán Martín, 2022; Spies-Gans, 2018; Jensen, 2015). During the nineteenth century, women Spanish artists started to have their spaces in national and international exhibitions (Illán Martín, 2022: López Palomares, 2002). In 1882, Spanish women artists were part of the Salons in Paris. In the national artistic sphere, women artists participated in the annual Exposición Nacional de Bellas Artes and needed to wait almost a century for their talent to be recognised with one of the prizes. From 1896 to 1900, the gallery Sala Parés in Barcelona organised four exhibitions titled “Exposición de Pintura Feminista” in the country, an exhibition devoted to Spanish women artists (Reguant Montiel et al., 2023; Cid Pérez, 2018). These were the first exhibitions devoted to women in Spain and gave the space to more than two hundred artists to show and exhibit their art. In 1903, the gallery Salón Amaré in Madrid, following the path of Sala Parés, organised another feminist exhibition. This artistic event exhibited forty artists. Women Spanish artists existed and were exhibiting and conquering spaces.

Even though Spanish women artists were part of exhibitions and even galleries devoted monographic exhibitions to them, prominent artistic institutions with international impact still did not include them in their permanent collections. In 1819, the Museo del Prado opened. As I mentioned before, this museum was meant to have the most complete collection of Spanish art. During the nineteenth century, the adhesion to other museum collections and the continuous acquisition of artworks grew the collection of Spanish art within the museum. The collection, in fact, become more diverse and includes art from a wide range of centuries and artistic styles. However, no artwork by women artists could be found to be held on their walls. Hence, the concept of Spanish art drafted in the

National Museum of Spain did not include any Spanish women artists in the nineteenth century.

Moreover, the other issue that appears when studying women artists is the lack of information recorded. Women's information and their participation in exhibitions in the nineteenth century were not equally registered in auction records or exhibition catalogues. Whenever a single woman lent an art piece to an exhibition, the only information recorded in catalogues was her last name. For example, Lady Slade appears in the catalogue of the International Exhibition held in Leeds. If she was married, then the recorded information was the last name of her husband, as Mrs Ellison was recorded in the same exhibition catalogue. Also, married women were recorded in catalogues with their husbands' first and last names, for example, Mrs Douglas Freshfield or Mrs Herber Stud, among other women lenders in the catalogue of the Spanish Art Exhibition in New Gallery in 1896. The unbalanced method of collecting and recording this information creates a systematic silence regarding information about women lenders. Moreover, this silence also increases when talking about artists. Women artists who are now considered essential in museum collections were often not exhibited under their own names. A notable example is Luisa Roldán, known as La Roldana (1652–1706), a prominent Spanish sculptor. Despite her high recognition during her lifetime as one of the sculptors for the Spanish royal court, her works are still frequently attributed to other artists or her male family members or listed as anonymous (Rabasco Aguilar, 2023; Girolami Cheney, 2005).

Taking this into consideration, the focus of this section is to identify and gain a better understanding of how women artists started to integrate and be part of the narratives and exhibition spaces supported by traditional institutions during the nineteenth century and the beginning of the twenty-first century. This section aims to explore the power dynamics inherent in exhibitions, which contributed to the consolidation of different artistic concepts as explored previously. To accomplish this, I examine the involvement of women artists within the co-exhibition network, highlighting their inclusion in the exhibition practices of prominent institutions and detailing when, where, and alongside whom they were displayed. Given the limited data available on Spanish women artists in

this corpus, this chapter employs both macro and micro approaches to gain a deeper understanding of the context and dynamics surrounding these artists.

With the goal of creating parallel analogies with the previous analysis of the graph of Spanish artists, this section of the chapter follows the same steps. Therefore, the first metric analysed is the number of connections within the network. The quantity of connections offers insight into their integration within the network. By comparing this figure with the count of exhibitions, one can easily assess the scale of the events in which they were involved. The visualisation of unique connections [fig. 10] shows a significant cluster of artists, each of them having more than 268 unique connections. After a detailed study of the collected corpus of catalogues, this cluster of highly connected artists is primarily associated with a group of women artists showcased in the Exposiciones Nacionales de Bellas Artes. Women's participation in these exhibitions was higher than in exhibitions organised by other more renowned institutions in the same period of time. However, even though some of these women artists have many connections, their presence in this corpus directly relates to one or two exhibitions, with the exception of Maruja Mallo. In other words, these artists have many connections due to their participation in large exhibitions, however, in this corpus, they are part of only one or two exhibitions.

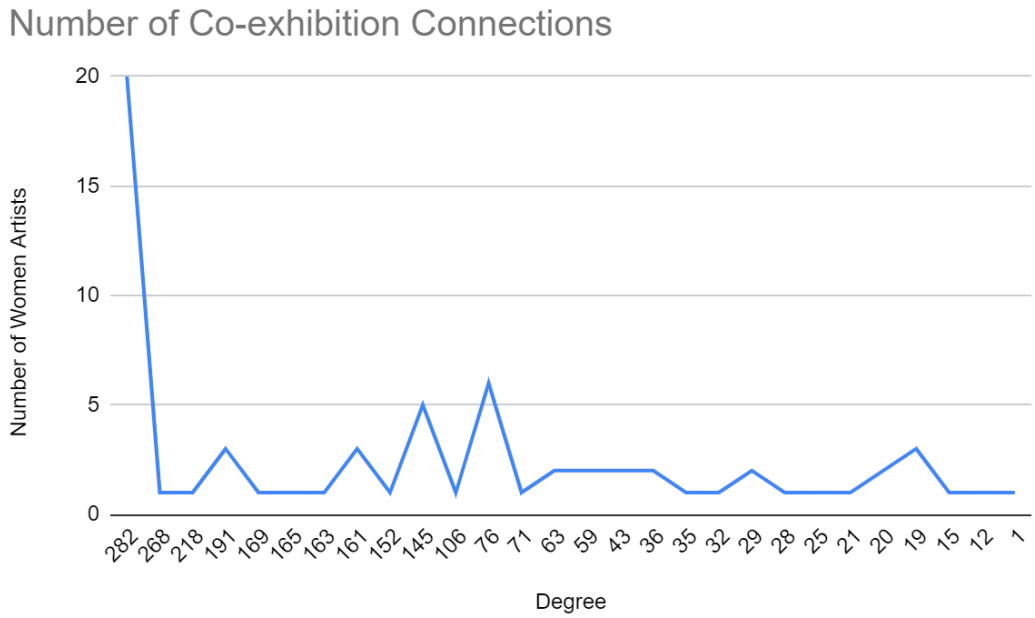

Figure 10. Degree centrality of the women artists in the Spanish artists co-exhibition network.

Due to the idiosyncrasy of the exhibitions in the nineteenth century, a large number of connections do not correlate with a high number of exhibitions or a higher influencer in the network. That is why, except for the case of Maruja Mallo, whom I investigate further at the end of this chapter when analysing the network with the entire corpus of Spanish artists, women artists are often overlooked, despite having a large number of connections. Regarding the exhibition dynamics, the analysis of connections revealed that most of the women artists belonging to this network were barely exhibited in small exhibitions, they were showcased mostly when exhibitions were large. However, that doesn't mean that they were not exhibited; it just means that this corpus does not contain their exhibitions because no official catalogue was produced or I could not find it in the archives.

Women Spanish artists had spaces where they exhibited their artistic production. There were monographic exhibitions of women artists in public art institutions, not in the Museo Nacional del Prado, but in the Museo de Arte Moderno (MAM) in Madrid (Rodrigo Villena, 2020). Moreover, women artists' associations provided support and guidance to these artists, carving out a place for them within the art sphere (Bezari &

Olivera, 2023). One example of results from these spheres is the ‘I Salón de Dibujantas’, an exhibition devoted to drawings of women Spanish artists, organised by the Lyceum Club Femenino in 1931. The Lyceum Club Femenino was a women's association that, following the path of other women's lyceums and cultural associations abroad, promoted the work of women artists and supported them in looking for a space in the cultural arena (Aguilera Sastre, 2011; Mangini, 2006; Leggott, 2008). Nevertheless, these exhibitions are excluded from the corpus due to the absence of an official catalogue in the archives during the information collection period.

If we consider these monographic and women artists association exhibitions part of this corpus, how would that change women Spanish artists' position in the network? The answer is complex. The problem with monographic exhibitions is that there are no connections with other artists. It is true that is a type of exhibition that retrieves a lot of positive sides, such as the fact that institutions decided to do a further investigation into specific artists. However, from a connections and network analysis perspective, monographic exhibitions do not enhance the overall connectivity between artists. While such exhibitions are significant events that can impact an artist's position within the network—due to their relationships with curators, institutions, or specific narratives—they do not necessarily improve network connections overall. Conversely, exhibitions organised by spaces or associations specifically for women increase the number of connections within that context. However, creating women-only exhibitions does not improve connections with mainstream artists, often resulting in the isolation of women artists within the broader network. This does not mean that their presence in the network is not relevant. The creation of subnetworks or sub-dynamics within the mainstream trends is what is called peripheries and where the other narratives and artistic concepts live. Since I do not have these exhibitions in this corpus, the subsequent compelling analysis focuses on their association with the broader context of Spanish artists. With which other artists were these women artists exhibited? Taking into consideration the different communities highlighted by the modularity class algorithm in the previous network, to which of these communities do they belong? Why?

To facilitate the visual identification of these women artists within the Spanish artist network visualisation, I transformed the previous network into grayscale while emphasising the nodes representing these women artists using the same distinct colours previously employed to denote artistic communities [Fig. 11]. The metrics used are the same ones used previously for analysing the communities of the entire network but emphasise the figures of the women artists that belong to them. Furthermore, to achieve a more comprehensive understanding of who these artists were and how they interacted within the network, I conducted micro-research or close reading on each one of these figures.

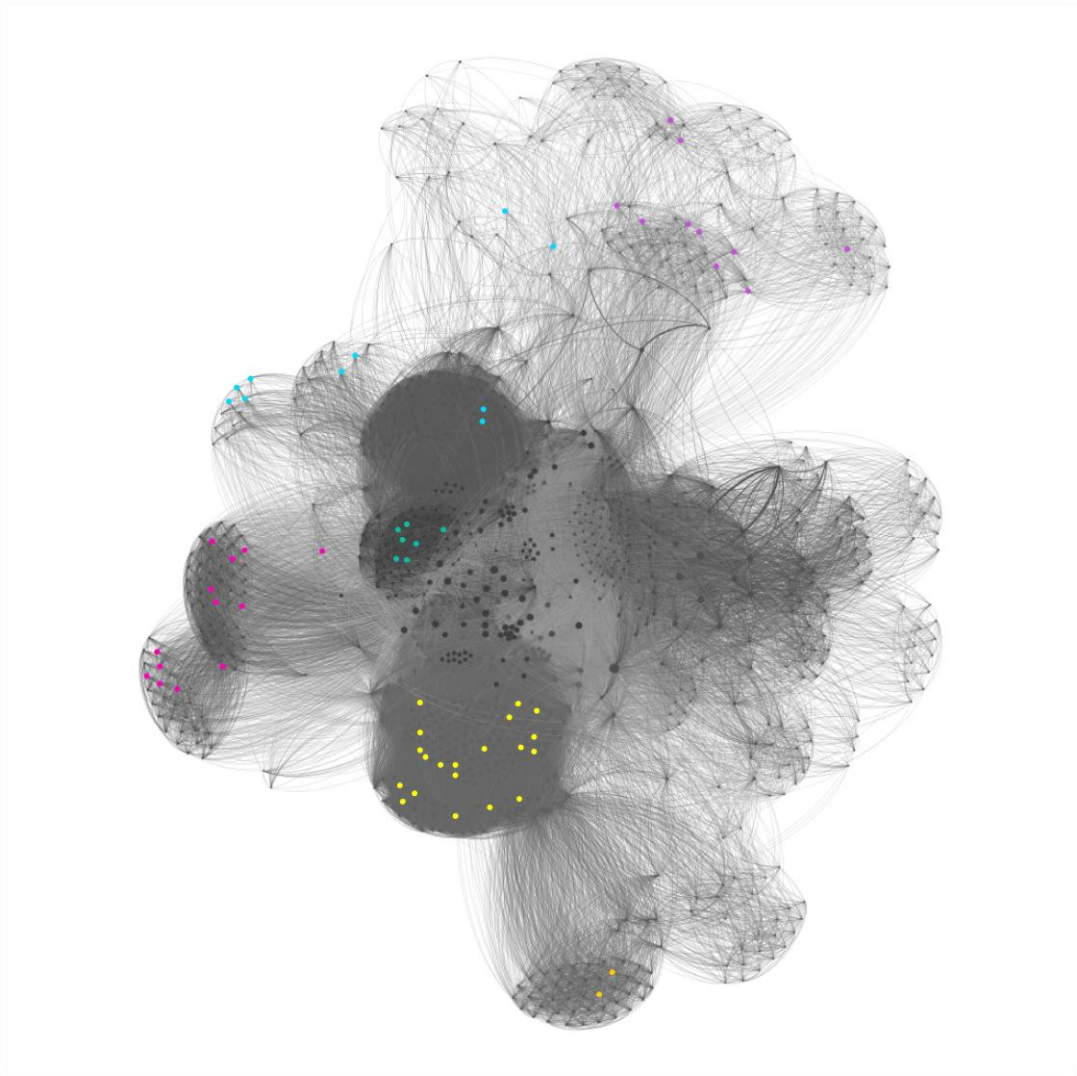

Figure 11. Spanish artists network in scale of grey, highlighted in colours the nodes representing women artist.

The analysis of the distribution of women artists through the different communities previously highlighted by the modularity class algorithm reveals that the highest number of women artists, twenty, belong to the yellow community. As outlined before, the yellow community was predominately composed of nineteenth-century artists. These women artists are part of the yellow community that was previously mentioned and exhibited in the Exposiciones Nacionales de Bellas Artes. Besides the information found in these exhibition catalogues about them, such as location or year of birth, there is not that much information about them in big projects that aim to cover Spanish artists, such as the Spanish Artists Dictionary by the Frick collection or the encyclopaedia created by the Museo Nacional del Prado. Therefore, to know more about who these women artists were, individual archival research is needed to see if there is any other information recorded about them. However, it is not totally sure that more information can be found.

Focusing again on the network analysis, the connections of this specific cluster of nineteenth-century women painters are based on one or two exhibitions of Exposiciones Nacionales de Bellas Artes. Meanwhile, male artists who exhibited with them had strong connections with other communities, and even though some of them belonged to different communities in the graph, these women artists stayed in the same community. That means some male artists exhibited in Exposiciones Nacionales de Bellas Artes were also part of other exhibitions recorded in this corpus. In contrast, these women artists were not part of any other exhibition collected for this study. However, the relation between Exposiciones Nacional de Bellas Artes and the ratio of success of the exhibited artists, in other words, being more likely to be exhibited in other exhibitions, nationally and internationally, is complex. These exhibitions were not always highly curated, and they did not even have a room with artworks from artists who held any kind of social relations with the exhibition committee (Arce, 1985). Therefore, not all the male artists exhibited in these exhibitions continued to be exhibited, but they were more likely to be exhibited than most of the exhibited women artists. Would the same phenomenon occur with other groups of women artists in this exhibition corpus?

The next group of women artists is part of the pink community. As mentioned before, this community is mainly composed of artists from the sixteenth and seventeenth centuries

but also of entities with the denomination of artistic schools, which were mainly populated by Gothic, Romanic, Renaissance and Baroque anonymous artists. This community also contains nineteenth-century artists; specifically, all the women artists that belong to it are nineteenth-century artists. Even though the most exhibited and connected nodes in this community are not nineteenth-century artists, there are no women artists from any other time. Women artists such as La Roldana, a seventeenth-century court sculptor recognised during her time by historiographers such as Antonio Palomino, are not part of any of the exhibitions collected in this research. Nevertheless, then, how are these women nineteenth-century artists exhibited within the community of the Old Masters more than with others that have more nineteenth-century artists?

Sharing the same problem, the lack of information, the women artists of the Pink community are not all anonymous. For example, María Luisa de la Riva y Callol de Muñoz (1859-1926) was a Spanish artist who was active by the end of the nineteenth century. She was a member of national and international associations of women artists, and she participated in exhibitions devoted to women, as well as in Exposiciones de Bellas Artes. The inclusion of De la Riva as part of international and national exhibitions made her have a strong co-exhibition connection with the Spanish Old Master, which can be explained by the great consideration of that most conservative art critic in Spain at that time and also her international career (Illán Martín, 2008), and the costumbrist and traditional style that was successful in the international art market (Juberías García, 2018). This international facet of De la Riva promoted her position in international exhibitions where she was exhibited with other male Spanish artists as the Old Masters.

Among the women artists in this community, the other ones with the most connections are María Luisa Pérez Herrero and Elena Sorolla García. Focusing on the case of Elena Sorolla García (1895-1975) was a Spanish sculptor and painter. The youngest daughter of the renowned nineteenth-century Spanish painter Joaquín Sorolla, studied arts with her older sister, María Clotilde Sorolla García (1890-1956), having as tutors different Spanish painters and sculptors such as Mariano Benlliure (Almarza, 2013). The Sorolla sisters were part of the Lyceum Club Femenino de Madrid and part of national and international exhibitions. However, their case is interesting because both of them, in this

network, belong to different communities, meaning that they were exhibited with slightly different groups of artists. Elena Sorolla belongs to the pink community, which aligns with a more traditional view of Spanish art based on the Old Masters, and María Clotilde Sorolla to the green community, where their father belongs, which generates a concept of Spanish art based on nineteenth-century artists.

The difference in connections between both sisters could be related to their artistic interests (Rodrigo Villena, 2017). Elena Sorolla, even though she painted, was mostly interested in sculpture. In this corpus, the difference between both sisters is that they exhibited in different exhibitions and with different artists. In the case of Elena Sorolla, she was exhibited in the wide exhibition of Spanish Art in London organised by the Royal Academy, which counted a wide range of artists, including nineteenth-century Spanish artists, also this artistic event exhibited Spanish Old Masters as part of a continuation of the annual Old Masters exhibitions. On the other hand, María Clotilde Sorolla was exhibited in exhibitions targeted to "modern" painters, in other words, nineteenth-century painters. This gave, in this corpus, less possibilities of being connected to artists such as Velázquez or Goya, but more connected with the context and sphere surrounding her father, Joaquín Sorolla.

A similar case of international success in the women artists of this community is María del Rosario Weiss Zorilla (1814-1943), a pupil of Francisco de Goya. Weiss Zorilla worked in Brussels and was influenced by Goya. Her work and labour as a painter were recognised when she was named one of the academic members of the Real Academia de Bellas Artes de San Fernando. Her artworks and copies were part of the market. However, in some cases, the attribution to her artistic production was not completely attributed to her. Her style and the impact of Goya's *maniera*, made the attribution of her production to Goya instead of to Weiss Zorilla, as happened with the drawings part of the collection of the Hispanic Society of America. The connection between Weiss Zorilla and the Old Spanish Masters, including Goya, comes from her painting style that connects with the particular style of her Goya, but also because, during part of her professional life, Weiss Zorilla worked at the Museo del Prado coping artworks from artists such as Velázquez, Murillo or Zurbarán.

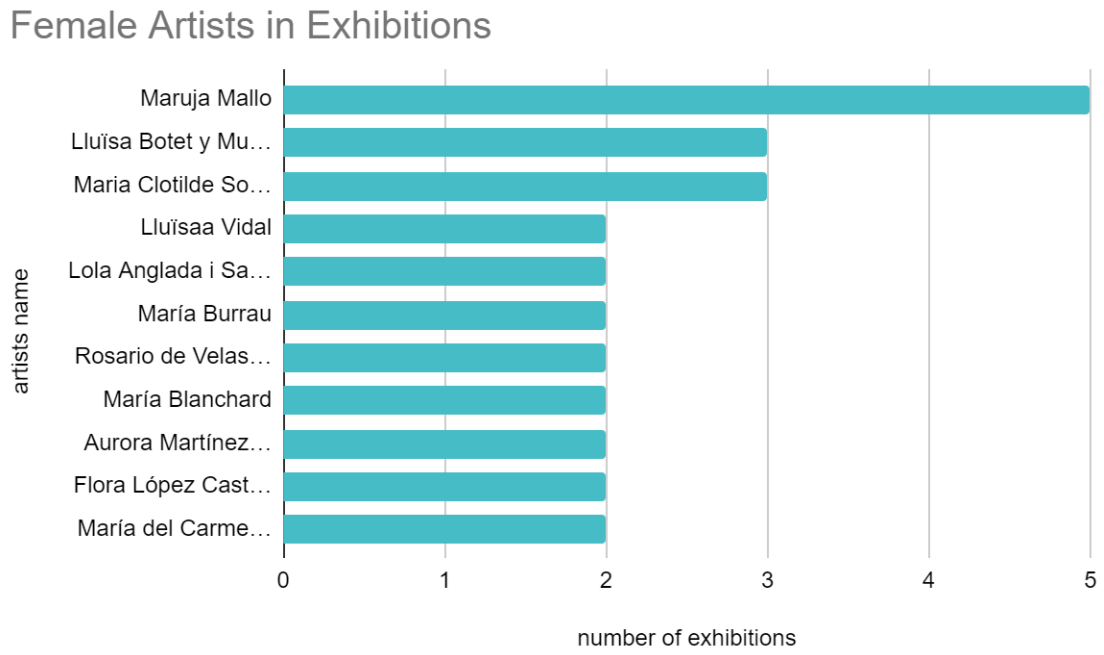

Figure 12. Women Spanish artists with the highest number of exhibitions in this corpus.

However, all these artists were not highlighted by any of the analyses when studying the entire network. In this graph, Maruja Mallo is more relevant in terms of connections and her position in the graph, with very few connections compared with the other women artists analysed. In other words, the fact that other artists were exhibited in larger exhibitions gives them more connections but not more relevance. As scholarly publications highlight, the lack of curation in the early editions of the Exposiciones Nacionales de Bellas Artes, combined with the fact that some artists were exhibited only once or twice in the exhibitions of this corpus and often in the same large events, led to their co-exhibition connections growing significantly. However, such exhibitions do not foster enduring connections over time. If an artist is displayed in smaller exhibitions but alongside other artists with more significant connections, this can enhance their relevance within the graph. The number of connections is not determinant. A good example is Maruja Mallo, who, despite having fewer connections and exhibitions, is notably well-connected

I highlighted the case of Maruja Mallo, not only for her relevant position in the network compared with other women artists but also because she was part of more exhibitions than the rest of the women artists in a very short period of time since the time frame of this research ends in 1939, while the rest of the artists were actively working and exhibiting during more time since they were actives earlier than her [Fig. 12]. Maruja Mallo (1902 - 1995) was an avant-garde Spanish artist who developed most of her artistic career in exile after the Spanish Civil War (Gaitan Salinas & Murga Castro, 2019). In the first years of her career, she studied art and exhibited in different venues in Spain. Mallo knitted a social and professional network with other intellectuals of the moment such as Maria Zambrano or Victoria Ocampo (Ballesteros García, 2004). In 1932, Mallo won a grant that allowed her to do an artistic residency in Paris, where she exhibited with other Spanish painters of the avant-garde such as Picasso or Miró. Mallo's case is intriguing because, unlike other artists examined, she succeeded in establishing herself as a professional artist, breaking with the common path of women nineteenth-century artists who were often relegated to teaching roles. (Val Cubero, 2013). Hence, her career trajectory and professionalisation in the art world, along with her established network, granted her the opportunity to be exhibited with other well-known and well-connected artists in this graph.

