Cosmopolitan Anatomy and Surgery in the Age of the Enlightenment:

Two Poles in the Career of Charles Nicholas Jenty.

by

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ABSTRACT

This thesis addresses two specific moments in the professional career of the French surgeon and anatomist Charles Nicholas Jenty (?-at least 1777) whose biography includes long residencies in both England and Spain. While generally being studied in the context of the illustrations included in his anatomical atlases Jenty's biography and the extent of his scientific activities are marked by notable gaps.

This thesis focuses on Jenty's membership in The Society for the Encouragement of Arts, Manufactures and Commerce and the chemical experiments he performed in London in 1761. It introduces for the first time in English an analysis of his surgical treaty published in 1766 in Spanish during his initial career in Spain. Finally, new biographical information is provided as a preliminary study for further investigation.

RÉSUMÉ

Le présent mémoire porte sur deux moments concrets dans la carrière professionnelle du chirurgien et l'anatomiste Charles Nicholas Jenty (?-au moins 1777) dont la biographie comprend de longs séjours et en Angleterre et en Espagne. Bien que la vie professionnelle de Jenty a été étudié dans le contexte des illustrations qui font partie de ses atlas anatomiques renommés, sa biographie et l'étendue de ses activités scientifiques se distinguent par des lacunes notables.

Le mémoire se concentre sur l'adhésion de Jenty dans la Society for the Encouragement of Arts, Manufactures and Commerce, et la réalisation de ses expériences chimiques en 1761 lorsqu'il se trouvait à Londres. Le mémoire présente pour la première fois en langue anglaise l'analyse de son traité de chirurgie publié en 1766 en langue espagnole au moment où il a débuté sa carrière en Espagne. De nouvelles informations biographiques sont également présentées dans le cadre d'une étude préliminaire qui mènera éventuellement à une étude plus approfondie.

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INTRODUCTION

The London Evening-Post of Saturday March the 3rd to Tuesday March the 6th 1753 reported the following criminal episode as having occurred in London:

> Last Saturday Night between Eight and Nine, as Mr. Jenty, Surgeon, of Fetter-lane, was crossing Grosvenor-square, he was suddenly seized by a Man and a Lad, who took from him about five Guineas and his Case of Instruments. The young Fellow recollecting as is supposed, that he had been concerned for Mr. Jenty in securing some of the Criminals executed at Tyburn returned the Instruments at his Desire, and called to his Accomplice to return the Money, for he was known by the Gentleman: But the other not regarding him, they both made off together.

The *Public Advertiser* and the *Old England's Journal* printed the same account on March the 5th and the 10th respectively.[1] Who is Mr. Jenty the gentleman surgeon who was robbed by a man and by the somewhat 'repentant' young procurer of criminal corpses while crossing the "most magnificent Square in the whole Town"?[2] Who is Mr. Jenty who four years later complained, not without some contempt, about the literary verbosity of certain anatomists, in the following words:

> From the Time of the great Harvey there have been such a Multitude of anatomical Writers, that a particular Detail of them would, of itself, require a Volume: I shall therefore only give a Catalogue of the principal, and take

[1] Unless otherwise indicated all the newspaper accounts mentioned in this research belong to the *17th-18th Century Burney Collection Newspapers*. They are digitally available at http://gdc.gale.com/products/17th-and-18th-century-burney-collection-newspapers/. In carrying out searches on Jenty within the digitalized Burney Collection it is advisable not to limit oneself to the combinations of last name, first name and middle name. Indeed, even a search indicating a specific topographical place related to Jenty can provide crucial information. An example of such a "synaptic" search will be discussed further below in this Introduction. Finally, it must be noticed that the Collection is not comprehensive.

[2] The magnificence of the square is celebrated in an anonymous tourist guide entitled *London in Miniature: being a Concise and Comprehensive Description of the Cities of London and Westminster, and Parts adjacent, for forty Miles round* (London: Corbett, 1755), 197. Julie Schlarman, "The Social Geography of Grosvenor Square: Mapping Gender and Politics, 1720-1760," *London Journal* 28 (2003:8-28) has analyzed the role played by women in the social, architectural and urban development of the square, providing a meticulous analysis of the female upper-class and nobility residents. While presently it is impossible to ascertain the reasons for Jenty's presence in Grosvenor-square, (he could have simply been "passing through"), a question could be posed: Could Jenty have been in the area because one of the residents required his surgical or gynecological services? To the best of my knowledge none of Jenty's patients have been identified thus far. Admittetly my reasoning here is highly speculative.

> some Notice of their Discoveries, when of any Importance. I must, however, remark, that it would have been fortunate for Anatomy, and Students in this Science, if Authors could have contented themselves with publishing their own Discoveries, and animadverting upon the Errors of others: But, instead of doing this, many have thought that a discovery, sometimes trifling enough, or a Professor's Chair, have entitled them to write an entire System; thus making it necessary to search large Volumes for Discoveries that a few Pages were sufficient to contain.[3]

Jenty is generally studied in the context of the drawings created by the Dutch artist Jan Van Rymsdyk (c.1730-1788/89) for two of his 1757 anatomical atlases entitled *An Essay on the Demonstration of the Human Structure, Half as Large as Nature, in Four Tables, From the Pictures painted after Dissections, for that Purpose* and *The Demonstrations of a Pregnant Uterus of a Woman at her Full Time in Six Tables. As large as Nature. Done from Pictures painted, after Dissections by Mr. Van Riemsdyk*.[4] Apart from this, knowledge about Charles Nicholas Jenty's life is sparse and marked by numerous chronological and topographical gaps, despite the fact that very recently both Jenty and van Rymsdyk have been characterized as "two extraordinary figures in British medicine and art, both uniquely gifted émigrés".[5]