The inclusion of Maruja Mallo in this discussion introduces crucial nuances to contemplate when addressing the central question that arises from this analysis: How did the incorporation of women into the framework of Spanish art commence? The answer to this question reveals that their inclusion gained momentum towards the end of the nineteenth century, notably linked to the avant-garde as an artistic movement that seems to give more space for women artists to belong. This phenomenon is closely intertwined with the concept of professionalisation, underscoring how women started to forge professional careers independent of traditional roles in motherhood and domestic life (Rodrigo Villena, 2017; Pérez Martín, 2017; Zakreski, 2016; Hadjiafxendi & Zakreski, 2013). While it is accurate that by the close of the nineteenth century, women started entering traditionally male-dominated spaces and exhibiting in some art institutions, this thesis underscores that professionalisation or contemporaneous recognition was not a guarantee of later inclusion in exhibition dynamics and the structural art system (Spies-

Gans, 2022). For instance, certain Spanish women artists preceding the nineteenth century, like La Roldana, were entirely excluded from the exhibition concept within the studied framework. Despite her artworks being contemporary with the Old Masters, she was not exhibited with them, even in exhibitions featuring other women Old Masters such as Lavinia Fontana. Nevertheless, La Roldana was a court artist highly recognised by the Spanish court and the artistic milieu of her era (Muñoz López, 2007).

After conducting both macro and micro analyses of these women artists through this corpus of exhibitions and combining these findings with a thorough literature review, the next question is whether their participation in these exhibitions integrated them into the general exhibition dynamics when displaying Spanish art. The research reveals that while Spanish women artists participated in exhibitions and were featured in both national and international events—showcasing the quality of their work—they were not consistently included or given an influential position within the network. Unlike their male counterparts, who were regularly exhibited and thus integrated into the traditional framework of Spanish art, women artists were shown less frequently. Despite the research encompassing a total of 2,747 artists, mostly men, and noting that not all male artists were exhibited extensively or prominently, many of them still achieved a significant place within the exhibition dynamics of Spanish art, as exemplified by figures like el Greco and Goya. In contrast, nineteenth-century women artists were less likely to be featured regularly.

As the nineteenth century progressed, women's presence in exhibitions grew; nevertheless, they did not participate in the exhibition dynamics to the same extent as other artists. It is interesting to highlight how the new venues and exhibitions that do not belong to big art institutions produce these spaces for women artists to belong. On the other hand, it is interesting to understand how exhibitions such as Exposiciones Nacionales, where a place for them to exhibit and have the opportunity to show their artworks to the audience, but this type of exhibition does not give them a relevant position, or security to continue exhibiting in other spaces. Therefore, their inclusion in the concept of Spanish art is slower and it cannot be considered to happen until the beginning of the twentieth century.

One of the highlights that this research demonstrates is how the inclusion of women in exhibition dynamics is also connected to artistic styles that inaugurated new venues for their artistic production to be exhibited (Val Cubero, 2013). As mentioned before, Spanish women artists contemporary to Velázquez, Zurbarán, or Murillo were not represented in the exhibitions dedicated to the Old Masters. However, the nineteenth century, with its diverse artistic styles, appears to offer more opportunities for women to be featured in exhibitions. Archives from the Real Academia de Bellas Artes de San Fernando reveal that while there were more female students at the academy, fewer of them were later included in exhibitions. The establishment of feminist exhibitions and dedicated spaces for women increased their visibility in the exhibition landscape. Despite this progress, women were still not fully integrated into the context of nineteenth-century artists. The early twentieth century, characterised by the rise of avant-garde movements and various new artistic styles, provided greater opportunities for women artists, allowing them to better position themselves within the art world and contribute to the development of artistic concepts.

Chapter 5

5 The Evolution of Exhibition Dynamics from 1800 to 1939

In the fourth chapter of this disseration an exploration was undertaken to delineate different exhibition dynamics when exhibiting Spanish art, leading to the identification of five distinct communities. These communities unveiled clusters of artists who were consistently shown together, offering a preliminary framework of how exhibition dynamics shaped the display of Spanish art that prevailed from the nineteenth century until 1939. The temporal scope of this research is expansive, with the preceding network analysis offering a cursory glimpse into diverse concepts. However, it is important to take into consideration that the intricacies surrounding exhibition dynamics become more profound when examining an extended timeframe. The analysis of a long period of time as this research is covering can fall into oversimplifying the complexity that historical, economic or social events can have in a determinate time period and their effect in exhibitions, for example, in the time period analysed armed conflicts and social changes happened in the countries analysed, putting Spain as an example during the 139 years analysed in this research it went through the Peninsula War, different governmental and political changes from monarchies to republics to dictatorships, and also a civil war. Hence, this chapter is dedicated to a chronological investigation of exhibition dynamics, aiming to unravel and scrutinise the evolution of these intricate ways of conforming these concepts of Spanish art over time.

There are several compelling reasons to carry out a chronological study of the consolidation of these five different concepts of Spanish art. One of the primary reasons is the inclusion of new artists. This research analyses a span of 139 years during which certain artists were not included in the initial exhibitions gathered in this corpus due to their inactivity or absence at the time. A case in point is the painter Joaquín Sorolla, whose national and international significance notwithstanding, was born in 1863, leaving his participation in the conception of Spanish art in the first half of the nineteenth century

unfeasible. Another essential reason pertaining to artists and the significance of a chronological analysis is that not all artists received exhibition opportunities or public acknowledgement during their lifetime or active period.

Furthermore, this investigation incorporates to the Spanish context, two international perspectives focusing on the United Kingdom and the United States of America. As previously indicated, the reception of Spanish art in the global market peaked in the nineteenth century, primarily featuring works from the Old Masters or the Renaissance and Baroque periods, exemplified by significant sales of mainly Spanish art such as the public sale of Marshals Soult collection in 1852 (Lerner, 2014; García Martínez, 2018; Lipschutz, 1972; Tinterow & Lacambre, 2003). Consequently, for artists of the nineteenth century to secure their inclusion in international exhibitions, their artworks must either enter the market or necessitate active efforts to garner support from patrons, institutions, or collections, ultimately establishing a noteworthy presence abroad. These chronological visualisations map the instances when nineteenth-century Spanish artists first gained exposure on the international stage, thereby introducing an additional stratum of intricacy to the conceptualisation of Spanish art.

The inclusion of nineteenth-century artists in exhibitions is contingent not only upon the availability of artworks that can be lent but also on the rapidly evolving tastes within the sociological context in which the exhibition is organised and held. Artistic taste dictates the tempo of the art market and collections. The burgeoning fascination with Spanish art during the nineteenth century, coupled with its emergence in the international art market, played a pivotal role in solidifying a predilection for Spain and Spanish art, commonly referred to as Hispanofilia or Spanish fever that (García Martinez, 2019; Kagan, 2019, Vicent-Cassy, 2022). This implies that a substantial portion of exhibition visitors were already familiar with Spanish art or interested in seeing Spanish art since was popular at that time. However, the taste, even in the realm of art collection, underwent a transformation towards the close of the nineteenth century with the introduction of other Spanish painters into the exhibition dynamics. Taste does not only favor artistic styles but also artists who started to be more “popular” without having to be contemporary. As an illustration, in the nineteenth century, the artistic legacy of el Greco underwent a

reevaluation. Despite el Greco being a painter active in sixteenth and seventeenth-century Spain, nearly contemporaneous with artists like Murillo, Velázquez, or Zurbarán, did not achieve heightened popularity until the middle or end of the nineteenth century (Storm, 2016; Álvarez Lopera, 1987; Marías, 2009; Pijoan, 1930). This stands in contrast to his contemporaries, who were featured in exhibitions at a much earlier time. In this context, a chronological examination of the development of co-exhibition networks becomes imperative for a comprehensive understanding of how artistic concepts conform over time.

Exhibitions, ultimately, emerge as cultural products crafted by individuals within a specific socio-cultural context intended for visitors who inhabit similar cultural contexts. The exhibition organiser, curators, or exhibition committee play pivotal roles in determining the content and presentation of these cultural events. Each artistic institution shaped the cultural landscape, organising exhibitions around particular themes or artists, as well as configuring artistic collections by discerning what merits display and what does not. Despite the enduring presence of certain museums founded in the nineteenth century, such as the Museo del Prado or the British Museum, other institutions have closed during the time frame studied. One of the examples is the British Institutions, which, in the early nineteenth century, hosted an annual exhibition of Old Masters including Spanish artists; however, it closed its doors in 1867. The traditional annual exhibition of European Old Masters was subsequently assumed by the British Royal Academy from 1870 onward.

5.1 Corpus and Analysis

This chronological analysis offers a comprehensive examination of the intricate transformations that have shaped exhibition dynamics, consequently contributing to the formulation of the concept of Spanish art. Unlike the prior network, which exclusively featured Spanish artists, this chronological analysis encompasses the entire dataset, comprising a total of 2,747 artists and 315,558 connections. The decision to incorporate all exhibited artists, rather than solely Spanish ones, is motivated by the visual requirements inherent in the creation of network visualisations.

The first exhibitions within this corpus predominantly showcased Old Masters, particularly before the 1830s when the representation of Spanish Old Masters abroad was limited. Therefore, adding the rest of the artists that were exhibited in those exhibitions, not only the Spanish ones, gives us not only a more significant number of connections that would not provide any meaning but will give us more nodes to redistribute the network when applying statistical analysis such as modularity class to unveil communities. Moreover, it provides additional nodes for redistributing the network during the application of statistical analyses, such as modularity class, which unveils communities within the network. By doing so, the analysis avoids potential misinterpretations that could arise if limited to early connections, such as erroneously suggesting that Velázquez and José Ribera were exhibited together predominantly because of their presence in three exhibitions. This expanded approach considers the entirety of connections, revealing nuances that would be overlooked if confined to specific periods or pairings. The critical point of this analysis lies in comprehending the nuanced evolution and configuration of the concept of Spanish art over time, necessitating a meticulous consideration of every detail.

The analysis was conducted by plotting the co-exhibition networks for each 25-year period. This was a deliberate choice made to accommodate the historical context, particularly the initial half of the nineteenth century, which is characterised by limited information availability. As mentioned before, the nineteenth century was the time that public museums opened, and Spain was immersed in the Peninsular War. As previously noted, this era witnessed the establishment of public museums, coinciding with Spain's involvement in the Peninsular War. Consequently, the records of exhibitions during this period are relatively rare, especially when comparing them with the later decades of the century, when art institutions and the art market were consolidated in the Western world. This analysis, by 25 years period, retrieved six graphs. These six graphs serve to illustrate the evolving intricacies of exhibition dynamics towards the latter part of the nineteenth century, demonstrating an expanded inclusion of artists in exhibitions and introducing layers of complexity to the study of the construction of the concepts of Spanish art.

Consistent colour coding has been employed across all graphs, delineating communities from the more extensive to the smaller ones with a progression of pink, yellow, blue, green, purple, and orange. Additionally, the node sizes are determined by the betweenness centrality algorithm, as mentioned in the chapter before, where larger nodes correspond to higher betweenness centrality scores.

5.2 Discussion

The examination of the six generated graphs is structured into two distinct sections. The initial section analyses three graphs spanning the years from 1800 to 1875, while the subsequent section focuses on the period from 1875 to 1939. This division stems from the observed data indicating a transformative shift in the paradigm of exhibition dynamics. This shift is based on the number of exhibitions, the artists exhibited, and how that added more complexity to the network. This shift not only altered the organisation and comprehension of these cultural events but also introduced a heightened complexity to the concept of Spanish art, characterised by the inclusion of a more significant number of artists and also the inclusion of contemporary artists.

5.2.1 Understanding the first exhibitions. Analysis of the co-exhibition graphs from 1800 to 1875

The first network under analysis spans the period from 1800 to 1825, a timeframe marked by the complexity across the three contexts investigated in this thesis. Primarily, within the Spanish context, these years encompass the period of French conquest, the Peninsular War, and the subsequent efforts to regenerate the country. During the first 25 years of the nineteenth century, the foundation of the Spanish cultural landscape was laid, marked notably by the establishment of the Museo del Prado in 1819, catalysing the creation of additional cultural institutions.

This time frame does not have that many exhibitions from Spain because prominent museums at that time, such as Museo del Prado and Museo Josefino/Museo de la Trinidad, did not have any temporary exhibitions until the twentieth century, resulting in a lack of data specifically related to the early nineteenth century. A similar challenge

arises when examining the United States of America, where the initial 25 years witnessed the establishment of museums and cultural institutions that began forming their collections. Significant sales of Spanish art in the international art market occurred towards the conclusion of this period (García Martínez, 2018). Therefore, there were not that many international art collections that had Spanish art there from 1800 to 1825. The limited number of institutions or public or private art collections worldwide possessing Spanish artworks, along with the scarcity of data from Spain and the United States during the first decades of the nineteenth century, poses constraints on comprehensive insights into exhibitions and the data gathered.

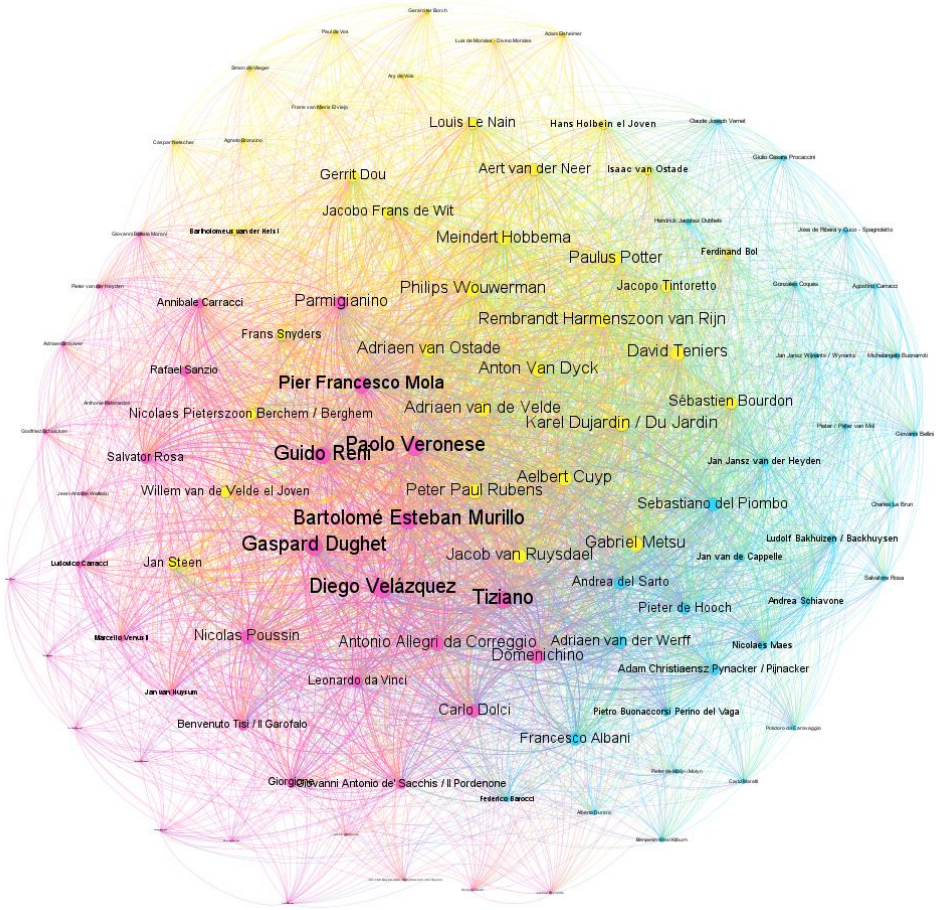

Figure 13. All artists co-exhibition network from 1800 to 1825 (Software: Gephi).

The United Kingdom, boasting a rich tradition of art collectors, stands out among European countries for its longstanding interest in art. The recorded acquisitions of

Spanish Old Masters like Murillo before the nineteenth century, coupled with the growing fascination for Spanish art and culture among British connoisseurs, positioned Spanish art as the most likely to spearhead exhibition opportunities (Japón, 2018; Glendinning, 2010). In this corpus, the exhibitions that populated this time period were predominantly hosted in the UK, particularly by institutions such as The British Institutions and the Royal Academy. Even though, the number of exhibitions collected for this period is not representative, it is interesting to analyse the display configuration of Spanish art within the very first exhibitions found.

This first graph (1800 - 1825) [Fig. 13] showcased an example of Spanish art or a first interest for Spanish artists based on the Old Masters. The Spanish artists the most exhibited were Bartolomé Esteban Murillo and Diego Velázquez. Other artists, such as Luis de Morales (Divino Morales), or Alonso Cano, started to be known and added to the Old Masters exhibitions. The modularity class algorithm unveils two different communities, both of them populated by European Old Masters. The graph highlights robust connections between Spanish and Italian Old Masters, sharing the same community and the colour blue in the visualisation, with a different colour for the other clusters of Flemish and Dutch Old Masters. One plausible explanation for this distinct division lies in the thematic content of the artworks. Spanish and Italian artists, influenced significantly by the Catholic Church, predominantly depicted biblical scenes or hagiographies. In contrast, Dutch and Flemish Old Masters, devoid of such Catholic influence and shaped by distinct social and economic contexts, concentrated on creating portraits of the upper class, capturing scenes of daily life, and offering diverse perspectives on biblical scenes.

Returning to the exploration of the construction of the artistic concept within this early network, what insights can be gleaned about its consolidation and formation? Primarily, despite the potentially greater accessibility and affordability of contemporary painters' artistic production, as scholarly publications have highlighted the very early interest abroad for Spanish art focused on the Old Masters, whose artistic production was scarce since it belonged to the Royal art collection or private collections being in churches, monasteries or convents. The inclination towards the Old Masters comes from the

tradition settled by the interest that Murillo arose internationally in the preceding century (Kent, 2020; Japón, 2018; Cason, 2003). This initial formulation of the concept of Spanish art outside the country contributed to the narratives of the nineteenth century, which depicted Spain as a nation deeply rooted in its past, lagging behind the modernisation that could be observed in its European counterparts. When significant institutions in influential art centres like London, pivotal in the nineteenth-century art market, predominantly showcase and endorse Renaissance and Baroque Spanish art, the perception of Spain from abroad becomes skewed, emphasising a biased representation centred on religious and traditional artistic expressions.

The second period of time analysed was from 1825 to 1850 [Fig. 14], aligning with the trajectory of the preceding time frame. Exhibitions remain relatively sparse, predominantly centring on Old Masters. However, in this case, only three Spanish painters were exhibited: Bartolomé Esteban Murillo, Diego Velázquez, José de Ribera y Cucó, Il Spagnoletto. During these twenty-five years, these artists were almost equally exhibited, when, as explained before, Murillo and Velázquez were the most exhibited artists now Ribera entered to be part of this triad of Old Masters, securing a comparable number of exhibition appearances to the other two artists. The inclusion of new seventeenth century Spanish artists to the exhibition circuit, was also fostered by the influx of more Spanish paintings in the art market with the important auctions of the art collection of French military members. This time frame solidifies the enduring position of Murillo and Velázquez as the pillars of the concept of Spanish art abroad, being consistently exhibited when Spanish art was exhibited for the first 50 years of the nineteenth century. While the first network (1800 - 1825) included a few more Spanish artists than the 1825 - 1850 graph, these additional artists exhibited only once or twice, with a notable disparity in frequency compared to the more prominently featured Murillo and Velázquez. José Ribera y Cucó had nearly equal exhibition appearances during this time frame, further cementing his status as a recurrent artist in exhibitions featuring Spanish art.

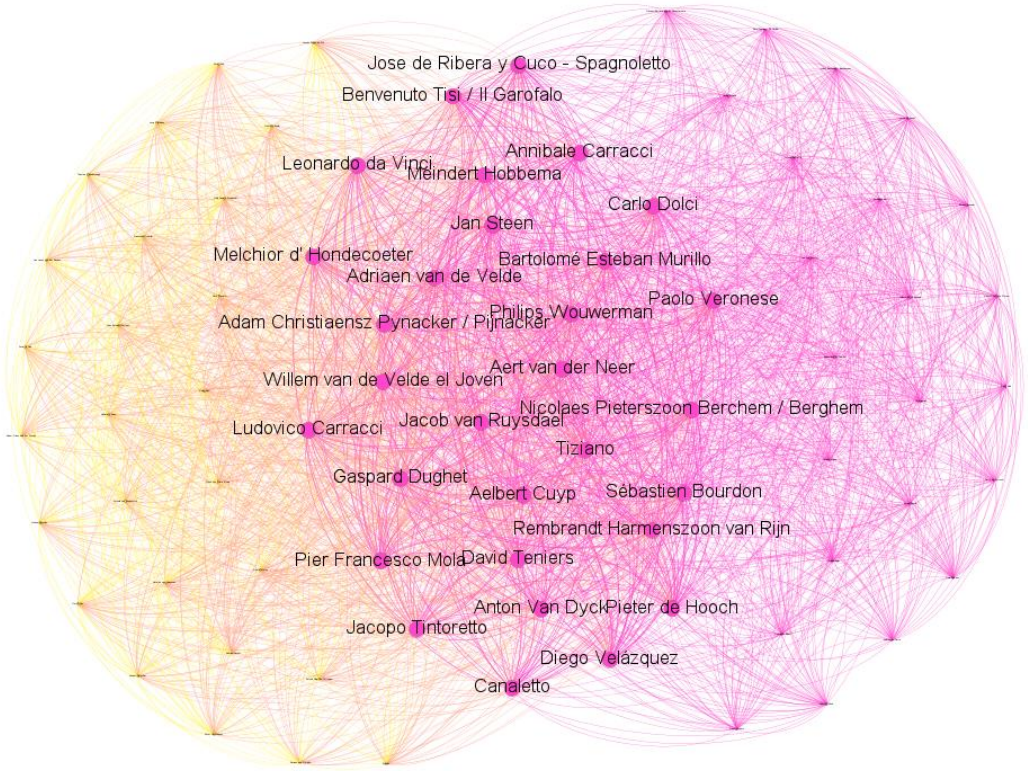

Figure 14. All artists co-exhibition network from 1825 to 1850 (Software: Gephi).

As a consequence of the first half of the nineteenth century and inspired by the burgeoning appreciation for Murillo in the preceding century, the foundation of the concept of Spanish art solidified, based on the Spanish Old Masters. While Murillo continued to captivate collectors and exhibition committees, a notable development unfolded as other Spanish painters began to make their presence in the exhibition scene during this period. The majority of exhibitions analysed in this initial half of the century were organised and hosted by British art institutions. Therefore, this inaugural concept of Spanish art in exhibition was promoted abroad in countries such as the one analysed here: the United Kingdom. However it was not the only country where Spanish Old Masters illustrated the first early idea of Spanish art through exhibitions, European countries such as France, Germany or Italy were also reproducing this dynamic. Furthermore, the predominant nature of these exhibitions was centred around the Old Masters. Hence, the likelihood of featuring other Spanish artists, such as more contemporary ones, to be

included in exhibitions with that focus is not possible. Despite a comprehensive review of information, including an examination of all the exhibition catalogues from prominent institutions like the Royal Academy of London, the search for Spanish artists in exhibitions not exclusively dedicated to Old Masters proved futile.

The following time frame, analysed from 1850 to 1875 [Fig. 16], showcases the complexity that the concept of Spanish art suddenly achieved. This frame counted with exponentially more exhibitions than the other two and, with it, an increase in the complexity surrounding Spanish art, adding more artistic styles and artists. The significant increase in exhibitions collected in this period can be explained by the settlement of new galleries and art institutions and how these cultural entities embedded in their program exhibitions as a recurrent event to be organised over time (Martínez Lombó, 2015; Lorente, 1993).

During this time frame, 1850 - 1875, Murillo and Velázquez continued to solidify their positions as the artists with the highest number of connections and exhibitions in this dataset. Consequently, when it came to showcasing Spanish art, art institutions and exhibition committees consistently demonstrated a strong preference for these two masters. Nevertheless, as indicated by the preceding two graphs, additional Spanish artists are incorporated into the exhibition framework, albeit in a less consistent manner, appearing in only a few exhibitions and not reaching the frequency seen with Murillo and Velázquez.

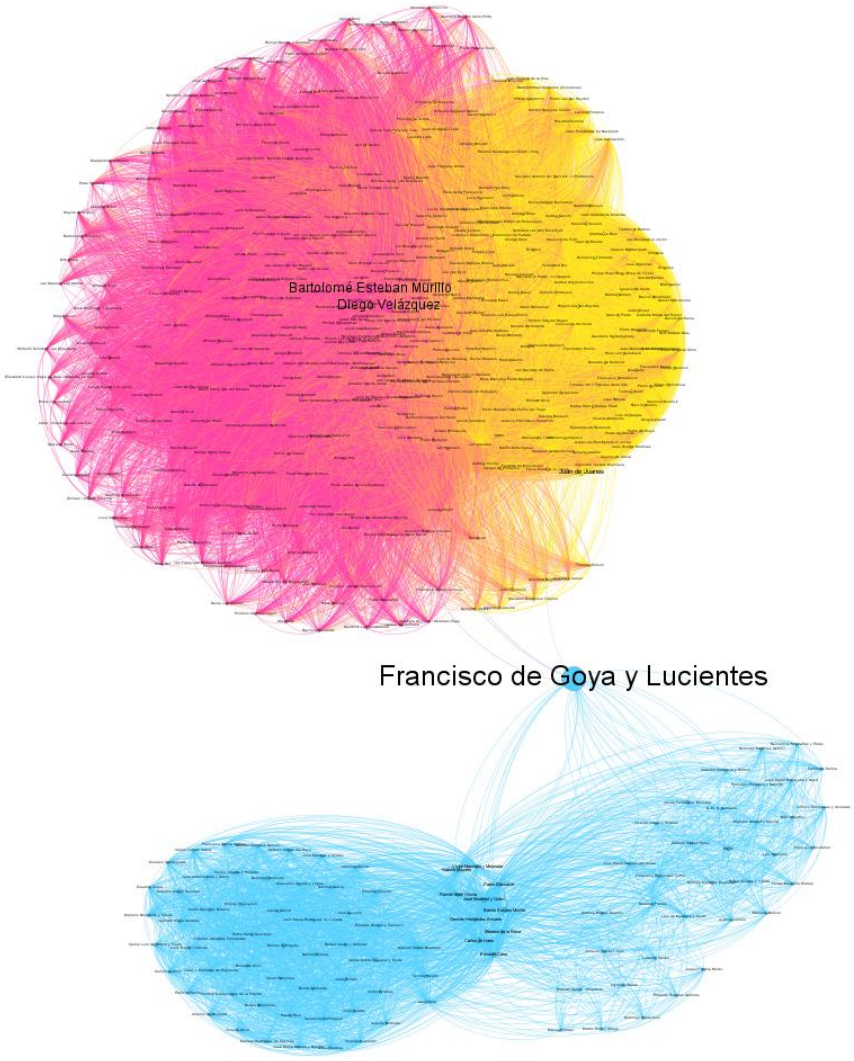

Figure 15. All artists co-exhibition network from 1850 to 1875 (Software: Gephi).

However, over these 25 years, artists such as Ribera, Zurbarán, and Luis Morales (Divino Morales) notably increased their presence in exhibitions. While this observation is not entirely novel, as these artists had been part of exhibitions in the early years of the nineteenth century, there is a discernible reduction in the disparity between the connections and the number of times they were exhibited in comparison to figures like Velázquez or Murillo, meaning that they were more imbibed and settled into the concept of Spanish art.

Within this chapter, the analysed corpus of artists includes all the artists featured in the collected exhibitions, encompassing not only those with Spanish nationality. This broader scope allows for a more comprehensive understanding of how artists were positioned within exhibition dynamics. In the graph of 1850 - 1875, two distinct communities emerge, encompassing Old Masters or primarily artists from the sixteenth and seventeenth centuries. These communities represent a different way of exhibiting Old Masters.

In the graph from 1800 - 1825, the distinction was based on nationalities, with the Italian Renaissance and Baroque set apart from the Dutch and Flemish. However, this separation is not consistently observed. In the graph covering the period from 1850 to 1875, the presence of these two clusters of Old Masters artists persists, but this time, the separation is not defined by artistic styles or nationalities. Instead, it is determined by the varying degrees of renown that these artists held during that specific time frame. The community coloured in pink includes very well-settled and recognised artists within traditional historiography, such as Da Vinci, Rembrandt, Rubens or van de Velde (McQueen, 2003; Bullen, 1979; Manthorne, 1989), but also supported by art institutions whose artworks became part of the first permanent collections displayed in European public museums. At the same time, the other community coloured in yellow featured esteemed artists like Sandro Botticelli and Albrecht Dürer. However, this yellow community also encompassed lesser-known figures from the Renaissance and Baroque periods, as well as women artists like Lavinia Fontana and Rosalba Carriera. This community demonstrated a more inclusive stance towards non-prominent artists from the same era, fostering a broader range of artistic concepts within these events.

Upon closer examination of the mentioned Spanish artists within the two communities of Renaissance and Baroque artists, the most consecrated Spanish artists by that time, Murillo and Velázquez, belong to the pink community. Additionally, other Spanish artists like Ribera and Zurbarán are incorporated into this consolidated concept of Spanish art, characterised predominantly by religious paintings with Renaissance and Baroque influences.

As previously mentioned, other contemporary Spanish artists were also highly exhibited; however, they belong to the yellow community, such as Alonso Cano, Divino Morales, el Greco, or Juan Pantoja de la Cruz. This means that this set of artists started to be more included in this concept of Spanish art based on Baroque and Renaissance that was reigning during the first half of the nineteenth century. The consolidation of the cluster of the Old Masters is not a surprise, given their prominence in exhibitions during the first half of the century. Nevertheless, a notable addition to this cluster is the inclusion of el Greco. As discussed in earlier sections, el Greco experienced a rediscovery by historiography in the nineteenth century. From 1850, in this corpus, el Greco began to feature in exhibitions alongside Old Masters, swiftly gaining recognition as one of the esteemed artists. He was suddenly part of the core group of Spanish artists that outlined the first concepts of Spanish art. As established in the preceding chapter, the exhibition dynamics of the nineteenth century consistently grouped together artists with comparable artistic styles. This facilitated el Greco's rapid integration into the prevailing concept of Spanish art, elevating his work to the same tier as revered artists like Murillo, Velázquez, or Zurbarán. Rather than placing him among the emerging nineteenth-century artists who form the third community in this graph, el Greco was placed among the preeminent figures of Spanish art.

The 1850 - 1875 graph marks the first time in the nineteenth century where a third community emerged, signifying the integration of contemporary nineteenth-century artists into exhibition dynamics. This development resulted in the establishment of a distinct community, separate from the other two communities primarily based on Old Masters. The two closely interconnected Old Masters communities are linked to the new nineteenth-century artists by only one artist: Francisco de Goya y Lucientes. In the preceding chapter, Goya was underscored as the artist with the highest betweenness centrality in the network of Spanish artists. Now, it becomes apparent how this high betweenness centrality originated. From the very first moment that not only Goya but nineteenth-century Spanish artists entered the exhibition circuit of that time, their main connection between them and the consecrated Old masters was Goya. This dynamic gives Goya a privileged space in the exhibition’s ecosystem.

The exhibitions in this corpus where Goya was exhibited gathered artists from the nineteenth century but also Old Masters. This afforded him a privileged position within the network, rapidly integrating him into the consolidated concept of Old Masters while maintaining connections with artists of his time and shared historical context. As Goya was associated with the Old Masters in exhibition settings early on, his influence and standing in the network expanded. In other words, the general exhibition dynamics observed before, where most of the artists were exhibited with other contemporary artists did not happened to Goya. Goya was the first nineteenth century artists absorbed immediately to be part of this first traditional concept of Spanish art based on the Old Masters, but also was still exhibited with other artists of this time. From the outset of the nineteenth century, Goya garnered acclaim from critics and art collectors, securing a place in the classic and traditional concept of Spanish Art. At the same time, his works were showcased in emerging concepts, contributing to the dissemination of his artistic production. However, Goya's success was not solely dependent on temporary exhibitions. The first catalogue of artworks exhibited in the permanent collection of the Museo del Prado in 1819 already featured two of his paintings, bestowing upon him a distinguished status unmatched by his contemporaries.

This first 75-year period worked towards the consolidation of Old Masters as the first Spanish artists to be part of international exhibitions organised by esteemed art institutions. This concept is based on art from the Spanish Golden Age and mainly represents Baroque and Renaissance art. The representation of Spanish art during this period leaned towards religious and traditional themes. However, towards the conclusion of this period, shifts based on a revision of this preliminary concept of Spanish art including other artists in exhibition dynamics became evident, incorporating artists such as el Greco and Goya when exhibited Spanish art, making them part of this traditional concept of Spanish art that solidified at that time.

5.2.2 The Shift: the inclusion of nineteenth-century artists and artistic styles. Analysis of co-exhibition networks from 1875 - 1939

Continuing with the analysis of the evolution of the concept of Spanish art, the graph from 1875 to 1900 [Fig. 16] introduced additional complexity to the concept. This timeframe witnessed the inclusion of a more diverse array of nineteenth-century artists, thus expanding and diversifying the overarching concept of Spanish art. The cluster of Old Masters remains the most substantial, with the presence of the familiar Spanish Old Masters persisting within it. Murillo and Velázquez ended the nineteenth century as the most exhibited Spanish artists in this corpus, but also the ones exhibited with more artists, which means that they were part of many exhibitions but also very multitudinous exhibitions. These two Old Masters communities follow a pattern settled through the exhibition dynamics of the whole nineteenth century.

A distinguishing characteristic of this period, setting it apart from the rest of the century, is the emergence of nineteenth-century artists having their position in the network. This development is not solely attributed to exhibitions like the Exposiciones Nacionales de Bellas Artes, which showcased numerous contemporary Spanish artists, but also stems from the artists beginning to share exhibition spaces on both national and international platforms. Nevertheless, being part of the robust concept of Spanish art consolidated by the Old Master was not as attainable as it may appear. The only nineteenth-century artist able to belong to that concept was Goya, who was absorbed in the very early stages when his artistic production was exhibited. The promotion and inclusion of more nineteenth-century artists in the exhibition sphere fostered the creation of a parallel concept of Spanish art where, as happens in this graph, artists clustered in different communities, when in the general graph were part of almost the same community. This is noticeable by the high betweenness centrality of more nineteenth-century artists, not only Goya in this network, for example, Ignacio de León y Escosura, Mariano Fortuny and Luis Álvarez Alcalá.

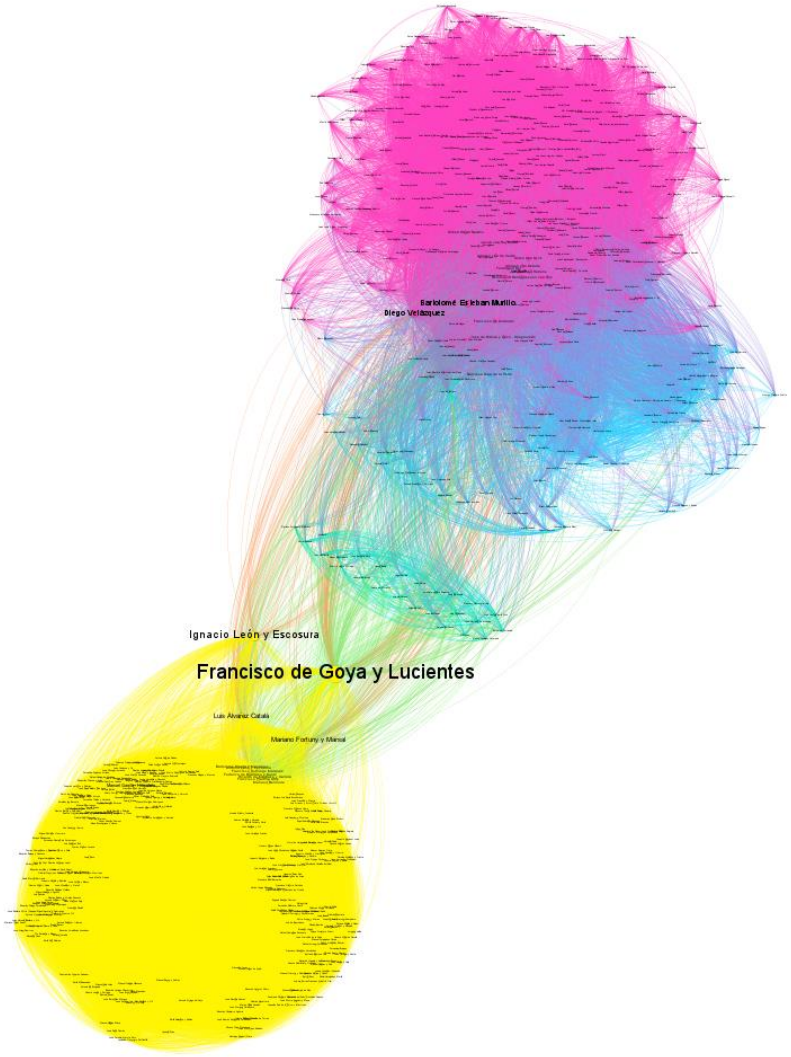

Figure 16. All artists co-exhibition network from 1875 to 1900 (Software: Gephi).

One of the initial factors contributing to this early-stage transformation in exhibition dynamics is the incorporation of contemporary Spanish artists into both national and international exhibitions. This shift is evident in the graph from 1875 to 1900, where the third community detected by the modularity class algorithm is primarily composed of nineteenth-century artists and contemporary artists with high betweenness centrality. For the first time, contemporary artists have a higher betweenness centrality, meaning that the exhibition dynamics provided them with opportunities to showcase their artwork alongside a diverse array of artists, other contemporary artists, but also Old Masters.

The establishment and creation of new spaces played a pivotal role in influencing the inclusion and promotion of contemporary artists within the exhibition circuit. The first decades of the nineteenth century witnessed the creation of the first national museums. These museums primarily exhibited the private collection of the crown following the premises of what the government of Napoleon had done in France. These collections were not prepared as much to assimilate and included nineteenth-century artists if they were not in charge of royal portraits. Therefore, contemporary artists needed new spaces to be part of the artistic and cultural arena of that time, what was known as 'museums of modern art'.

These new type of museums comes at the same time as other more specialised museums devoted to different types of art, such as the crafts museums (Lorente, 1993). Art academies, art associations, art galleries and even artists independently curated and hosted exhibitions featuring artists promoted or associated with these spaces (Baldacci et al., 2020). An illustrative example is the Women Artists Associations (Garb, 1994) or the Ateneo in Madrid (Ezama, 2019; Muñoz, 2023; Aguilera Sastre, 2021), which served as platforms for women artists who were often excluded from the traditional art exhibition circuit. These alternative spaces initiated exhibitions, established cultural event programs and commenced the production of their own catalogues. However, not all of them developed official publications out of the exhibitions organised. The fact that new venues were settling in is decisive in supporting and confirming contemporary artists and artistic styles, including them in the main art history narrative (Altshuler, 2008).

It was not until the beginning of the twentieth century that this corpus and, subsequently, the plotted co-exhibition graph could map the complexity of the exhibition dynamics when including more contemporary artists. Investigating the collected corpus, two hypotheses emerge about the inclusion of more contemporary artists in the exhibition arena emerge: (1) the lack of exhibition catalogues for all the exhibitions. Not every exhibition held during the studied period produced catalogues, and only a subset is incorporated into this thesis for the reasons explained before. Adding to that, the retrieval of twentieth-century exhibition catalogues proved to be more straightforward and accessible during the research phase. (2) Moreover, the emergence of new artistic styles,

such as the avant-garde that disrupted the traditional styles, such as the avant-garde, which disrupted traditional conventions, prompted the quest for spaces where these styles could find acceptance, particularly when not all established art institutions were inclined to include them. This fostered the creation of exhibitions outside the programs of traditional institutions, resulting in a broader array of venues. As a consequence, the graph of 1900 - 1925 is more intricate, and the application of statistical analysis to the data unveils a shift in the established exhibition patterns, if we compared with the previous graphs the exhibition dynamics include more artists but also the way of exhibiting them changed. This topic that will be the initial focus of exploration. What commenced in the preceding twenty-five-year timeframe thrived and became more apparent in the initial decades of the twentieth century.

To comprehend the resulting graph derived from the data of the period 1900 - 1925, it is important to recognise the evolving dynamics of exhibitions over time, altering the experience not only for visitors but also shaping the construction of concepts within them. For an artist to establish co-exhibition connections with a substantial number of peers, the only requisite was to be exhibited once or twice in a large exhibition. For instance, artists showcased in exhibitions such as Exposiciones Nacionales de Bellas Artes, even if exhibited only once in this corpus, garnered hundreds of connections.

However, at the beginning of the twentieth century, the exhibition dynamics underwent a shift, as evidenced by the correlation between the number of exhibitions and the number of connections per artist. In the twentieth century, exhibitions started the path of the museology schemas that we know nowadays. In other words, exhibitions reduced the number of artists exhibited in them, creating smaller events with a more curated selection of artists. This shift limited the opportunities for artists to showcase their work, given the diminished list of included artists. This trend is apparent in the data when examining the number of exhibitions per artist alongside their connections, as well as in the analysis of the average connections and exhibitions per artist. The move towards curated exhibitions corresponds to refined concepts, presenting challenges for artists to be included alongside more established counterparts. Hence, being part of the concept of Spanish art led by the Old Masters became rather impossible or exceedingly difficult in the twentieth century.

In this context, where artists are exhibited in smaller exhibitions, the clusters spread, creating more communities and, with them, more individual concepts of Spanish Art. The graph from 1900 - 1925 highlights six communities [Fig. 17]. Following the usual patterns of the previous graphs analysed, there are two communities where the Old Masters are the most exhibited and connected ones. Furthermore, the modularity class algorithm highlights four other communities showcasing contemporary artists. The emergence of numerous communities in this graph highlights the shift in exhibition dynamics, characterised by the increased presence of contemporary artists.

The four other concepts outlined by the graph of 1900-1925 signify the integration of late nineteenth-century artists, a phenomenon less pronounced during the nineteenth century. As an example, the third most populated community within the network exclusively comprises nineteenth-century artists—specifically, those active toward the end of the century, for example, Gonzalo Bilbao or Joaquín Sorolla. Another community highlighted is predominantly composed of Catalonian artists, reflecting the distinctive clusters formed by established Catalonian galleries where artists like Josép Clara i Ayats or Isidre Nonell exhibited.

Due to the period of time analysed in this graph, one of the last clusters that is interesting to analyse is the one composed primarily of avant-garde artists. The beginning of the twentieth century brought with it new disruptive artistic styles. The avant-garde broke with the established understanding of art to come up with new representations and conceptualisations. In this corpus, the only three Spanish artists that are part of this community are: Pablo Ruiz Picasso, Juan Gris and Manolo Hugué. This means that other avant-garde artists, such as Miró or Dalí, did not belong to this community, but they were actively exhibited. Miró or Dalí belong to other communities in this graph, which are more connected to the hub created by Catalonian artists or with other nineteenth-century artists.

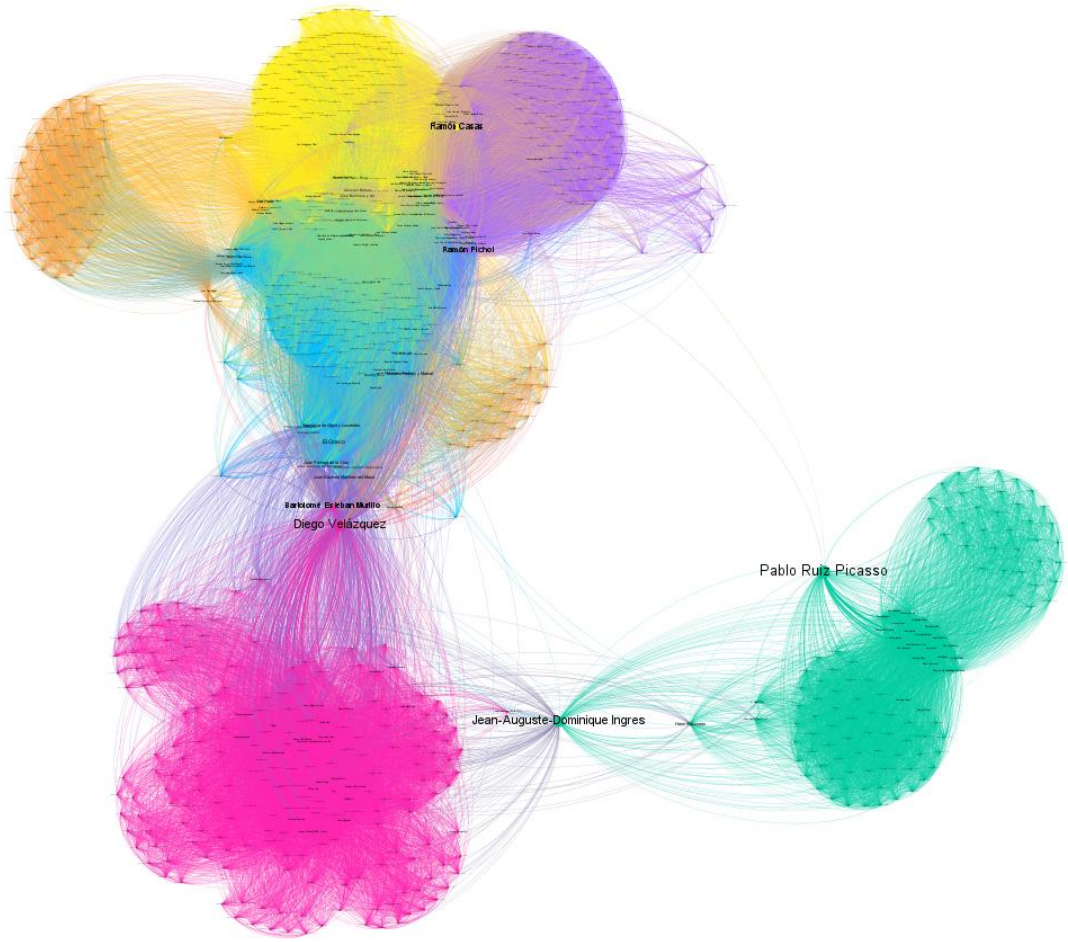

Figure 17. All artists co-exhibition network from 1900 to 1925 (Software: Gephi).

The important observation from this time span (1900-1925) is that when avant-garde artists began to be showcased, the venues differed from those associated with the traditional concept of Spanish art. These artists, although displaying their works in distinct spaces, were not assimilated into the traditional concept of Spanish art based on the Old Masters, as observed in the case of Goya. Nonetheless, the creation of new exhibition spaces produced these separate communities in the network, delineating three clear categories: Old Masters, nineteenth-century artists and avant-garde artists.

These three distinct exhibition dynamics when exhibiting Spanish art, organised chronologically, are also divided based on similarities in artistic styles. However, artists are not entirely segregated, with numerous connections bridging them together. For

instance, the two communities consisting mostly of Old Masters share a high number of connections the difference between each one of them , meaning that even at the beginning of the twentieth century, exhibition dynamics exhibited Old Masters together consistently, more than with any other artists (nineteenth-century artists or avant-garde). The nineteenth-century artists' communities are also extremely connected, having this graph shows only one of the communities that are not as connected to the others as these, and it is the avant-garde community. The metric used in this research to analyse the connections among these communities is betweenness centrality.

As discussed in the preceding chapter, assessing the betweenness centrality of graph nodes reveals the connections among various communities. In this instance, Goya experienced a reduction in betweenness centrality from the levels observed in the 1875-1900 graph. This change occurred due to the emergence of new nineteenth and twentieth-century artists establishing connections within the new communities. Velázquez and Murillo have higher betweenness centrality than in the previous graph (1875 - 1900), meaning that they started to be exhibited with artists from different communities, not only the one that they were part of. Velázquez, for instance, has a high number of connections with nineteenth-century artists from different communities, a pattern not observed in earlier analyses. Hence, in the first decades of the twentieth century, Murillo and Velázquez were displayed alongside contemporary artists, signalling a broader expansion of the Spanish art concept. This new exhibition dynamics allowed a more complex understanding of Spanish art being shown, not only the Old Masters as a showcase of what was Spanish art.

Upon further examination of nodes with notable betweenness centrality, the artists Ramón Casas and Ramón Pichot emerge as significant figures. As nineteenth-century artists in this network, they serve as connectors linking various communities of their contemporaries. As previously mentioned, this graph showcases how there is one big cluster of nineteenth-century painters. Still, a few of them do not have a huge density, giving us more curated concepts of Spanish art. Therefore, it is inevitable that a few artists display strong connections with other nineteenth-century artists of other

communities, since the differences between both groups are based on a small number of exhibitions. Two examples of this phenomenon are Casas and Pichot.

In the case of the avant-garde artists' community, the French painter Jean Auguste Dominique Ingres and the Spanish artist Pablo Picasso are the nodes with the highest betweenness centrality. In this graph, the French painter substitutes the position of Goya in the other network in order to connect the Old Masters with the clusters of the most contemporary artists. Ingres, like Goya, was an early nineteenth-century painter. His artistic production, due to the chosen topics and style, was widely considered by art historians and other artists as a referent, having even connections with Picasso's artwork (Marrinan, 1977; Kleinfelder, 2000). In the graph, Ingres' high betweenness centrality reflects the visual representation within exhibitions, aligning with historiographical trends that positioned Ingres as a key influence for the emerging generation of artists, including those associated with modernism and the avant-garde movement (Kleinfelder, 2000; Jensen, 1988; Schapiro, 1957).

The final period under examination spans from 1925 to 1939 [Fig. 18]. This time period introduced a heightened level of complexity to the realm of Spanish art, fostering diverse communities and, in other words, showcasing a greater array of artists. Analysing the relation between the number of exhibitions per artist and the number of connections, as happened before, the results are similar to the previous graph: artists participated in a higher number of exhibitions than in the nineteenth century with fewer connections with other artists. The first characteristic to highlight in this time period is how the figures of Murillo and Velázquez, who during the period of time analysed before were not only the most exhibited ones but also the artists with the highest number of connections, are now relegated to a second place. This means that exhibition dynamics in the twentieth century did not rely that much upon this consecrated Old Masters when exhibiting Spanish art, diversifying the concept of Spanish art and allowing other artists to take their positions, such as Picasso, Dalí and Miró.

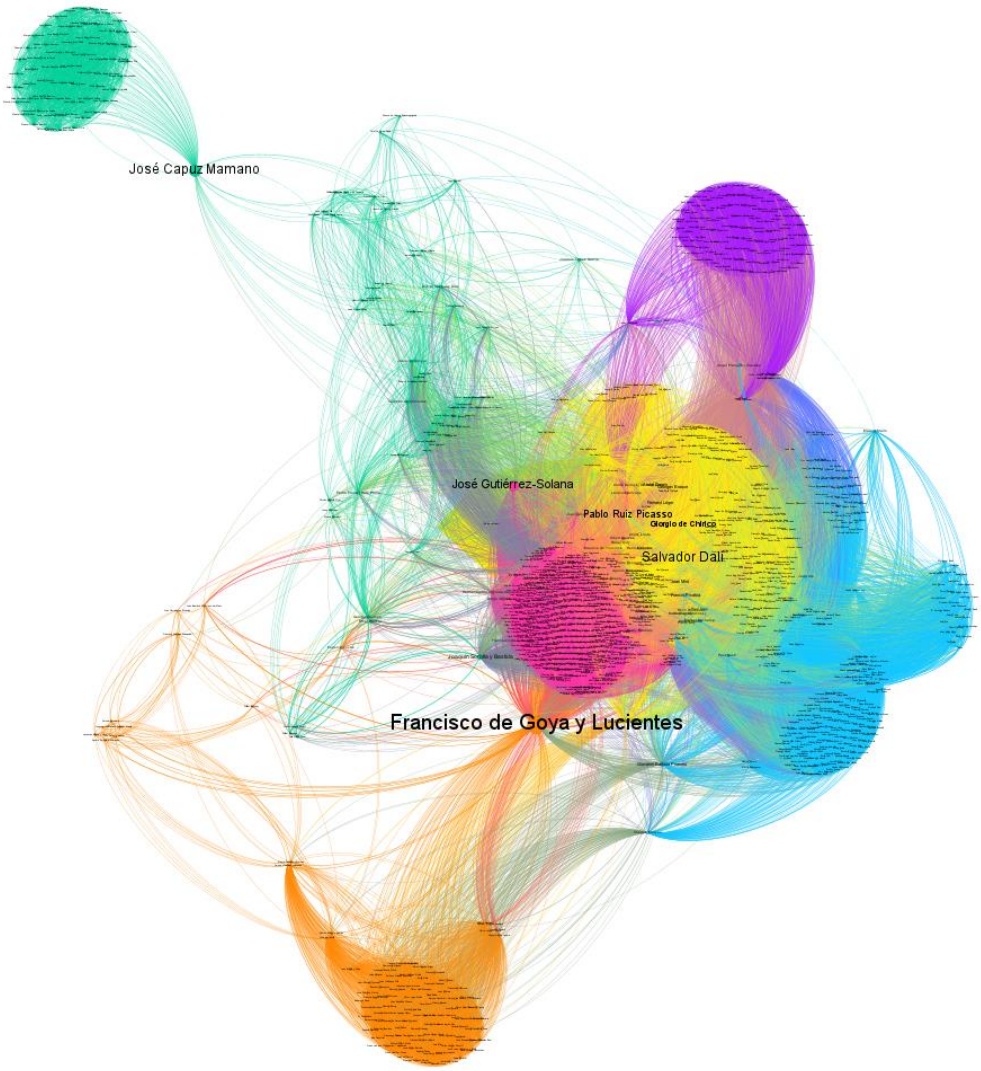

Figure 18. All artists co-exhibition network from 1925 to 1939 (Software: Gephi).

Analysing the communities outlined by the modularity class algorithm in this graph shows how exhibition dynamics follow the same pattern from the period of 1875 to 1900, with a higher number of less populated communities. The period from 1925 to 1939 highlights a significant surge in the inclusion of artists and diverse artistic styles. This graph exhibits an exponential growth in the number of communities, thereby intensifying the complexity associated with the notion of Spanish art. Unlike the patterns observed in previous graphs, where communities adhered to a structure based on artists' chronology or artistic styles, distinctions began to blur in this period. An illustrative example of this pattern is the Spanish Old Masters.

Since very early in the nineteenth century, the concept of Spanish art embodied in exhibitions showcased the Spanish Old Masters as the main representatives of Spanish art. These Old Masters artists had very tight connections with each other, creating an almost close concept of Spanish art, where nineteenth-century artists did not belong, except in the case of Goya. As mentioned before, when nineteenth-century artists entered exhibition dynamics of that time, a new community was formed, showing a separation. In other words, nineteenth-century artists were part of their own exhibitions but very rare in the same ones of the consecrated Old Masters. However, this pattern is not settled, and what the graph from 1925 to 1939, apart from not being the most exhibited or most connected ones, the Spanish old masters do not even have a community as before. The Old Masters are scattered through the different clusters of the plot, meaning that there are not that many strong exhibitions of solo Old Masters and that they are exhibited with other artists. Moreover, none of the Old Masters were exhibited with the same group of artists, which is why they do not belong to the same community but to many of them. This is due to the swift in exhibition dynamics, that promoted new type of exhibitions that did not display strictly artists connected by artistic style, time or geography, giving the opportunity to artists such as the Old Masters to be exhibited with avant-garde artists.

This new way of understanding the Old Masters within the concept of Spanish art, if before the Spanish art displayed in exhibitions was based on a traditional and religious view of what was Spain, now old masters are used as an anchor linking the tradition to the avant-garde. Therefore, the view of Old Masters shifted from exemplifying religious and royal depictions to being considered predecessors of the new artistic styles of the early twentieth century, due to their use of brushstrokes, colours, and composition (Vicent-Cassy, 2022; Valdivieso Rodrigo, 2016; Jeffett, 2016). In the concept or concepts of Spanish art offered by the exhibitions from 1925 to 1939, there is a much more inclusive concept but also one more contemporary to their time, alive artists were exhibited and included in the exhibition with other consecrated artists, meanwhile during the nineteenth century this did not happen until the end of the century. The idea of Spanish art as Renaissance, Baroque and traditional religious art is now diluted into a wide diversity of concepts.

In terms of the betweenness centrality within this graph, Goya emerges as one of the artists holding a significant position in this regard. However, the graph reflects a notable shift in exhibition trends, where Spanish art showcased is now centred around contemporary artists. Goya remains a pivotal link, connecting Old Masters with artists from the nineteenth century and extending to those of a more contemporary period. High betweenness centrality is also observed in artists like Picasso and Dalí, attributed to the formation of clusters and communities, as previously mentioned. Unlike traditional groupings based on artistic style or temporal periods, the graph reveals a more intricate exhibition dynamic. Old Masters, nineteenth-century artists, and avant-garde figures are now distributed across several communities, presenting a nuanced and inclusive perspective on Spanish art.

These three graphs spanning from 1875 to 1939, illustrate a notable shift in exhibition dynamics, shedding light on a growing openness toward the concept of Spanish art that would continue to evolve throughout the twentieth century. It is important to emphasise, however, that this openness or inclusivity that the concept of Spanish art faced during this period of time doesn't necessarily extend to embracing new Old Masters or nineteenth-century artists. The concepts of Spanish art did not do a revision of periods of time, adding artists that they were overseen by exhibitions or historiography, for example, the previously mentioned women artist La Roldana. Instead, it reflects a receptiveness and inclusion towards new emerging artists following similar patterns and without including a higher number of contemporary women artists.

5.3 Conclusions

The graph analysis presented in this chapter reveals shifts in the understanding and consolidation of the concept of Spanish art across the nineteenth and twentieth centuries. The first conclusion draw from this study agrees and contributes to the scholarly publications about the Old Masters and their collection and exhibition during the nineteenth century: the most popular concept of Spanish art, based on the Old Masters, was created and solidified during the nineteenth century. During the twentieth century, the concept of Old Masters appeared to be more broad. The co-exhibition network of

Spanish art, analysed in the previous chapter, demonstrated that even though exhibition dynamics changed and, consequently, the way of showcasing Spanish art changed, the consolidation of Old Masters is strong and keeps over time.

The consolidation of the Old Masters as a referent, when exhibited Spanish art, has an idiosyncrasy that built this encapsulated concept: Murillo and Velázquez. These two artists do not have a high betweenness centrality, except when exhibited with other Old Masters in the first half of the nineteenth century. This means that none of these two artists were exhibited with nineteenth-century artists or any other contemporary artists. Solidifying them into a unique dynamic that together with historiography and the art market made them the two main representatives of Spanish Art in the first half of the nineteenth century. This is a phenomenon that changed in the last 25 years analysed in the twentieth century from 1925 – 1939, but echoes less strongly in the overall graph analysed in the previous chapter. The other aspect that makes the concept of the Spanish art based on the Old Master different from the rest of the concepts outlined as time goes by is the consistency in exhibiting practically the same prominent artists. Murillo and Velázquez are the most exhibited artists and the most connected ones during most of the nineteenth century. Following them, other Renaissance and Baroque artists appear such as Zurbarán, Ribera or Cano. However, the concept is completely closed, and the artists that belong to this Old Masters community are consistently exhibited over time together, with no new inclusion or alterations, except for el Greco and Goya.

Focusing now on this hermetic understanding of the Old Masters' concept of Spanish art, the fact that Goya, a nineteenth-century painter, was included as part of this group is rare and does not happen with any other artists during the time analysed; not even other Old Masters were able to reach the importance and impact of the figure of Goya within the co-exhibition network. Goya was very early assimilated in exhibitions as part of this hub of Renaissance and Baroque artists, which made very clear the importance of his artistic production to historiography and exhibitions. The fact that since the very first moment when exhibited is connected with the Old Masters, secures Goya a place in this hermetic concept.

However, the twentieth century showed how exhibition dynamics changed, and the Old Masters' concept blurred towards a more inclusive understanding of Spanish art. When new artistic styles surged, the idea was not to relegate the Old Masters but to elevate the new emergent artists to their position, exhibiting them together. Continuing perpetuating the importance of the Old Masters for the concept of Spanish art makes it almost impossible to dissociate both. Exhibition dynamics and historiography recycled and reinvented the concept of the Spanish Old Masters by exhibiting them with artists from other geographies but also other artistic styles. Therefore, the global imaginary has not conformed a new concept or concepts of Spanish art without them.

Chapter 6

6 From Global to Local. Study of the Exhibition Dynamics in the Three Geographical Contexts

One of the criticised aspects of computational approaches to the study of humanities is the risk of falling into globalisation or simplification of individual or local contexts (Love, 2010). The analysis of extensive datasets can help identify overarching patterns, trends, and constructions over time, but there is also an existent risk of overlooking nuanced local contexts. While global analyses have shed light on the formation of patterns when consolidating the different concepts of Spanish art, such as the consistent display of Spanish Old Masters between each other, but not as much with other contemporary artists. It's essential to acknowledge and focus on the diverse geographical and socio-cultural contexts involved.

The previous chapter covered the study from a chronological perspective, understanding how the co-exhibition network conforms over time, changes and processes. In this chapter, the emphasis shifts towards an exploration of three distinct geographical contexts, aiming to understand the intricacies of the artistic concepts shaped within each country's unique socio-cultural context. The goal is not only to avoid the pitfalls of globalising contextual understandings but also to facilitate a more nuanced comparative analysis of the similarities and differences between the construction of the concept of Spanish art and the socio-cultural environments in which they originated.

The chapter focuses on three geographical contexts, Spain, the United Kingdom, and the United States of America, which were chosen for their significant interactions with Spanish art and their diverse cultural backgrounds. The selection of these countries allows for an examination of the varying impacts of Spanish art, particularly in the realms of art collection, artistic taste, and the establishment of art institutions. The main research questions guiding this chapter are: Which are the concepts of Spanish art outlined in each context? How do exhibition dynamics contribute to the shaping and reinforcement of this

understanding of Spanish art? What are the notable differences in the conceptualisation of Spanish art across the three analysed contexts?

This chapter is structured into three distinct sections, each dedicated to the examination of a specific country: Spain, the United Kingdom, and the United States. Each section begins with a brief contextual overview, providing insights into the socio-cultural landscape and unique characteristics of the respective countries. There are two essential aspects in the formation of exhibitions: institutions and collectors.

Institutions play a pivotal role as they are responsible for curating and organising exhibitions, thereby shaping the artistic concepts showcased within them. On the other hand, collectors also hold a significant influence, as some of them contribute artworks to exhibitions. They serve as essential resources for art institutions, enabling them to showcase specific artistic styles or artists that may not be present in their own collections. Moreover, collectors are integral to the art market, influencing trends in both acquisitions and public interest. While museums and art institutions do contribute to exhibitions by lending objects, private collectors often play a more substantial role in this regard. Consequently, the establishment and development of private collections have a profound impact not only on the availability of objects for exhibition but also on the overall artistic discourse and presentation.

The methodology employed in this chapter aligns with that of previous chapters, adopting a computational approach to provide a macro-perspective on the study of each geographical context through a co-exhibition network. Similar to the previous chronological study, this methodology aims to capture a comprehensive understanding of the diverse interpretations and concepts of Spanish art by encompassing all exhibited artists within the corpus, not solely Spanish artists.

The visual representation of the co-exhibition network employs the same principles as in earlier chapters. Graphs are colour-coded to distinguish communities identified by the modularity class algorithm, while node and label sizes are determined by betweenness centrality degree. Statistical analyses conducted on the graphs plotted in this chapter are consistent with the rest of the thesis, focusing on metrics such as centrality degree

(number of unique connections) and the number of exhibitions in which an artist has participated. Additionally, the betweenness centrality is examined to understand better how connections are established, and concepts are formed within the network.

In contrast to previous chapters, where institutions were primarily referenced as supporting examples, this study focuses on the analysis of the institutions organising and hosting the exhibitions. This expanded focus aims to provide insight into the role of institutions in shaping exhibition dynamics and contributing to the establishment of artistic concepts.

6.1 Spain

6.1.1 Context

In the time period studied in this research, the socio-cultural context in Spain was heavily marked by a series of tumultuous events. Beginning with the Independence War, the nation experienced a succession of governmental transitions, including shifts between absolute monarchies, constitutional monarchies, two republics, and, ultimately, a dictatorship. Concurrently, Spain was embroiled in conflicts abroad, notably the wars in its Spanish overseas territories, Cuba and the Philippines, as well as a devastating civil war that concluded in 1939, introducing a forty-year dictatorship.

These political issues contributed to a destabilisation of the economy, which was already extremely affected by the Peninsula War and influenced decisions such as the desamortizaciones that indirectly shaped the Spanish cultural ecosystem. The economic repercussions extended beyond public cultural institutions and educational programs, permeating the art market and influencing the dynamics of art sale and acquisition (Gil Salinas, 2010; Vázquez, 2001). The manner in which art transactions unfolded was closely linked to the prevailing socio-political contexts, thereby reflecting the broader societal shifts and challenges encountered during this period in Spanish history (Otero & Pallol, 2018).

As outlined in the introduction, the museum landscape in Spain began to take form during the French occupation when Napoleon's government initiated the Museo Joséfino

project. Following the war, the project of the Museo Joséfino was transformed into the Museo de la Trinidad, and the Napoleonic idea of a publicly sharing royal collection took form as the Museo del Prado, which officially opened its doors in November of 1819 (Géal, 2002; Antigüedad del Castillo-Olivares, 1998; Antigüedad del Castillo-Olivares, 1997). However, none of these museums organised temporary exhibitions in the first decades of the nineteenth century. In the case of Museo del Prado, and the extensive work in its permanent collection trying to achieve this complete view to showcase Spanish art, the organisation and presentation of exhibitions were not incorporated into its mandate until the early twentieth century.

Regional museums, established as a consequence of expropriations and desamortizaciones carried out by the Spanish government during the nineteenth century, did not regularly schedule exhibitions during their initial decades after their opening (López Rodríguez, 2010; Arana Cobos, 2010). Consequently, the majority of temporary exhibitions were hosted by art academies, galleries, or a select few public museums and art institutions that included these cultural events as part of their programming.

In the case of the American and British cultural arenas, the institutionalisation of Spanish art in exhibitions came from museums and, to a lesser extent, from galleries, but in Spain, the galleries and other types of institutions were notably more active in showcasing Spanish art in exhibitions. Museums, such as the Museo del Prado, often regarded as pivotal institutions in the institutionalisation of the concept of Spanish art, did not commence organising temporary exhibitions until the twentieth century. Hence, it becomes imperative to scrutinise the varied institutional landscape and their exhibition dynamics to understand the factors shaping the conceptualisation of Spanish art as explored in the network analysis.

One illustrative example is La Asociación Española de los Amigos del Arte, which annually organised exhibitions featuring contemporary artists of the time. Another example of one of the art spaces that hosted the most exhibitions featuring Spanish artists in this corpus was Galería Sala Dalmau. This institution operated with distinct exhibition practices compared to other cultural venues. Situated in Catalonia, Galería Sala Dalmau

predominantly showcased primarily highlighting Catalonian artists active during the late nineteenth and early twentieth centuries, these exhibitions often represented artistic movements such as Noucentisme or Avant-garde (Ascunce Arenas, 2012).

Another important variable when studying exhibitions is the role of exhibition lenders, in other words, private collectors. In nineteenth-century Spain, art collection was primarily the domain of noble families such as the House of Alba or the House Osuna, who possessed the necessary capital to amass significant art collections (Martínez Plaza, 2021). However, the mid-nineteenth century saw the emergence of new socio-economic dynamics, particularly the rise of the middle class. This shift profoundly impacted the realm of art collecting in Spain, leading to the emergence of new collectors with the financial means to acquire artworks. However, this transformation also brought about changes in the nature of collecting. New events, such as Exposiciones Nacionales de Bellas Artes, gained prominence during this period, serving as gathering points for the nobility and offering opportunities for artists to showcase their work to influential buyers (Vigara Zafra, 2018; Caparrós Massegosa, 2014; Gutiérrez Burón, 1992). Furthermore, these exhibitions presented collectors with artworks by contemporary painters, exposing them to new possibilities of collecting beyond traditional styles and promoting a modernisation of their collections. This evolving landscape of art collecting not only reflected shifting socio-economic dynamics but also influenced the creation of artistic concepts and exhibition practices.

6.1.2 Analysis

The analysis of the co-exhibition network of Spain maps a few phenomena that washed out when analysing the entire network. One of the first observations, even before analysing the graph and solely based on the collected data, is the relatively low participation of foreign artists in exhibitions alongside Spanish artists within the Spanish cultural landscape. This observation is unsurprising given that this network comprises the highest number of Spanish artists exhibited compared to the UK and the US. Consequently, the concept of Spanish art delineated within Spain appears to be a more local concept, providing space for artists who may not have achieved international

recognition or garnered institutional attention at that time to still showcase their work within their home country. I have identified two main reasons for this: the first one is that most of these big exhibitions, such as Exposiciones Nacionales de Bellas Artes, or exhibitions in the Academia de Bellas Artes de San Fernando, were meant to promote Spanish contemporary artists, so there was no space to bring artists from abroad. Most foreign artists displayed in exhibitions during the nineteenth century in Spain were in small exhibitions in galleries or private exhibition rooms. The second reason is the nature of the museums and the dynamics of exhibitions they started programming. For example, the Museo Nacional del Prado counted a large number of international artists in its permanent collection. The museum continued this intersection of national and international artists but with solo exhibitions, which do not connect the artists with other artists in the network. Moreover, this is one of the exploratory paths that this research opens as future endeavours to analyse the reception in temporary exhibitions of foreigner art in Spain during the nineteenth century.

To understand exhibition dynamics at a glance using the data from this corpus, the initial focus is on the analysis of the most exhibited artists. Examining the top ten most exhibited artists offers valuable insights into the prevailing concept of Spanish art showcased [Fig. 19]. With the exception of Goya, the artists featured predominantly represent a more modern nineteenth to twentieth-century interpretation of Spanish art. The other artists that are the most frequently exhibited in this corpus are Pablo Picasso, Joaquín Torres García, Rafael Barradas, Joaquím Sunyer, Salvador Dalí, and Oleguer Junyent.

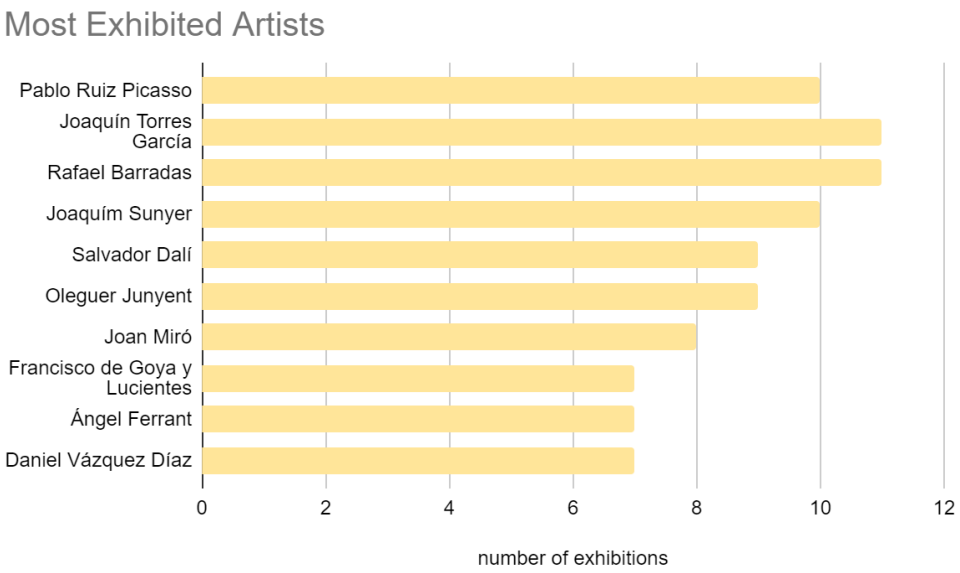

Figure 19. Most exhibited artists in the Spain exhibitions ecosystem registered in this corpus from 1800 to 1939.

The fact that these are the most exhibited artists in this corpus of exhibitions in Spain provides valuable insights into the exhibition dynamics in Spain, shedding light not only on the presence of Spanish artists but also on their interactions with international counterparts. Contrary to the findings of the previous chapter's analysis spanning historical periods, where artists like Murillo and Velázquez dominated exhibition spaces during most of the nineteenth century, they do not feature prominently in not even the twenty most exhibited artists in Spain. This contrast serves as an initial indication of the disparity between the exhibition landscape in Spain from the nineteenth century until 1939 and the broader network analyses. It underscores the importance of contextual understanding and the necessity of analysing from global and local perspectives to grasp the emergence and evolution of trends and patterns comprehensively.

This pattern is also clear when examining the betweenness centrality scores of nodes in this network. Joaquín Torres García, Venancio Vallmitjana, and Joan Miró emerge as the artists with the highest betweenness centrality, closely followed by José Pinazo, Darío Regoyos, and Francisco de Goya. As mentioned in previous chapters, a high betweenness centrality score indicates that these artists were exhibited by artists who belong to

different communities, indicating which artists played a pivotal role in exhibition dynamics when exhibiting Spanish art. Interestingly, in this graph, Goya does not have the high betweenness centrality observed in previous analyses run in the two previous chapters. This discrepancy suggests that the exhibition strategies for not only Goya but also other Spanish artists differed when diving deep into this local context. The figure of Goya, in the Spanish context, does not have a high betweenness centrality, which means that he was not as exhibited with a wide range of artists as the network of all the Spanish artists showed. In the permanent collections and exhibition ecosystems in Spain, Goya entered as part of the first permanent collection displayed in the Museo Nacional del Prado. His artworks were considered as valuable as the European Old Masters were. In terms of temporary exhibitions, one of the first temporary exhibitions of el Prado was devoted solely to Goya. Thus, Goya's connections in the Spanish exhibition's ecosystem and based on the collected corpus show he was not as exhibited in Spain as abroad.

Furthermore, the betweenness centrality analysis highlights new names that did not previously rank as highly in betweenness centrality when analysing the total network. This sheds light on a different perspective of exhibition dynamics, indicating a distinct grouping of artists exhibited alongside these new high betweenness centrality nodes. Essentially, this reveals a shift in the composition of artist clusters, demonstrating variations in exhibition strategies and artist groupings within this specific network analysis.

For instance, examining an overview of the top ten nodes with the highest betweenness centrality reveals two important observations that are useful for understanding the concept of Spanish art generated in Spain through these exhibitions [Fig. 20]. Firstly, these artists were predominantly active during the nineteenth century, and their artistic styles diverged from the classic and academicist tendencies often associated with the inherited traditional style that had a substantial impact on nineteenth-century Spanish art. These high betweenness centrality artists define a concept of Spanish art as more modern and contemporary, aligning with the artistic trends and social context of the end of the nineteenth century and the beginning of the twentieth century.

Secondly, a notable deviation from previous observations lies in the inclusion of a sculptor among these high-concentration artists. This aspect carries significance due to the previous lack of emphasis on sculptors in the network analysis. This discrepancy reflects a longstanding dichotomy in values between painting and sculpture within Spanish art, with painting traditionally garnering greater appreciation. This is evidenced by the big difference in participation rates of painters and sculptors in Exposiciones Nacionales. However, as the avant-garde movement emerged at the turn of the twentieth century, artists began to exhibit greater versatility, blurring the lines between disciplines. It was by the beginning of the twentieth century and with the starting of the avant-garde that artists started to be more polyvalent, being sculptors and painters such as Picasso, and their artworks were mostly equally exhibited.

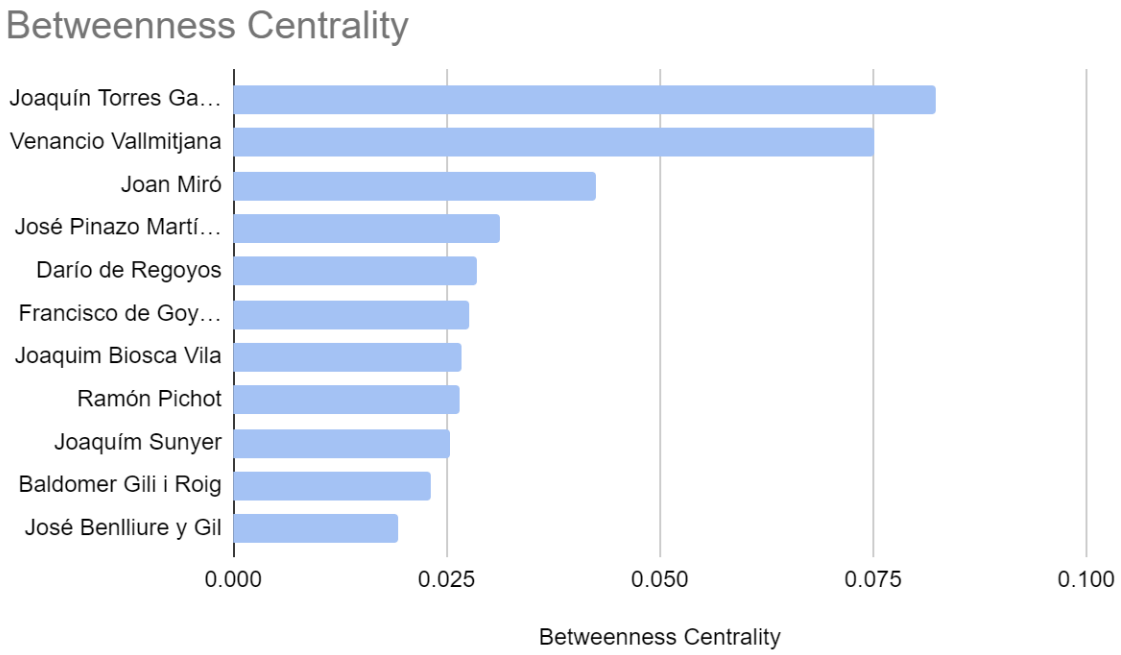

Figure 20. Artists with the highest betweenness centrality in the Spanish exhibitions ecosystem registered in this corpus from 1800 to 1939.

Furthermore, the shift in paradigm becomes evident when comparing the most exhibited artists and the betweenness centrality measures. In contrast to the previously analysed networks where Spanish Old Masters dominated the exhibition landscape, we now

observe a different set of artists forging connections through exhibitions, shaping concepts of Spanish art more attuned to the nineteenth and early twentieth centuries. To deepen our understanding of these different concepts of Spanish art, which challenge the established norms identified in prior analyses, the next metric to analyse is the results from the community detection algorithm.

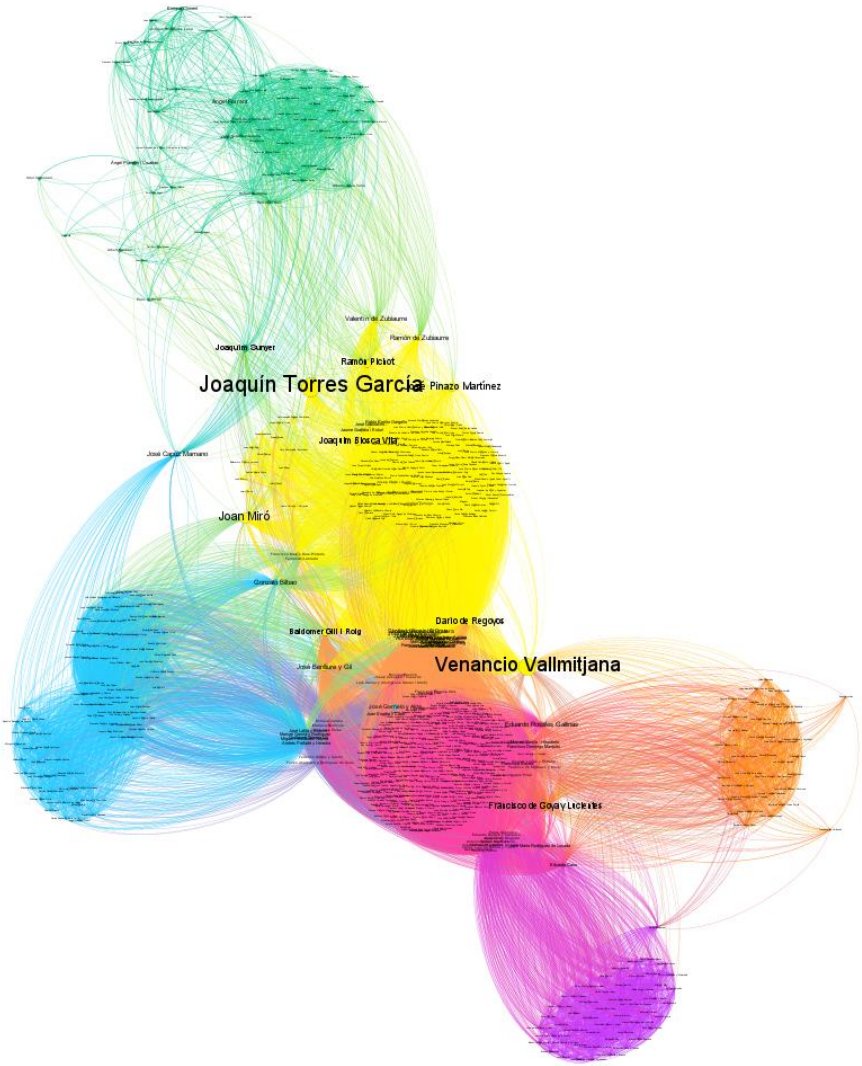

Figure 21. All artists co-exhibition network of the Spanish exhibition ecosystem registered in this corpus from 1800 to 1939.

The community detection algorithm has unveiled six different communities, marking a notable departure from the overarching patterns observed in the previous global network analysis [Fig. 21]. Particularly in the Spanish context, the prominence of the Old Masters community highly contrasts with the patterns observed previously. The community conformed by the Old Masters comprises only 5.74% of the total artists in the network, indicating a limited presence in exhibitions of artists considered under the category of Old Masters. When considering this outcome alongside the observation that Spanish Old Masters do not attain high scores in the other analysis, indicating their limited presence in exhibitions and low betweenness centrality, it becomes evident that their impact and significance in shaping the concept of Spanish art within exhibitions in Spain is minimal. However, this discrepancy does not negate the historical significance of these artistic traditions; rather, it suggests that while the promotion of this vision may not have been a priority within temporary exhibition dynamics, it remained prevalent in the permanent collections of museums. As a result, contemporary artists tended to dominate the exhibition circuit, reflecting a difference between exhibition programming and museum collections.

Following the analysis of the communities in this graph, the other communities most populated and containing the most exhibited artists are primarily consisting of contemporary artists. Many of these artists were recurrently showcased in Exposiciones Nacionales de Bellas Artes, as well as in various other settings that generated smaller clusters, such as those associated with Catalonian artists. However, not all these clusters of contemporary artists have an impact on the entire Spanish art network. That is why the analysis from global to local and vice versa contributes to achieving a better understanding of complex cultural systems. In this case, exhibitions in Spain crafted clusters of nineteenth century painters that do not have a direct repercussion in the general network but are significant when analysing the co-exhibition network in Spain. There is one cluster within the Spanish network that stands out: that of Catalonian artists. This particular cluster has a significant impact on the larger network of artists.

However, a notable observation from the Spanish context is the scarcity of international artists exhibited alongside Spanish artists. While the network in this chapter includes all

artists, not just Spanish ones, it is evident that even the few international artists featured, such as Joaquín Torres García or Rafael Barradas, spent a significant portion of their artistic careers within the Spanish context. This indicates that the intersections observed in the chronological artist network, where Spanish artists were exhibited alongside international counterparts, primarily occurred in exhibitions held abroad. In contrast, within Spain, international artists were predominantly showcased independently, for example, the solo exhibition that the Museo Nacional del Prado devoted to Mengs in 1929, and Spanish artists were featured in more exhibitions with other Spanish artists, leading to the formation of more individualistic and local clusters. However, these clusters lacked the strength to exert significant influence on the broader network.

The presence of international artists in Spain was primarily associated with avant-garde artists, a trend illuminated by the chronological study. The avant-garde not only signifies a disruptive shift in traditional art styles but also reflects changes in exhibition dynamics, how and with whom artists were exhibited. Furthermore, this period provided the time and platform for artists such as Maruja Mallo to be exhibited, showcasing their work more prominently nationally than in the other two contexts analysed.

But what is the concept or concepts of Spanish art exhibited in Spain? The exhibited overall concept appears to be a more modern one, highlighting artists active during this period and emphasising contemporary artistic trends. This stands in contrast to the encapsulated concept of Spanish Old Masters, which seems to emanate not from temporary exhibitions but rather from the permanent collections found within Spain.

6.2 The United Kingdom

6.2.1 Context

The United Kingdom differs from the context of Spain and the United States, due to the rich tradition of art collecting that led to the early institutionalisation of display spaces. Public museums in the UK began consolidating their collections notably earlier than in Spain or the United States, primarily towards the end of the eighteenth century. These museums sourced their artworks from both royal and private collectors. Among the

earliest public museums established in the UK are the British Museum in 1750, enriched by the collection of Sir Hans Sloane (Anderson, 2012), and the National Gallery, inaugurated in 1824, which incorporated diverse private collections (Taylor, 2012). Consequently, art institutions in the UK commenced consolidating their permanent collections (acquiring more objects) and incorporating exhibitions into their programs earlier than their counterparts in the other analysed contexts. By the first decades of the nineteenth century, a well-established exhibitions program was integral to these art institutions. By the first decades of the nineteenth century, a consolidated exhibitions program was part of art institutions, where they organised exhibitions devoted to a specific artistic style or artists, or even annual Summer Exhibitions, where different artists, depending on the organiser, took part in them.

Moreover, the British cultural landscape is interesting due to the establishment of major art institutions, initially comprising diverse private art collections. Upon transitioning into public art institutions, these establishments came under the management of trustee boards, many of whom were private collectors or members of the aristocracy. These boards tailored events such as exhibitions to a specific audience (Whitehead, 2005). While some aristocrats retained their private collections, others opted to make their collections publicly accessible to align with European trends (Marbles, 2018). This is an interesting example because these institutions, created by different private collections, and run by trustee boards, demonstrated the important role of the network built by them with other collectors while establishing collections but also when organising exhibitions since they would be the main lenders. This phenomenon is evident in events like the Loan exhibitions held in Leeds during the nineteenth century, which served as symbols of status and collective cultural sophistication (Wolff & Seed, 1988). Essentially, the quality of the exhibitions and the objects displayed therein reflected the taste and cultural understanding of the collectors, particularly the emerging middle-upper class.

However, the crucial role played by individuals within the British exhibition and museum collections landscape is rooted in a significant tradition of collecting and connoisseurship within the country (Cowan, 2006). Moreover, it is also attributed to the advantageous position of Britain, particularly London, within the international Western art market of

the nineteenth century (Avery-Quash & Huemer, 2019). In the early years of the nineteenth century, collectors, dealers, and subsequently, galleries and art institutions assumed a prominent role in shaping the British socio-cultural context, along with their burgeoning interest (Helmreich, 2017). As a result, exhibitions were fuelled by collectors and their private collections, while the art market in London thrived in this conducive environment. Although collecting Spanish art had been part of artistic taste trends during the eighteenth century, it did not achieve widespread popularity until the nineteenth century.

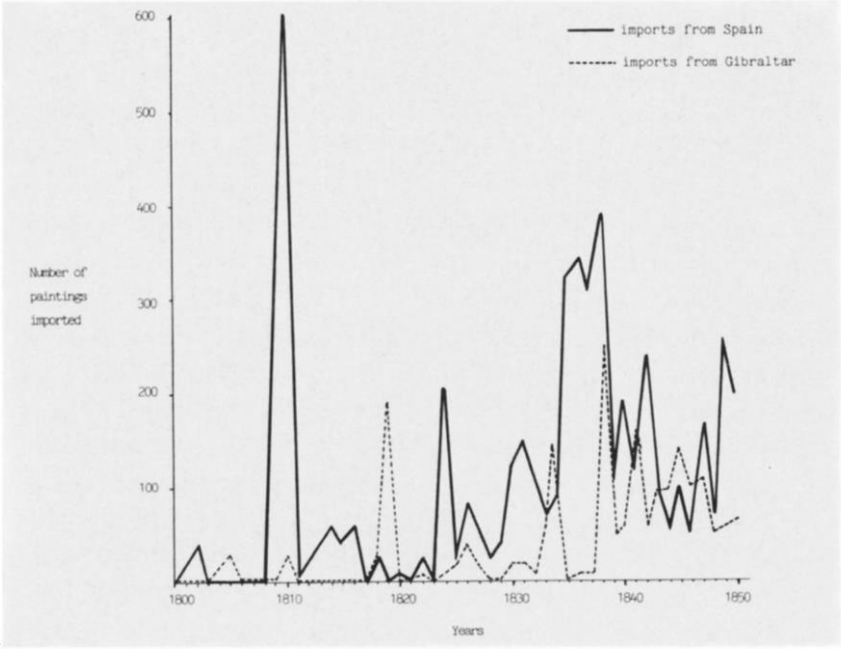

Figure 22. Number of Spanish artistic objects imported from Spain to the UK. From Glendinning, N. (1989). "Nineteenth-Century British Envoys in Spain and the Taste for Spanish Art in England".

The enthusiasm in the United Kingdom for collecting Spanish art traces its roots back to the late sixteenth century, with records of travellers bringing back objects from Spain (Avery-Quash & Huemer, 2019; Glendinning et al, 2010). However, it wasn't until the end of the eighteenth century that this interest became firmly established. During this time, the circulation of copies of artworks by Goya, Murillo, and Velázquez, along with a growing appreciation for Murillo's work, fuelled the British taste for Spanish art (Japón,

2018). Interest in Spanish art surged further during the nineteenth century, spurred by the increased flow of Spanish artistic objects into the UK [Fig. 22] and the establishment of collections solely dedicated to Spanish art, such as the one belonging to the Duke of Wellington, which generated considerable excitement within the cultural sphere in the UK.

The high influx of Spanish artworks in the art market facilitated the lending of art pieces to museums and exhibitions. The information from Sales Catalogues in Britain from 1681 to 1840 collected by the Getty Research Provenance gives an overview of the importance of the nineteenth century as a crucial moment for selling Spanish art [Fig.23] (Fernández-García, 2019). Despite this big interest in Spanish art does not align with an interest in contemporary Spanish art. The British taste for Spanish art also follows the tradition of the interest of the Old Masters.

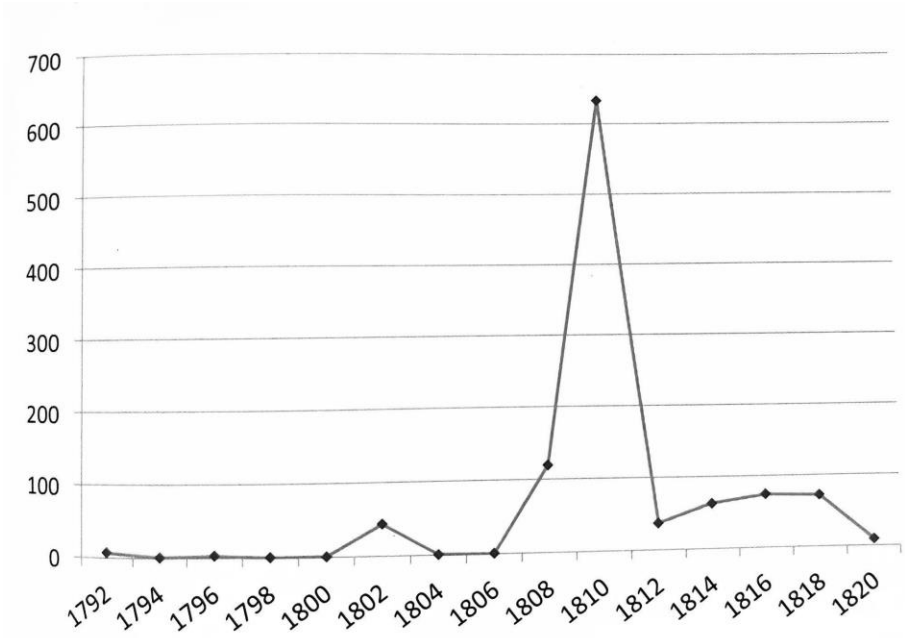

Figure 23. Numbers of Spanish Paintings sold in the London art market from 1792 to 1810. From Fernández-García, A. M. "Commercial Agents of Spanish Painting in the United Kingdom, 1780 – 1820" in Avery-Quash & Huemer, *London and the Emergence of a European Art Market, 1780 – 1820,* Getty Research Institute, 2019.

6.2.2 Analysis

The initial analysis of the data from this corpus, focusing on exhibitions held in the United Kingdom, involves examining which Spanish artists were most frequently exhibited. This examination aims to understand better how the artists that populated the most these exhibitions and how they were repeated over time. The data show that in the collected corpus, the most exhibited artists are: Murillo and Velázquez, followed by a set of Flemish, Dutch and Italian Old Masters. Continuing the tradition established in previous centuries, British institutions held a strong preference for Old Master art, as happened with collectors. British collectors believed that investing in these artists was a sound strategy, given their enduring recognition in the artistic and cultural landscape. These collecting practices became firmly entrenched during the eighteenth and early nineteenth centuries (Hoock, 2012)

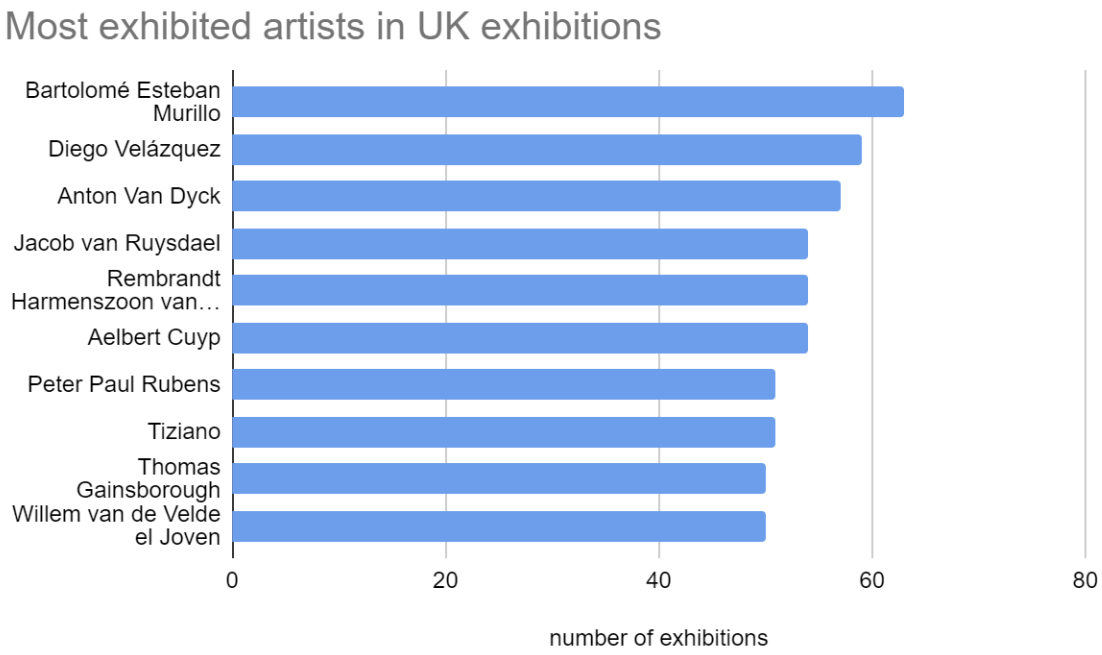

Figure 24. . Most exhibited artists in the UK exhibitions ecosystem registered in this corpus from 1800 to 1939.

Compared to the previous graph, this graph shows a shift in the dynamics of British exhibitions, indicating the emergence of new dynamics. Unlike in the Spanish context, where Old Masters were not prominently featured in exhibitions, Murillo and Velázquez are now part of 63 and 59 exhibitions, respectively. Moreover, the top 10 most exhibited artists show similar participation levels, suggesting a notable popularity of Old Masters exhibitions. This trend anticipates a strong preference for showcasing Spanish Old Masters alongside their European Old Masters.

Now, changing the focus to the graph plotted using the co-exhibition schema, the following metric under analysis is betweenness centrality. Examining the betweenness centrality in this network reveals an interesting blend of Spanish Old Masters and Spanish contemporary artists. The betweenness centrality of this network illustrates a shift in dynamics when exhibiting Spanish art. Murillo, besides being the most exhibited Spanish artist, also possesses the highest betweenness centrality, indicating that he was exhibited alongside a wide range of artists. Following Murillo, the Spanish artist with the second-highest betweenness centrality is Joaquín Sorolla. This shift from traditional Old Masters to Sorolla, followed by Francisco de Goya, showcases a change of perspective from this Old Masters centred concept of Spanish art. This marks a significant shift in dynamics as nineteenth-century Spanish artists become integral to the graph. Sorolla's international popularity surged towards the end of the nineteenth century, leading to the organisation of exhibitions dedicated solely to his artistic output, such as the one held in Grafton Galleries in 1908. This Spanish Impressionist painter found his artworks resonating with international audiences due to his creation of new iconographies with a regionalist tint in his choice of depicted scenes (Hopkins, 2020). His artistic style also aligned with the popular European movement of Impressionism, which was particularly prevalent in France at the time. The catalogue of his solo exhibition not only featured sales of displayed artworks but also promoted his services as a painter, underscoring the widespread appeal of his style.

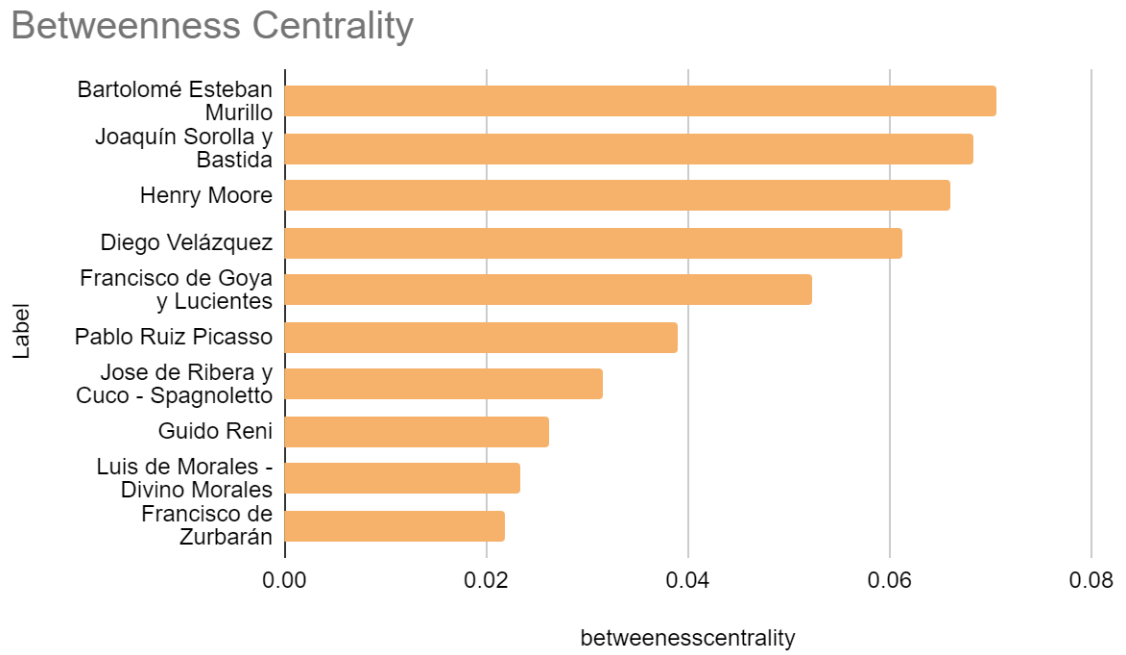

Figure 25. Artists with the highest betweenness centrality in the British exhibitions ecosystem registered in this corpus from 1800 to 1939.

The analysis of betweenness centrality highlights the significance of alternative concepts within Spanish art that emerged within exhibition dynamics, beyond the predominant focus on Old Masters, despite their frequent display. To gain a better understanding of the formation of concepts within Spanish art, particularly those crafted by nineteenth-century artists, the next step in the analysis will involve employing the modularity class algorithm. Following the patterns seen in the two previous analyses of this network, the modularity class algorithm highlights that the two most populated communities and one of the smaller ones (coloured in pink, yellow and orange), comprising 74% of the total of artists of the network focuses on Old Masters or a more sixteenth, seventeenth-century art. These communities demonstrate the interest and appreciation of British Institutions and collectors for the Spanish Old Masters. These two communities are conformed of not only Spanish Old Masters but also Dutch, Flemish and Italian, representing how British exhibition dynamics tended to showcase Spanish Old Masters more than contemporary Spanish painters, and when doing so, they exhibited Spanish Old Masters painters with other European old Masters and very rarely with contemporary artists. As a difference

with the Spanish exhibition landscape, in the United Kingdom, the Spanish Old Masters are part of permanent collections in display but also actively part of exhibitions from very early stages, showing not only what was permanently held in these institutions but also artworks from private collections, adding more value to these artists and art pieces and perpetuating the consecration of Spanish Old Masters.

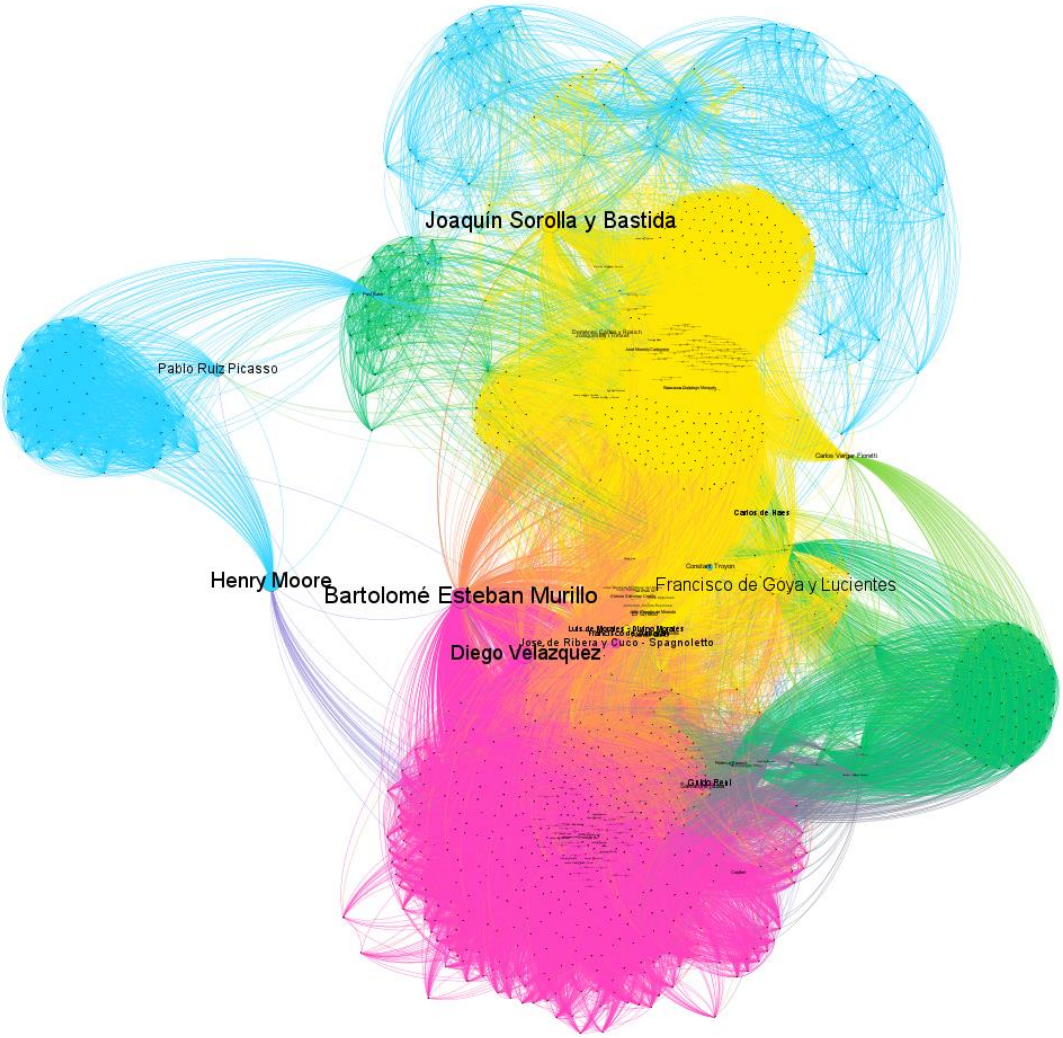

Figure 26. All artists co-exhibition network of the British exhibition ecosystem registered in this corpus from 1800 to 1939.

However, and as mentioned in previous chapters, this consecration of Old Masters prevalent in Britain was primarily institutionalised by specific and influential museums, galleries and art institutions. In this corpus of exhibitions, institutions like the Royal Academy of Arts consistently showcased Spanish Old Masters in their annual Old Masters exhibitions, exemplified by the "Old Masters and Deceased Masters of the British School" exhibition in 1872. The Royal Academy of Arts hosted the sole exhibition where Spanish artists beyond the Old Masters were displayed, known as the "Exhibition of Spanish Painting" in 1921, the exhibition did not only exhibit paintings but a wide range of Spanish artistic objects such as sculpture, tapestry or furniture. The interesting aspect of this exhibition is that even though the organisers devoted a significant part of the exhibition to display the Spanish Old Masters, it also included contemporary artists such as Mariano Fortuny or Antonio María Esquivel. That can also be seen in the organisation of the information in the exhibition catalogue that predominantly emphasized Old Masters' objects, relegating "modern paintings and sculptures" to the latter pages. This exhibition displayed artworks from hundreds of artists, which made this exhibition more of a survey exhibition to understand what was Spanish art more than a curated exhibition of contemporary Spanish artists. Hence, during the period spanning 1800 to 1939, influential art institutions like the Royal Academy of Arts in London constructed a notion of Spanish art predominantly centred on Old Masters and a Baroque-influenced perspective, reinforced by the inclusion of contemporary European Orientalist that depicted Spain as a country anchored in the past.

Nonetheless, this does not mean that nineteenth-century and twentieth-century Spanish painters did not have space in the British cultural arena. The betweenness centrality plot shows how there are nineteenth-century artists that had a space within the exhibition dynamics, and this can be appreciated in the communities that divided the rest of the nodes of this network, representing 26% of the entire network, outline concepts of Spanish art focusing on more contemporary artists. These groupings encompassed nineteenth-century artists with varied artistic styles, often leaning towards academic and neoclassical aesthetics.

The British exhibition ecosystem has also showcased avant-garde Spanish artists like Picasso and Miró. It's interesting to note the persistence of exhibiting Catalonian artists as a community, both in the UK and Spain. Contrasting the UK network with the others, British nineteenth-century artists were occasionally exhibited alongside Spanish Old Masters rather than with their Spanish counterparts of similar artistic styles or periods of time. Spanish Old Masters gathered high recognition internationally, while the nineteenth-century Spanish artists became more popular by the end of the nineteenth century. Exhibiting British contemporary artists alongside Old Masters in exhibitions significantly elevated their public recognition. One example is the 1887 exhibition titled "Exhibition of Works by the Old Masters and by Deceased Masters of the British School including a Collection of Watercolour Drawings by Joseph M. W. Turner, R A." Turner was already a renowned painter in Britain; however, being showcased alongside the Old Masters, especially when exhibited alongside Spanish artists, further elevated his stature, ultimately enhancing the appreciation for his artistic legacy after his death. This type of exhibition made Turner a part of the Old Masters club, in other words, his artworks were compared and exhibited together with Spanish Old Masters rather than with other Spanish artists of the same period or similar artistic style, allowing for a more direct comparison, emphasising his unique position within the artistic canon.

And mirroring the previous section of this chapter, after these analyses, the question is but, what is the concept of Spanish art exhibited in the United Kingdom? The outlined concept revolves around religious painting, focusing predominantly on the Renaissance and Baroque periods. This emphasis is not surprising given the strong interest of British Orientalist painters and writers, who actively promoted this perception of Spain anchored in its historical past (Hopkins, 2020). They romanticised Spain, which for them was a way to show how advanced and notably forward the British society was, compared to the Spanish one, adding to that the portrayal of Spain in British exhibitions often centred on its historical legacy, particularly through the lens of Old Masters. This portrayal seemed to overshadow the artistic contributions of Spain both before and after this period, shaping a narrow perspective of Spanish artistic identity within British cultural contexts.

6.3 The United States of America

6.3.1 Context

The cultural landscape of the United States presents a distinct example of the establishment of public museums and the institutionalisation of art collections. Unlike Europe, where centuries-old monarchic structures prevailed, the societal framework in the US mirrored the emergence of the middle class by the nineteenth century. The newfound wealth in the US was predominantly derived from trade in goods, natural resources, and fossil fuels. Within this context, the burgeoning social elite began to amass their own art collections, drawing inspiration from European models (Reist, 2021). However, and this is a distinctive reason for this new social status, the interest in collecting was not based on keeping their social upper class position since they did not have any nobiliary title, more as an education and cultural status (Gleason, 2015). Following the European trend of the nineteenth century, these prominent individuals focused on acquiring works by Old Masters, aiming to connect with European traditions and establish a lasting artistic legacy.

In the first half of the nineteenth century, the United States began to actively collect Spanish art. Initially, these acquisitions were often personal purchases made by politicians or diplomats, similar to the practices observed in the United Kingdom. Additionally, this period presented opportunities for collecting through various means, including artworks looted during the Peninsula War and the subsequent desamortizaciones organised by the Spanish government. Many US collectors capitalised on these opportunities, acquiring not only artworks but also architectural pieces, thereby contributing to the growing interest in Spanish art within the United States (Kagan. 2019) Contrary to expectations based on prevailing trends in European taste for Spanish art at the time, society in the United States not only developed an appreciation for traditional and renowned Spanish artists but also cultivated an interest in collecting nineteenth-century art during the Gilded Age (Reist & Colomer, 2012).

These private collectors in the United States mirrored trends in Europe by institutionalising their collections through foundations and public/private spaces.

Examples of these private collections are some of the most famous collections of Spanish art in the US, such as the Hispanic Society of America, founded by Archer M. Huntington. Consequently, not all organised exhibitions had an exhibition committee or board, resulting in different exhibition displays. The interest of US collectors extended beyond nineteenth-century artists. The Hispanic Society, primarily housing a permanent collection of Spanish art, also curated exhibitions. However, instead of focusing solely on the Spanish Old Masters, the institution hosted exhibitions featuring contemporary Spanish artists, such as the two solo travel exhibitions of Sorolla in 1909 and 1911, who achieved huge recognition in US society (Boone, 2013).

Another significant aspect to consider is the notable position of New York as a new relevant place for the art market by the end of the nineteenth century, which flourished in the twentieth century. This transition coincided with the emergence of dense art hubs in major US cities, particularly Manhattan, where galleries served not only as exhibition spaces but also as venues for purchasing European art. For example, one of the spaces that had monographic exhibitions of Spanish art during the period of time studied is the Ehrich Galleries. Ehrich Galleries were founded in 1903, and they specialised in art from before the nineteenth century. This gallery consistently promoted Spanish Old Masters through small exhibitions only devoted to them, for example, the exhibitions of Early Spanish Paintings, organised in 1913 and 1921, or the exhibition of paintings by Goya, el Greco, and Zurbarán in 1916. However, this gallery did not sell the exhibited object *in situ*, but it sold it through other galleries. Galleries such as Knoedler Galleries were one of the spaces where Spanish art was sold to collectors in New York (Jensen, 2018). The data collected from sales catalogues, only stockbooks, by the Getty Provenance Index shows that, despite not specialising exclusively in the sale of Spanish art, Knoedler Galleries conducted numerous transactions involving Spanish art by the end of the nineteenth century [Fig. 27].

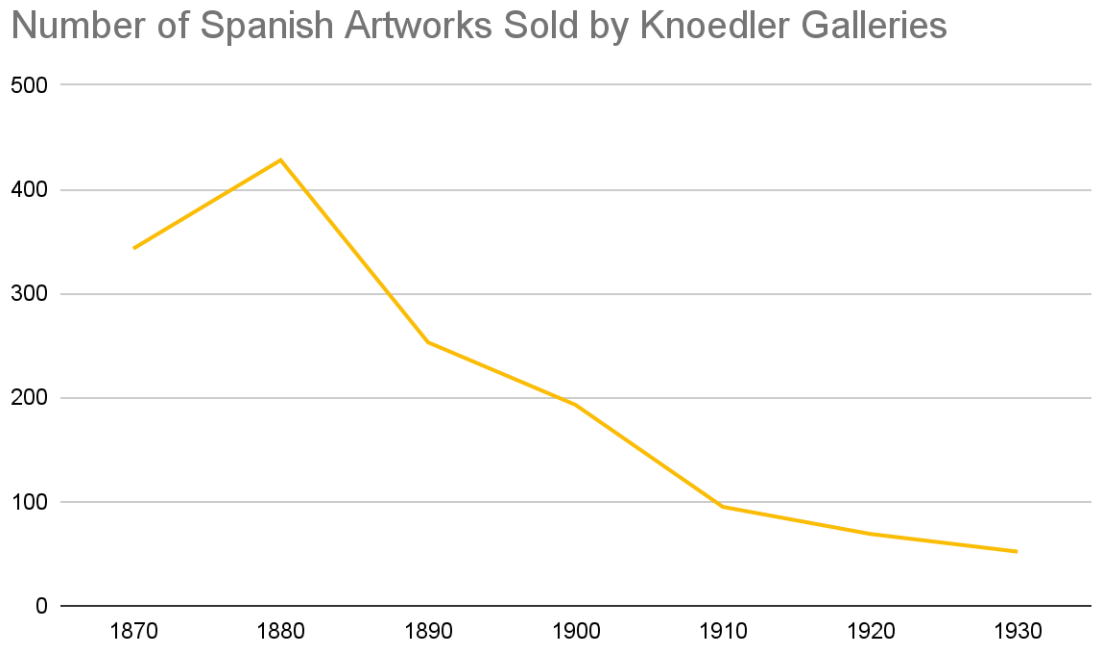

Figure 27. Number of Spanish artworks sold by Knoedler Galleries until 1930. The information was collected from the Provenance Index at the Getty Research Institute.

Furthermore, it is notable that while some of the exhibitions organised by Knoedler Galleries concerning Spanish art adhered to a more traditional concept, for example, the exhibition "Loan Exhibition of Paintings by El Greco and Goya" in 1912, the artists whose works were most frequently sold by Knoedler were contemporary Spanish artists [Fig. 28]. The data was collected by the Provenance Index at the Getty Research Institute, which gives us an overview of what the gallery was selling and what the American society was collecting from 1800 to 1939.

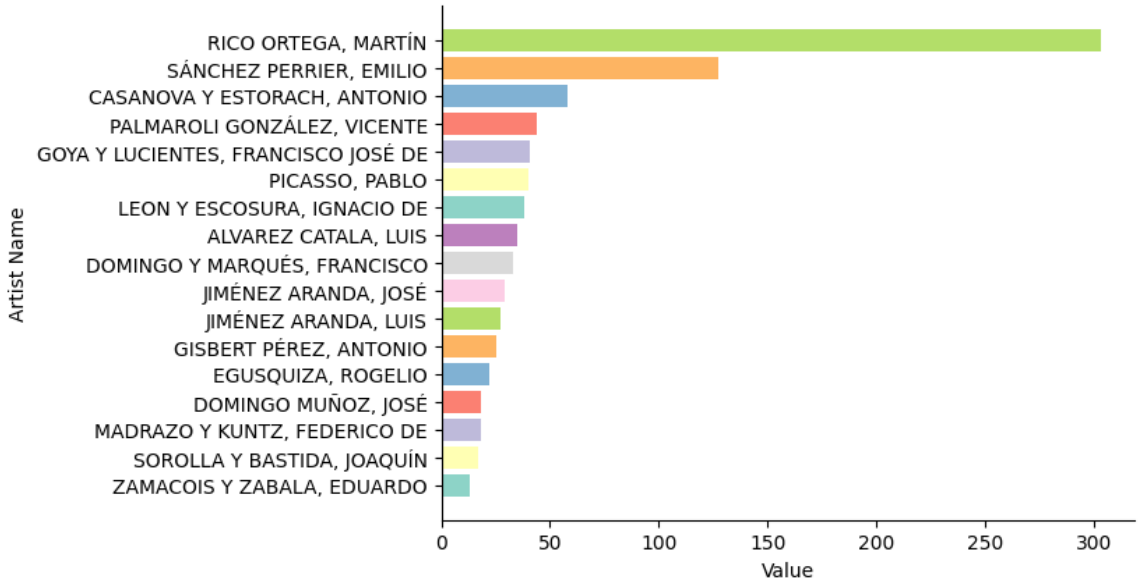

Figure 28. The most sold artists by Knoedler galleries until 1930. The information analysed was collected from the Provenance Index at the Getty Research Institute.

The analysis reveals that the top-selling Spanish artists in the gallery are Martín Rico Ortega, Emilio Sánchez Perrier, Francisco de Goya y Lucientes, and Pablo Picasso. The type of art sold is more late nineteenth-century art, with the exceptions of Goya, a late eighteenth-century painter, and Pablo Picasso, one of the leaders of the avant-garde movement. Knoedler Gallery's work is an example of what happened in the United States art market.

6.3.2 Analysis

The artists most exhibited in the exhibitions held in the United States that are part of this corpus are artists who belong to the avant-garde movement, such as Picasso, Matisse, or Braque. However, if we explore further only the most exhibited Spanish artists, we find that after Picasso, the next most exhibited Spanish artists are Goya, Velázquez and Murillo. Therefore, there is still a strong presence of Spanish Old Masters in the US artistic and cultural arena, but not as connected with other European Old Masters since they are not also highly exhibited as happened within the British context. However, analysing the degree centrality of the US co-exhibition graph, in other words, the number

of connections per artist, we can see that even though artists such as Goya, Velázquez and Murillo were highly exhibited, they did not have that many connections, showing that the way of exhibiting Spanish artists is not as was happening in the other two previous contexts, they are displayed in smaller or more curated exhibitions.

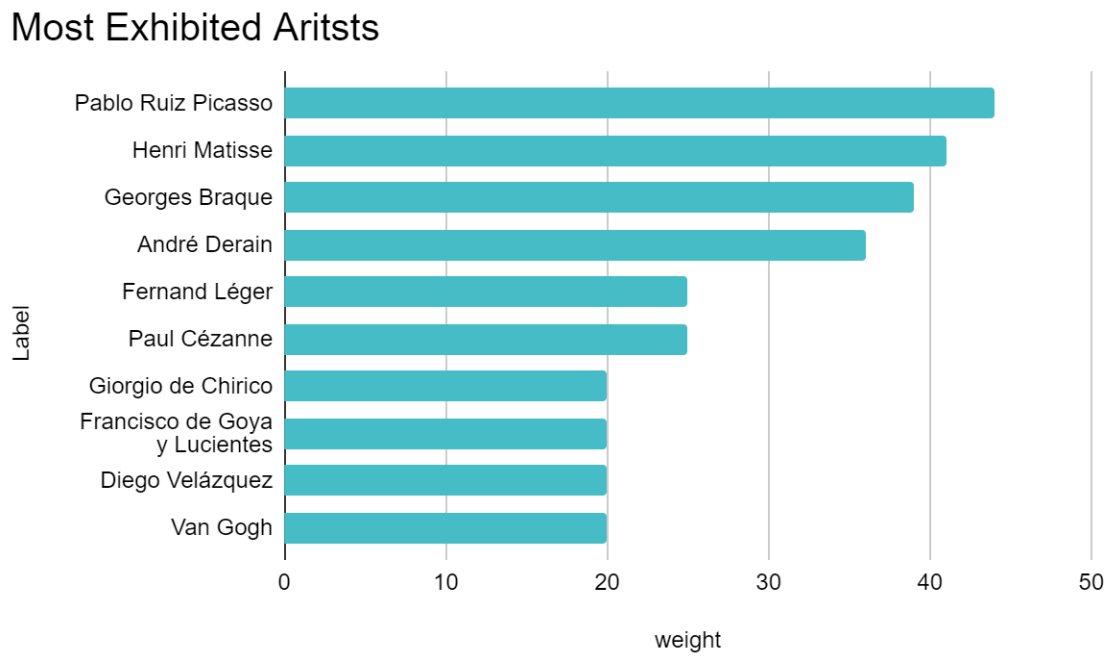

Figure 29. Most exhibited artists in the US exhibitions ecosystem registered in this corpus from 1800 to 1939.

After analysing the co-exhibition graph, the betweenness centrality of the network's nodes continues to reinforce a pattern that diverges from the two previous dynamics examined. Spanish artists with the highest betweenness centrality include Picasso, Sorolla, Zuloaga, and Velázquez. This indicates a shift in the strategies employed for exhibiting Spanish art, favouring late nineteenth-century and avant-garde artists. These artists play a crucial role in connecting various communities or groups of artists frequently exhibited together, highlighting the change in exhibition practices where nineteenth-century artists now participate in exhibitions alongside different Spanish artists.

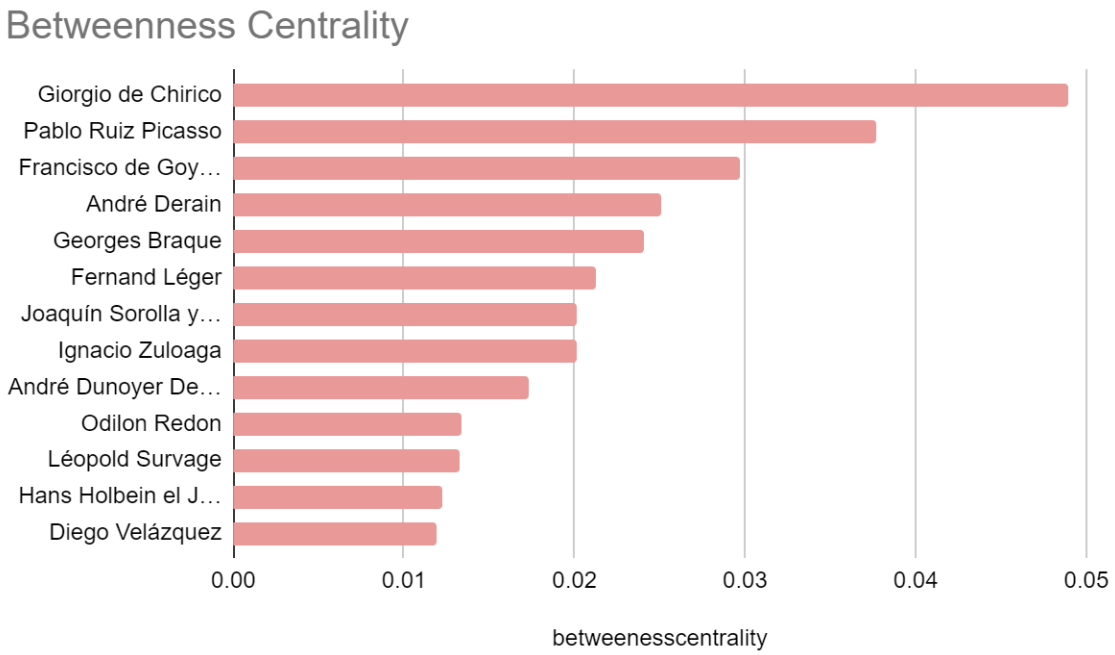

Figure 30. Artists with the highest betweenness centrality in the US exhibitions ecosystem registered in this corpus from 1800 to 1939.

To understand better these new constructions and clusters, the subsequent analysis focuses on the communities highlighted by the modularity class algorithm. The new configuration in communities shows how the exhibition dynamics in the US do not follow the patterns of what we have been analysing before, artists are not exhibited together by similarities in their artistic styles or active period of time, in these dynamics, the connection between artists are made adding a new layer of complexity. One example of this is the biggest community detected by the algorithm, coloured in pink, which has Velázquez as one of the most connected artists in the cluster. This time, instead of being exhibited mainly with other Old Masters artists, as happened in the case of the UK, Velázquez was exhibited with artists such as Edouard Manet, John Constable, Joshua Reynolds or Camille Pissarro. Velázquez was shown with Old Masters as well, which makes him an influential node that connects otherwise separate communities. In his network, Velázquez does not belong to the same community as the rest of the Spanish Old Masters, such as Ribera, Zurbarán or Murillo. This exhibition dynamic does not only occur with Velázquez, for example, since Picasso entered the network, the dynamics

fluctuated when displayed Picasso. Picasso was never only exhibited with other cubist or avant-garde artists, but from very early stages, his artistic production was also connected with other artists, such as the Old Masters, rooting it in the art history tradition.

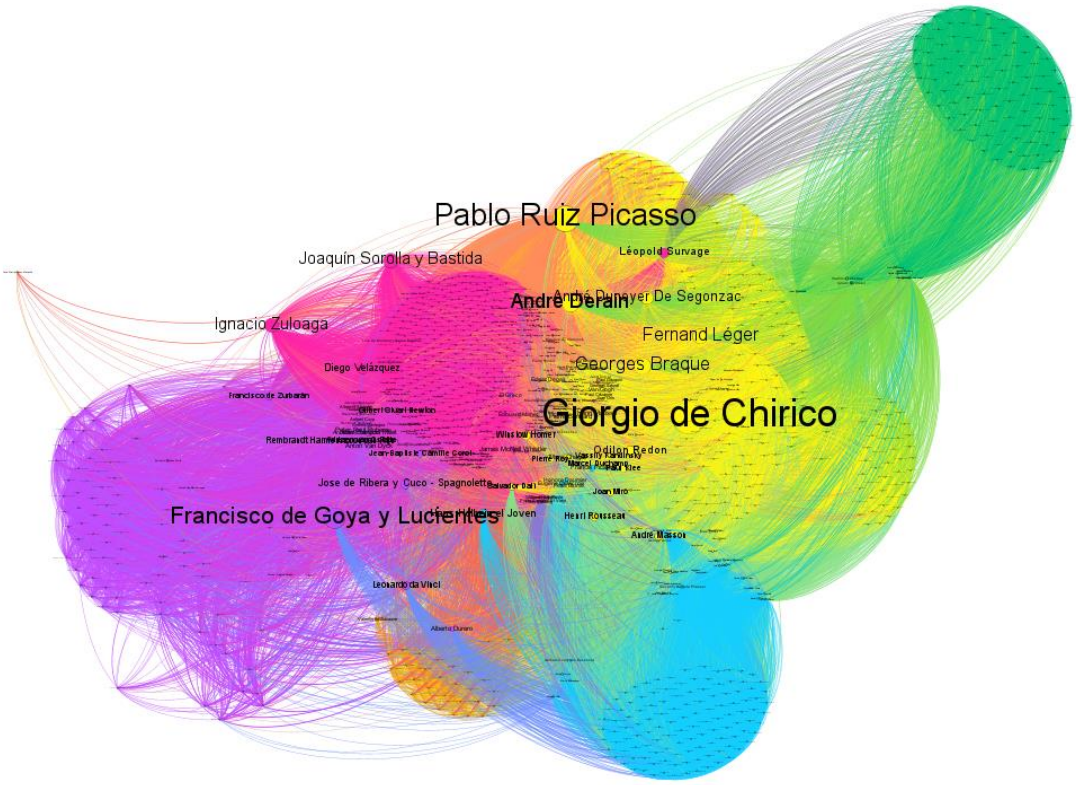

Figure 31. All artists co-exhibition network of the US exhibition ecosystem registered in this corpus from 1800 to 1939.

Given the newfound appreciation for Velázquez, the next intriguing case to examine individually is Murillo. As observed, Murillo stands out as one of the earliest Spanish painters to gain widespread recognition outside Spain, attaining significant popularity by the late eighteenth century. However, in the previous local ecosystems analysed, Murillo was consistently exhibited alongside other Old Masters, both Spanish and European. He remains entrenched within the community primarily comprising Old Masters and does not fit into these emerging re-conceptualisations of his artistic production. One possible reason for this could be the thematic focus of Velázquez's works; while Murillo is a canonical Baroque painter known for his depictions of saints, mystic and biblical scenes,

Velázquez, in contrast, depicted a broader range of subjects, including religious and mythological themes as well as everyday life scenes such as "Vieja Friendo Huevos" and "El Aguador". Besides the depicted subject, the artistic style and *maniera* of Velázquez made him an inspiration for modern and nineteenth-century painters, for example, Manet (Tinterow & Lacambre, 2003). Moreover, the increasing taste inherited from the British for Velázquez grew over the whole nineteenth century in the United States (Reist & Colomer, 2012).

However, these new re-conceptualisations of painters are not always intentional; they also stem from the evolving exhibition programming that took shape in the nineteenth century. Notable among these were the Summer Exhibitions, or annual exhibitions, held in various US institutions, which brought together artists from across the Western world. A prime example within this corpus is The Chicago Art Institute, where exhibitions where Spanish art was displayed, were significant events showcasing hundreds of Western painters and a diverse array of artistic styles. Exhibitions such as the "Loan Collection of Old and Modern Masters from Chicago Collections" in 1935 or the "Third Annual Exhibition of the Art Institute of Chicago" in 1885 presented a broader perspective on Spanish art. Therefore, the re-conceptualisation of artists in exhibitions is not always deliberate but often emerges from the configuration and dynamics of these exhibitions, which bring forth new and meaningful connections.

The communities showcased a blend of various artistic concepts and historical periods, offering a fresh perspective on Spanish art. What becomes evident is the significant involvement of nineteenth-century painters and avant-garde artists in exhibitions across the United States. These exhibitions shape modern and accurate interpretations of Spanish art within their respective eras. An illustrative example within this co-exhibition network is the emergence of the second largest community, characterised by avant-garde artists highlighted in yellow. Among the most prominently featured artists in this community are Picasso, followed by Matisse, Braque, and Derain. Additionally, other Spanish avant-garde figures like Miró and Juan Gris contribute to this vibrant artistic community.

Meanwhile, the reception and formation of diverse notions of Spanish art began with the Old Masters. Analysis of exhibition dynamics reveals that US institutions exhibit a broader interest in nineteenth-century and avant-garde Spanish painters, highlighting contemporary interpretations of Spanish art rather than solely emphasising its historical significance and national glory.

6.4 Conclusions

The study of the three local contexts within this thesis provides a more detailed understanding of the variety of concepts of Spanish art outlined by the exhibition dynamics in each country. Firstly, the concept of Spanish art based on the Old Masters, which portrays that view of a Spain anchored in the past with religious, and renaissance and baroque tints provided by the artworks of the Old Masters, is noteworthy. Despite the popularity of Spanish Old Masters, particularly Murillo and Velázquez, who captivated collectors, collections and exhibitions in the United Kingdom and the United States in very early times, this encapsulated traditional concept of Spanish art predominantly thrives and endures in British exhibitions. This does not mean that Spain did not consecrate these painters as an example of the concept of Spanish art. They did. But through permanent collections, specifically the one at the Museo del Prado when in the nineteenth century, aimed to give the most complex and complete concept of Spanish art based primarily in non-contemporary artists. On the other hand, this traditional concept of Spanish art is also exported to the United States, showcased in exhibitions and also in the permanent collections of museums like the Metropolitan Museum of Art, however, it is not as noticeable in this network because of the organisation and curation of exhibitions, which do not only display Old Masters with each other but with artists from other artistic styles and time.

Considering the cultural impact of the Peninsula War in the first decades of the nineteenth century in Spain, it's crucial to acknowledge that not all active Spanish painters during this period had their artworks circulated in the international art market. The influx of Spanish artworks into Western markets during this time was largely due to war looting. Therefore, the international connections with Spanish nineteenth-century

artists happened in different settings depending on the country. In Spain, the exhibition circuit promoted contemporary painters and fostered new synergies with them. Yet, it remains challenging to bridge the gap between Old Masters and contemporary artists within art collections since often Old Masters are part of permanent collections, and contemporary artists in temporary exhibitions, unlike the approach taken by institutions such as the Royal Academy of Arts, which displayed some eighteenth - nineteenth century British artists with the Old Masters in exhibitions.

The only nineteenth-century painter who achieved an international impact was Goya with his engravings during the early nineteenth century. A notable observation from these analyses is the cumulative score of Goya's high betweenness centrality in the global network, as shown in the previous chapter. While locally, Goya does not hold high betweenness centrality in any of the three countries individually, his figure is highlighted with significant betweenness centrality when considering all contexts collectively. That means, in each context, Goya was exhibited with artists with a wide diversity of artistic styles or active in different periods of time, making it a high connector of clusters when plotting the global network.

Lastly, this chapter sheds light on the pivotal role of institutions in each country and their contribution to the institutionalisation of artistic concepts through permanent collections sourced from private collectors—be it monarchy, aristocracy, or the emerging high middle class. The discourses crafted by these art institutions, bolstered by extensive networks of governmental support or societal elites, utilise the power to legitimise and disseminate concepts of art to the public.

Chapter 7

7 Conclusions

The main research question of this study revolves around the consolidation and creation of the concepts of Spanish art as expressed in exhibitions in three different contexts: Spain, The United Kingdom and The United States of America, from 1800 to 1939. With that purpose, the conclusions drawn come from the study of the corpus of 336 exhibitions from a data perspective but also a traditional approach, analysing each one of the information collected in the catalogues.

To answer the main research questions and the following sub-questions of this study — who showcased Spanish art in exhibitions? How were Spanish artists displayed during the studied timeframe and with which other artists? How did exhibition dynamics change over time? What were the differences in the exhibition ecosystems of the three countries studied?—I adopted a computational approach to map global patterns with a comprehensive view of individual events.

This study enhances both art historical research and computational methodologies by illustrating the application of network analysis, particularly co-exhibition networks, as an effective tool for revealing patterns and analysing exhibition dynamics. By translating and adapting terms and specific metrics from graph theory, such as degree centrality, betweenness centrality, and modularity class, into art historical research contexts, it establishes a robust framework for exploring and understanding the human-made connections formed when artists are exhibited together from a macro-perspective.

Even though a data-driven analysis was the most suitable approach for this study, it is incomplete without a micro approach. This entails a detailed study of the primary sources—each catalogue—alongside an extensive bibliography in different languages that has contributed to the analysis and discussion and helped contextualise the results and conclusions. The analysis and subsequent discussions are articulated in three different chapters. Before going further into the conclusions drawn from each chapter, it is important to acknowledge the significance of the methodology and the dataset

analysed. Throughout this study, I cited other exhibitions that are nor part of the analysed data because I did not find their catalogue. These exhibitions are acknowledged and not dismissed. They have been used to understand and contextualise the results of statistical and network analysis. The conclusions and analysis of this research are based on the 336 exhibitions I collected and the cited bibliography. It is important to understand, as explained in the methodology chapter, that other data exist but are not collected and therefore not part of the visualisation, yet they contribute to the analysis. This limitation is a common aspect of all types of research, as all research is influenced by the socio-cultural and economic context of the researcher, as well as by the access to knowledge and languages understood by the researcher. Therefore, another significant contribution of my thesis is a dataset with detailed documentation for other researchers to build upon or use, taking into consideration potential biases.

This dissertation, beyond its computational aspect, also contributes to scholarly publications and research on Spanish art, adding a new layer of complexity to the field. Firstly, it uses a large corpus of exhibitions as the object of study when analysing the formation of artistic concepts, rather than focusing solely on historiography or a limited number of exhibitions. Secondly, as previously mentioned, the application of computational methodologies to the study of exhibitions enhances our understanding of how graph theory and statistical analysis can reveal new insights and conclusions about the creation and consolidation of artistic concepts in exhibitions.

For the traditional concept of Spanish art based on the Old Masters which is outlined, consolidated and studied through historiography, this study showcases how not all the studied countries formulated or maintained this concept when exhibiting Old Masters, the exhibition dynamics in Spain and The United States do not cluster artists such as Murillo and Velázquez consistently together. For example, the exhibition ecosystem in Spain during the nineteenth century do not showcase the Old Masters in temporary exhibitions, as they are part of the permanent collections of museums and other cultural institutions. Temporary exhibitions in Spain mainly displayed contemporary artists, tailoring concepts of Spanish art connected to the trends and artistic styles of the nineteenth century. This dynamic changed at the beginning of the twentieth century, when the Old Masters started

to be displayed in temporary exhibitions. Quite the opposite happened in the British exhibition ecosystem consistently which supported this understanding of Spanish art based on the Old Masters by exhibiting consistently them when referring to Spanish art. The United States exhibition dynamics do not consecrated an hermetic or unique concept of Spanish art, but a more interconnected concept displaying Old Masters and contemporary Spanish artists. Hence, it is mostly the British ecosystem the one that support and perpetuate this concept of Spanish art based on the Old Masters, which was also absorbed in different ways (permanent collections) by the other two ecosystems.

The United States exhibition's ecosystem challenged the traditional exhibition dynamics, where artists were most likely to be exhibited with similar artists based on their time, geographical spaces or artistic style. The US exhibition dynamic displayed Spanish nineteenth century and avantgarde artists with Old Masters, breaking the constant representation of Spanish Old Masters as an inaccessible concept of Spanish art. These dynamics, that seems to be part of the idiosyncrasy of the US ecosystem, are a general shift in exhibition dynamics in the other two context. By the end of the nineteenth century, exhibitions reduced their size, but became more complex in terms of created narratives. This can be seen in the graphs, as the manner of displaying artists change and space is made for contemporary artists, but also by mixing artists from different periods of time or artistic style together under the same narrative. This leads to the other conclusion that the study of exhibitions to analyse the construction of artistic concepts offers a more comprehensive and broader concept of Spanish art relative to historiography.

Moreover, and to sum up, the different analysis and the mixed of methodologies applied to this study showcase how there is not one solo concept of Spanish art build through exhibitions, and that even though some exhibition ecosystems and historiography perpetuated a traditional concept of Spanish art based on the Old Masters, exhibitions dynamics add different layers of complexity adding contemporary artists. Therefore, exhibition contributed in a diverse range of ways to perpetuate the concept of Spanish art based on the Old Masters, but also offered room for other artists to be included and new concepts to be consolidated. Moreover, the fact that exhibition dynamics started to

include new artists did not relegate the Old Masters to a second position, it was the opposite. Contemporary artists started to be exhibited with the Old Masters, being the Old Master a constant over time, and consolidating their position in a global imaginary that do not dissociate Murillo, Velázquez, Goya, or Zurbarán for the concept of Spanish art.

However, there are more efforts to be made to complete this analysis and this is a path to continue exploring and working in the future. A section of this research also cover the figure of Spanish women artists in exhibitions dynamics during the period of time studied. The analysis of women artists and their participation in exhibitions, should not be treated as isolated events and instead efforts should be made to actually comprehend how these artists in the peripheries of these dynamics exhibition found their place and build their narratives. The above showcases how these conclusions are not meant to be static. They are a start of future endeavours and contributions to the field that would be adding to the current scholarship and open up new paths and possibilities for new research questions to be ask.

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Appendices

Appendix 1: Corpus of Exhibitions

Expofinder_id	Exhibition Title	Date	Place
97086	'The Armory Show' International Exhibition of Modern Art	1913	USA
102059	A Brief Survey of Modern Painting	1932	USA
144287	A Century of Progress Exhibition of Paintings and Sculpture	1933	USA
109095	A Group of French Paintings from Courbet Down To and Including the Contemporary Moderns	1930	USA
141330	A Remarkable Series of Drawings Illustrating Don Quixoje by Ricardo Martin	1923	UK
140357	A Survey of Spanish Painting through Goya	1937	USA
97630	Abstractions by Braque and Picasso	1935	USA
97812	Art in Our Time: 10th Anniversary Exhibition	1939	USA
143481	Art Modern Nacional i Estranger	1929	Spain
97745	Bonnard-Braque-Henri Matisse-Picasso-Rouaul	1938	UK
97682	Braque and Picasso Abstractions	1936	USA
143837	Catálogo de la exposición de retratos de mujeres españolas por artistas españoles anteriores a 1850	1918	Spain
144128	Catalogue of a Loan Collection of Selected Works of Modern Masters	1901	USA
144132	Catalogue of Etchings from the Joseph Brooks Fair Collection	1908	USA
144117	Catalogue of Paintings - Opening of the New Galleries 1890	1890	USA
144527	Centennial Exhibition	1876	USA

144556	Chicago Interstate Industrial Exposition	1874	USA
97697	Chirico and Picasso (René Gaffé Collection)	1937	UK
144526	Claghorn Collection	1874	USA
142278	Colección de María Regordosa de Torres Reina	1935	Spain
144227	Collection of Drawings and Etchings	1888	USA
144121	Collection of Paintings from Various Sources	1890	USA
102061	Color Reproductions: Modern Watercolors and Pastels	1934	USA
143419	Cuatro pintores modernos	1922	Spain
106506	Cubism and Abstract Art	1936	USA
143353	Dario de Regoyos	1910	Spain
130077	De Barnaba da Modena a Francisco de Goya	1939	Spain
97001	Dibujos de Pablo Picasso y Ramón Casas	1901	Spain
97110	Drawings and Paintings by Picasso and Braque	1914	USA
97470	Drawings from Ingres to Picasso	1931	USA
143735	Drawings of the War of Spain	1938	USA
144488	Eighth Annual Exhibition of the American Society of Painters in Water Colors	1875	USA
142281	El Arte de la Tauromaquia	1918	Spain
97513	Etchings by Picasso and Objets by Joseph Cornell	1932	USA
144281	European Paintings from Carnegie Interantional Exhibition	1931	USA
144562	Exhibition by the Pennsylvania Academy of the Fine Arts	1877	USA
144237	Exhibition of Contemporary Art	1879	USA
144047	Exhibition of Early Spanish Paintings	1921	USA
140572	Exhibition of Modern Spanish Art	1914	UK

97574	Exhibition of Paintings and Sculpture. A Century of Progress	1934	USA
143889	Exhibition of Paintings by Spanish Masters	1912	USA
97471	Exhibition of Paintings: Corot to Picasso	1931	USA
139583	Exhibition of Pictures by Señor Don J. Cusachs under the Patronage of his Excellency the Ambassador of His Majesty the King of Spain	1907	UK
96964	Exhibition of Spanish Paintings	1920	UK
132594	Exhibition of Spanish Paintings	1939	USA
140429	Exhibition of Spanish Paintings at the Royal Academy of Arts	1920	UK
141757	Exhibition of the Ancient Masters	1858	UK
144729	Exhibition of the Carolina Art Association	1858	USA
144731	Exhibition of the Carolina Art Association	1860	USA
144497	Exhibition of the First Chicago Art Union Distribution	1860	USA
144558	Exhibition of the Harrel Art Collection	1876	USA
144727	Exhibition of the Loan Collection of Pictures forming the First Exhibiton by the Art Association of Davenport	1878	USA
144254	Exhibition of the Works by the Old Masters and by Deceased Masters of the British School	1877	UK
144258	Exhibition of the Works by the Old Masters and by Deceased Masters of the British School including a Special Collection of Works by Holbein and His School	1880	UK
142668	Exhibition of the Works of Spanish Painters	1901	UK
144250	Exhibition of the Works of the Old Masters and by Deceased Masters of the British School	1876	UK
144246	Exhibition of the Works of the Old Masters Associated with Works of Deceased Masters of The British School	1871	UK
144247	Exhibition of the Works of the Old Masters together	1872	UK

	with Works of Deceased Masters of the British School		
144259	Exhibition of Works by the Old Masters and by Deceased Masters of the British School	1882	UK
144262	Exhibition of Works by the Old Masters and by Deceased Masters of the British School	1885	UK
144278	Exhibition of Works by the Old Masters and by Deceased Masters of the British School	1910	UK
144270	Exhibition of Works by the Old Masters and by Deceased Masters of the British School including a Special Selection from the Works of Frank Holl R. A. and a Collection of Water-Colour Drawings by Joseph W. Turner R.A	1889	UK
144275	Exhibition of Works by the Old Masters and by Deceased Masters of the British School inlcuding a Collection of Water Colours and Chalk Drawings	1907	UK
144272	Exhibition of Works by the Old Masters and by Deceased Masters of the British School including a Collection of Drawing and Models by Alfred Stevens	1890	UK
144276	Exhibition of Works by the Old Masters and by Deceased Masters of the British School including a Collection of Water Colours	1908	UK
144260	Exhibition of Works by the Old Masters and by Deceased Masters of the British School including a Special Selection from the Works of John Linnell and Dante Gabriel Rossetti	1883	UK
144274	Exhibition of Works by the Old Masters including a Special COllection of Paintings and Drawings by Claude	1902	UK
143198	Exposició de Domenec Soler	1928	Spain
143443	Exposició de Modernisme Pictoric Catalá	1926	Spain
143187	Exposició de pintures Marquès-Puig	1928	Spain
143239	Exposició Joan Gil	1935	Spain
143236	Exposició Oleguer Junyent	1932	Spain
143238	Exposició Oleguer Junyent	1935	Spain

143241	Exposició Sainz de la Maza	1935	Spain
143189	Exposició Xavier Güell	1928	Spain
143519	Exposición Angel Ferrant	1932	Spain
143539	Exposición Antonio Rodríguez Luna	1934	Spain
143471	Exposición Colectiva	1928	Spain
143265	Exposicion Darius Vilas	1932	Spain
143467	Exposición de José María de Sucre y de Grau	1928	Spain
143263	Exposición de acuarelas	1932	Spain
143254	Exposición de Alexandre de Cabanyes	1935	Spain
143425	Exposición de Amando Suárez Couto	1923	Spain
143409	Exposición de Andrés García Prieto	1921	Spain
143413	Exposición de Andrés García Prieto	1921	Spain
143429	Exposición de Andrés García Prieto	1924	Spain
143446	Exposición de Angel Ferrant	1926	Spain
143531	Exposición de Angel Ferrant	1932	Spain
143433	Exposición de Angel Ferrant y Gabriel García Maroto	1925	Spain
143514	Exposición de Ángel López Obrero	1930	Spain
143511	Exposición de Àngel Planells i Cruañas	1930	Spain
143272	Exposición de Antoni Badrinas	1922	Spain
143558	Exposición de Antoni García Lamolla	1936	Spain
143534	Exposición de Antonio Rodríguez Luna	1933	Spain
143528	Exposición de Antonio Rodríguez Luna y Enrique Climent	1932	Spain
143516	Exposición de Antonio Souto	1930	Spain
143509	Exposición de Apelles Fenosa	1930	Spain

143420	Exposición de artistas	1922	Spain
143431	Exposición de artistas	1925	Spain
143544	Exposición de artistas	1935	Spain
143529	Exposición de Arturo Souto	1932	Spain
143535	Exposición de Arturo Souto	1933	Spain
143705	Exposición de Bellas Artes en Sevilla 1922	1922	Spain
143669	Exposición de Bellas Artes en Sevilla 1925	1925	Spain
143475	Exposición de Benjamín Palencia	1928	Spain
143515	Exposición de Benjamín Palencia	1930	Spain
143524	Exposición de Benjamín Palencia	1931	Spain
143527	Exposición de Benjamín Palencia	1932	Spain
143381	Exposición de Celso Lagar	1915	Spain
143387	Exposición de Celso Lagar	1913	Spain
143391	Exposición de Celso Lagar	1917	Spain
143401	Exposición de Celso Lagar	1919	Spain
143378	Exposición de Celso Lagar y Hortensia Begué	1915	Spain
143836	Exposición de códices miniados españoles	1929	Spain
143447	Exposición de Cristobal Ruiz	1926	Spain
143438	Exposición de Cristóbal Ruiz	1925	Spain
143244	Exposición de cuadros antiguos colección Jose María Jordá	1929	Spain
143283	Exposicion de cuadros de Pere Casas	1926	Spain
143293	Exposición de Daniel Sabater	1936	Spain
143406	Exposición de Daniel Vázquez Diaz	1920	Spain
143411	Exposición de Daniel Vázquez Diaz	1921	Spain

143414	Exposición de Daniel Vázquez Díaz	1921	Spain
143428	Exposición de Daniel Vázquez Díaz	1924	Spain
143377	Exposición de Dario de Regoyos	1913	Spain
143845	Exposición de dibujos y litografías de Eusabio Planas	1935	Spain
143522	Exposición de Emiliano Barral y Antonio Rodríguez Luna	1931	Spain
143422	Exposición de Enric C. Ricart	1923	Spain
143427	Exposición de Enric C. Ricart	1924	Spain
143303	Exposición de Enric Pascual Monturiol	1911	Spain
143513	Exposición de Enrique Climent y José Planes	1930	Spain
143262	Exposición de Ernest Santasusagna	1931	Spain
143449	Exposición de Federico García Lorca	1927	Spain
140600	Exposición de fotografías documentales y artísticas	1927	Spain
143404	Exposición de Francisco Iturrino	1919	Spain
143523	Exposición de Francisco Mateos	1931	Spain
143525	Exposición de Francisco Mateos	1932	Spain
143394	Exposición de Franciso Iturrino	1918	Spain
143291	Exposición de G. M. Zampolini	1933	Spain
143402	Exposición de Gabriel García Maroto	1919	Spain
143458	Exposición de Gabriel García Maroto	1927	Spain
143439	Exposición de Helios Gómez	1925	Spain
143444	Exposición de Helios Gómez	1926	Spain
143339	Exposición de Isidre Nonell	1909	Spain
143342	Exposición de Isidre Nonell	1910	Spain
143533	Exposición de Ismael González de la Serna	1933	Spain

143269	Exposición de Jaume Guardia	1920	Spain
143295	Exposición de Joan Colom	1910	Spain
143466	Exposición de Joan Massenet	1928	Spain
143395	Exposición de Joan Miró	1918	Spain
143278	Exposición de Joan Vilas. Homenaje a los amigos del arte litúrgico	1925	Spain
143355	Exposición de Joaquim Sunyer	1911	Spain
143430	Exposición de Joaquim Sunyer	1924	Spain
143434	Exposición de Joaquim Sunyer	1925	Spain
143512	Exposición de Joaquim Sunyer	1930	Spain
143445	Exposición de Joaquim Torres García	1926	Spain
143518	Exposición de Joaquin Sunyer	1930	Spain
143390	Exposición de Joaquín Torres García	1917	Spain
143398	Exposición de Joaquín Torres García	1918	Spain
143469	Exposición de Joaquín Torres García	1928	Spain
143536	Exposición de Joaquín Torres García	1933	Spain
143435	Exposición de José María Ucelay	1925	Spain
143455	Exposición de José María Ucelay	1927	Spain
143474	Exposición de Jose Moreno Villa	1928	Spain
143506	Exposición de Jose Moreno Villa	1929	Spain
143526	Exposición de Jose Moreno Villa	1932	Spain
143461	Exposición de José Moreno Villa	1927	Spain
143478	Exposición de Josep de Togores	1928	Spain
143423	Exposición de Josep de Togorres	1923	Spain
143289	Exposición de Josep Maria Bartrina	1930	Spain

143418	Exposición de Josep Mompou	1922	Spain
143477	Exposición de Josep Renau	1928	Spain
143663	Exposición de la obra grabada de Goya	1928	Spain
143621	Exposición de la Sociedad de Artistas Ibéricos - San Sebastian 1931	1931	Spain
143622	Exposición de la Sociedad de Artistas Ibéricos - Valencia 1932	1932	Spain
143436	Exposición de la Sociedad de Artistas Ibéricos Madrid 1925	1925	Spain
143623	Exposición de la Sociedad de Artistas Ibéricos Madrid 1935	1935	Spain
128273	Exposición de la Spanish Gallery en las Cavendish Rooms 1869	1869	UK
143279	Exposición de Labarta	1925	Spain
143261	Exposicion de las artes y los artistas	1932	Spain
143302	Exposición de las obras de Enric Casanovas	1911	Spain
143247	Exposición de Lluis Foix	1923	Spain
143540	Exposición de Luis Quintanilla	1934	Spain
143532	Exposición de Manuel Ángeles Ortíz	1933	Spain
143287	Exposición de Manuel Sagnier	1930	Spain
143306	Exposición de Mariano Pidelaserra i Brias	1903	Spain
143561	Exposición de Mariano Rodríguez Orgaz	1936	Spain
143472	Exposición de Maruja Mallo	1928	Spain
143560	Exposición de Maruja Mallo	1936	Spain
140597	Exposición de miniaturas en los salones de Pedro Reig e Hijo	1910	Spain
143329	Exposición de Néstor Martín Fernández de la Torre	1908	Spain

143399	Exposición de Nou Ambient	1919	Spain
143277	Exposicion de Oleguer Junyent	1924	Spain
143280	Exposición de Oleguer Junyent	1925	Spain
143286	Exposición de Oleguer Junyent	1930	Spain
143297	Exposición de Oleguer Junyent	1910	Spain
143545	Exposición de Pablo Gargallo	1935	Spain
143415	Exposición de Pancho Cossío	1921	Spain
143421	Exposición de Pancho Cossío	1922	Spain
143424	Exposición de Pancho Cossío	1923	Spain
143510	Exposición de Pedro Flores García	1930	Spain
140603	Exposición de pintura antigua de los siglos XV al XIX	1913	Spain
143268	Exposición de pintura de F. Labarta	1933	Spain
143298	Exposición de Pintura y Escultura	1910	Spain
143259	Exposicion de Pinturas	1932	Spain
143249	Exposición de pinturas de L. mercadé dibujos de P. Ynglada	1934	Spain
143281	Exposición de pinturas y dibujos de Frederic Masriera Vila	1926	Spain
143503	Exposición de pinturas y esculturas residentes en París	1929	Spain
143405	Exposición de Rafael Barradas	1920	Spain
143408	Exposición de Rafael Barradas	1920	Spain
143441	Exposición de Rafael Barradas	1926	Spain
143453	Exposición de Rafael Barradas	1927	Spain
143479	Exposición de Rafael Barradas	1929	Spain
143285	Exposición de Ricardo Verdugo Landi	1927	Spain

143432	Exposición de Salvador Dalí	1925	Spain
143442	Exposición de Salvador Dalí	1926	Spain
143464	Exposición de Salvador Dalí	1928	Spain
143530	Exposición de Salvador Dalí	1933	Spain
143537	Exposición de Salvador Dalí	1934	Spain
143662	Exposición de Salvador Dalí	1933	USA
143274	Exposicion de Segrelles	1921	Spain
143388	Exposición de Torres García y Barradas	1913	Spain
143380	Exposición Francisco Iturrino	1915	Spain
143849	Exposición General de Bellas Artes de 1858	1858	Spain
143465	Exposición homenaje a Marinetti	1928	Spain
143740	Exposición Internacional de Bellas Artes de 1892	1892	Spain
128251	Exposición Internacional de Londres de 1862	1862	UK
143375	Exposición Isidre Nonell	1912	Spain
143340	Exposición Joan Colom	1909	Spain
143538	Exposición Joan Miró	1934	Spain
143376	Exposición Joaquín Torres García	1912	Spain
143520	Exposición Juan José Luis González Bernal	1931	Spain
143546	Exposición Logicofobista	1936	Spain
143309	Exposición original de Lluis Graner	1907	Spain
143541	Exposición Pochoirs	1935	Spain
143255	Exposición Porcar	1933	Spain
143841	Exposición póstuma de pinturas y dibujos de Antoni Gelabert	1932	Spain
143393	Exposición Rafael Barradas	1918	Spain

143396	Exposicion Rafael Sala	1918	Spain
143360	Exposicon d'Art Cubista	1912	Spain
144675	First Annual Exhibition of the Western Academy of Art	1860	USA
142223	Flowers	1935	USA
97495	French Paintings from Manet to Derain	1931	USA
97257	French Watercolors and Drawings Assembled by Pierre Matisse	1925	USA
139568	From el Greco to Goya	1938	UK
97252	From Ingres to Picasso	1925	USA
97752	From Matisse to Miró: Recent Paintings	1938	USA
97552	Gifts and Loans from the Collection of Mrs. Sadie A. May	1933	USA
142200	Goya	1934	USA
142313	High-Class Pictures	1913	UK
142233	Ignacio Zuloaga together with an unknown work by El Greco	1938	UK
102060	International Exhibition of Theatre Art	1934	USA
97648	International Surrealist Exhibition	1936	UK
143346	IV Exposición de Arte Moderno	1905	Spain
140270	La pintura gótica en Cataluña / La pintura gòtica a Catalunya	1937	Spain
141928	Landscapes by Leading Artists	1934	UK
144224	Loan Collection of Old and Modern Masters from Chicago Collections	1935	USA
142230	Loan Exhibition of Old Masters	1912	USA
97304	Loan Exhibition of Paintings from El Greco and Rembrandt to Cézanne and Matisse	1927	USA

144232	Loan Exhibition of Pictures from the Collection of Henry C. Frick	1910	USA
144123	Loan Exhibition of Selected Works of Old and Modern Masters	1898	USA
144495	Loan Exhibition of the Pennsylvania Academy of the Fine Arts	1876	USA
143383	Los pintores íntegros	1915	Spain
97026	Manet and the Post-Impressionists	1910	UK
143310	Manifestación Artística de 1907	1907	Spain
143331	Manifestación de obras de pintores y escultores catalanes	1908	Spain
142372	Masterpieces of Graphic Art	1926	USA
142328	Masterpieces of Old and Modern Painters	1915	USA
97460	Memorial Exhibition. The Collection at the Late Miss Lillie P. Bliss	1931	USA
97553	Modern European Art	1933	USA
97395	Modern French Paintings	1930	USA
109096	Modern French Paintings	1934	USA
102882	Modern Painters and Sculptors as Illustrators	1936	USA
139972	Modern Spanish Art	1914	UK
97585	Modern Works of Art 5th Anniversary Exhibition	1934	USA
142321	Murillo's Masterpiece and Works by Other Masters	1908	UK
142367	Naval and Military Portrait	1932	USA
144499	Ninth Annual Exhibition of the American Society of Painters in Water Colors	1876	USA
143738	Objetos que expuso el Sr. D. José Villaamil y Castro	1885	Spain
97497	Obras de Picasso y de Ramon Casas	1932	Spain

97413	Painting in Paris from American Collections	1930	USA
144138	Paintings by Contemporary Spanish Artists	1913	USA
142331	Paintings by El Greco and Goya	1915	USA
144210	Paintings by Ignacio Zuloaga	1917	USA
144136	Paintings by Joaquín Sorolla y Bastida	1911	USA
144236	Paintings by Joaquín Sorolla y Bastida	1909	USA
142284	Paintings by Old Masters	1928	UK
141212	Paintings from Spanish Collections	1937	UK
141953	Paintings in Gouache of the Coronation and other Subjects by Grau Sala	1937	UK
97161	Picasso and Matisse	1919	UK
97632	Picasso and Matisse	1936	USA
97735	Picasso and Matisse	1938	USA
97400	Picasso et Derain	1930	USA
97455	Picasso-Braque-Léger	1931	USA
141334	Pictures of the Italian and Spanish Schools	1816	UK
143843	Pinturas de Joan Gil	1936	Spain
97751	Pissarro to Utrillo: ‘For the Young Collector’	1938	USA
141322	Portfolios of Industrial Art	1881	UK
143507	Primer Salón de los Independientes	1929	Spain
144208	Prints and Drawings by Blake and Goya	1933	USA
144209	Prints by Francisco Goya	1936	USA
144207	Prints by Goya	1928	USA
141950	Recent Paints of Spain by Manuel Moreno	1928	UK
142294	Retratos de niño en España	1925	Spain

144087	Second Annual Exhibition of The Art Institute	1884	USA
144732	Second Exhibtiion of San Francisco Art Association	1872	USA
97476	Since Cézanne: A Cross Section of 17 Leading Painters of the École de Paris	1931	USA
97359	Some Modern Paintings	1929	USA
144220	Some Modern Paintings	1926	USA
142188	Sorolla Exhibition	1908	UK
139602	Spanish Art	1928	UK
128285	Spanish Art 1896	1895	UK
142384	Spanish Old Masters in Support of the National Gallery Funds	1913	UK
139877	Spanish Paintings from el Greco to Goya	1928	USA
144830	Spanish Pictures	1914	UK
144100	Special Exhibition of Engravings	1884	USA
141956	Summer Exhibition of Works by Contemporary Artists and Modern Spanish Paintings	1937	UK
97405	Summer Exhibition Retrospective	1930	USA
97516	Summer Exhibition: Painting and Sculpture	1932	USA
97550	Summer Exhibition: Painting and Sculpture	1933	USA
102062	Summer Exhibition: Painting and Sculpture from the Museum Collection and on Loan	1937	USA
97657	Summer Exhibition: The Museum Collection and a Private Collection on Loan	1936	USA
140336	The Art of Anglada – Camarasa	1930	UK
141906	The Art of Yesterday	1931	UK
128274	The Earl's Court Spanish Exhibition 1889	1889	UK

142135	The International Surrealist Exhibition	1936	UK
142420	The Pictures and Drawing in the National Loan Exhibition	1909	UK
139971	The Seville Exhibition	1929	Spain
144108	Third Annual Exhibition The Art Institute of Chicago	1885	USA
144487	Third Art Reception of the Union League of Philadelphia	1873	USA
144525	Third Cincinnati Industrial Exposition	1872	USA
97221	Twenty Recent Paintings by Pablo Picasso	1923	USA
143351	VI Exposición de Arte Moderno	1910	Spain
143628	VI Exposición Internacional de Arte Barcelona	1911	Spain
143842	Visiones de la Barcelona Novencentista	1933	Spain
141549	Waring Exhibition of Spanish and Italian Art	1907	UK
143256	XIX Exposición de las artes y los artistas	1933	Spain

Curriculum Vitae

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Post-secondary Education and Degrees:

University of Málaga
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2011-2015 B.A.

University of Málaga
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2015-2017 M.A.

Western University
London, Ontario, Canada
2019-2024 Ph.D.

Honours and Awards:

Paul Mellon Centre, Yale University
Conference Bursary
2023

J. Paul Getty Foundation, Graduate Fellowship
Fellowship
2022-2023

Western University
Mary Routledge Fellowship
2022

SGPS - Western University
Community-Engaged Learning Project
2021

University of Málaga
International Research Scholarship
2018

University of Málaga
Master Thesis Cum Laude
2017

Telefonica Foundation
Entrepreneurship award
2015

University of Málaga
Early Research Grant
2015

Related Work Experience

Digital Humanities Specialist
Utrecht University, The Netherlands
2023 - Ongoing

Researcher
CulturePlex Lab, Western University, Canada
2018 – Ongoing

Researcher
iArtHisLab, University of Málaga, Spain
2015 – Ongoing

Instructor
Western University, Canada
2019 - 2024

Digital Art History Fellow
Getty Research Institute, USA
2022 – 2023

Visiting Researcher
Rijksmuseum, The Netherlands
2022

Publications:

Book Chapter. Romero Ferron, Barbara & Espejo, María Paula "Baking Critical Understanding: Crafting Impactful Social Science Research in the Anthropocene" on *ACRL, Critical Digital Humanities Cookbook,* 2024 [Accepted]

Romero Ferron, Barbara, Rodriguez Ortega, Nuria, Suarez, Juan Luis. "De cómo se elaboró el primer Catálogo Monumental de España. Análisis de la correspondencia de Manuel Gómez-Moreno Martínez de 1894 a 1902", *Universitas Humanística,* nº 90, 2020.

Selected Conference Presentations:

Romero Ferrón, Bárbara, Rodríguez Ortega, Nuria, Ortiz Tello, María, "Challenging Conventional Statistical Metrics for Gender Equity in Exhibitions Ecosystem", ADHO, Washington University, August, 2024.

Romero Ferrón, Bárbara, Rodriguez Ortega, Nuria; Mozo Quesada, Alejandro; Ortiz Tello, María, "Picasso and AI: analysing and questioning the technology that overwhelms us", Conversations on Art History and Artificial Intelligence, South Dakota State University, February, 2024.

Romero Ferron, Barbara & Medina Fortes, Luana. "The Depiction of Motherhood through Multimodal Networks: a Comparative Study About Socially Engaged Engravers Producing in Brazil in the 20th Century", *Global Digital Humanities Symposium,* 2024.

Romero Ferron, Barbara, "The concept of Spanish art in nineteenth-century exhibitions: A data-driven analysis", Cultural Data Analytics Conference / CUDAN, Tallinn University, 2023.

Romero Ferron, Barbara, "Who was visiting? Analysis of Advertisements in Nineteenth Century Exhibitions Catalogues", *Publics of the First Public Museums I. Institutional Sources (XVIII-XIX c.),* Università della Svizzera Italiana, 2023.

Medina Fortes, Luana & Romero Ferron, Barbara. "Working-class women through the eyes of engravers in Brazil from 1940 to 1960: a data-driving analysis", *ACH – The Association for Computers and the Humanities,* 2023.

Romero Ferron, Barbara. "Concept(s) of Spanish Art through the Nineteenth Century. Network Analysis of Exhibitions in Spain, the United Kingdom, and the United States of America, 1800–1939", *Annual Graduate Symposium,* AHNCA, Association of Historians of Nineteenth-Century Art, online, 2023.

Romero Ferron, Barbara. "Quantifying the concept of Spanish Art in the nineteenth century UK. A Cultural Network Analysis of Exhibitions." *Transgression and Liminality in Iberian and Latin American Art: Emerging Researchers Symposium,* Durham University, United Kingdom, 2022.

Romero Ferron, Barbara. "Art Exhibition Data. Exploring Spanish Art Exhibition from 1850 to 1939", *Coffee Talks*, Online, 2021.