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[3] Charles Nicholas Jenty, *A Course of Anatomico-Physiological Lectures on the Human Structure and Animal Oeconomy[...]*, 3vls. (London: Rivington, 1757), I: cxxxi. A summary of this passage is also included in Andrew Cunningham, *The Anatomist Anatomis'd: An Experimental Discipline in Enlightenment Europe*, (Farnham, UK: Ashgate, 2010), 81. From time to time Jenty's "sharp tongue" surfaces throughout his *Lectures* clearly specifying his targets. For instance while discussing the language used by the famous surgeon and anatomist William Cheselden (1688-1752) in describing an operation on the anus Jenty notes: "If I did not know that Mr. Cheselden had been a Surgeon, I should have thought that this had been the Language of a Butcher, rather than of an Anatomist," II:60-61. A more rhetorically articulated and stinging comment is reserved for the famous Alexander Monro (1697-1767). In commenting on a specific urological description Jenty notices how: "It is hoped, that the nice medical Reader will indulge our ingenious Author as to the Oddity of his Expressions, which, perhaps, are not so anatomical as one might expect from a Man of so great Repute," II:171. On the other hand, Jenty's negative criticism can also be more covert without specifically identifying the target of his malcontent.

[4] K.F. Russell, *British Anatomy 1525-1800: A Bibliography of Works published in Britain, America and on the Continent*, 2nd. ed. (London: St. Paul's Bibliographies, 1987), 115-119, describes very meticulously several editions of Jenty's atlases as well as the *Anatomico-Physiological Lectures*. It is worth noticing how Russell notices that: "there is no doubt that Jenty was a very skilled dissector," xl.

[5] Aris Sarafianos, "Casts and Drawings at the Pennsylvania Hospital, Philadelphia: Jenty, Rymsdyk and Early American Medicine and Anatomy," *Newsletter of the Friends of the History Collections* [University of Pennsylvania Health System, Pennsylvania Hospital], 4 (2009: n. p.). The newsletter is comprised of

Basic biographical data about Jenty has generally been culled from his own published works in English and from additional information provided by Gask, Dobson and Russell between 1936 and 1973.[6] This data was gathered and presented by Thornton and Want in 1978 in what still constitutes the foundational biographical material for scholarship written in English.[7] In 1979 the same authors included an abbreviated version of their initial findings within a comparative study of the images of the gravid uterus provided by Jan van Rymsdyk for the anatomical atlases produced by William Smellie (1697-1763), William Hunter (1718-1783), Thomas Denman (1733-1815) and Jenty.[8] In 1983 Thornton published *Rymsdyk: Medical Artist of the Eighteenth Century* where more detailed information is provided about the iconographical apparatus accompanying Jenty's atlases.[9]

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four pages not numbered. The article was written on occasion of the exhibition entitled *From Pastel to PDA's: Medical Education from the 18th c. to the 21st c.* held at the Pennsylvania Hospital in Philadelphia in 2009/2010. See http://www.uphs.upenn.edu/paharc/collections/exhibits/anatomical-drawings/ for a press release. The exhibition featured 16 Rymsdyk crayon drawings. See also Aris Sarafianos, "The Politics of 'Prodigious Excitement': Art, Anatomy and Physiology for the Age of Opposition," *The Center & Clark Newsletter* [UCLA Center for 17th -& 18th Century Studies William Andrews Clark Memorial Library], 50 (2009:2-7), 3, where Jenty is said to be "another virtually unknown but not less important figure in British medicine". The Newsletter is available at *http://www.c1718cs.ucla.edu/content/nwsltr/newsletter50.pdf*.

[6] E. G. Gask, "John Hunter in the Campaign in Portugal, 1762-30 " *British Journal of Surgery* (1936-37:640-668); republished in E. G. Gask, *Essays in the History of Medicine* (London: Butterworth &CO,1950), 116-144; Jessie Dobson, "The Army Service in the Eighteenth Century," *Annals of the Royal College of Surgeons of England* 14 (1954:417-419); K.F. Russell, *British Anatomy 1525-1800: A Biography*, (Melbourne: Melbourne University Press, 1963). In addition, in 1973 Jessie Dobson contributed to the knowledge of Jenty through *personal communications* to Thornton and Want's research.

[7] John L.Thornton and Patricia C. Want, "C. N. Jenty and the Mezzotinto plates in his 'Demonstrations of a pregnant uterus', 1757," *Journal of Audiovisual Media in Medicine* 1 (1978:113-115). In addition to the references recorded above (note 6) this article contains bibliographical references related to Rymsdyk/ Jenty's drawings and anatomical material now located in Philadelphia as well as J. G. De Lint, "The Plates of Jenty," *Janus* 21 (129-135) where no substantial bibliographical information is provided. Finally, Dobson's *personal communication* dated 1973 is also acknowledged.

[8] John L. Thornton and Patricia C. Want, "Jan Van Rymsdyk's Illustrations of the Gravid Uterus drawn for Hunter, Smellie, Jenty and Denman," *Journal of Audiovisual Media in Medicine* 2 (1979:10-15).

[9] John L. Thornton, *Jan van Rymsdyk: Medical Artist of the Eighteenth Century*, (Cambridge/New York: The Oleander Press, 1982), 53-60. A brief discussion about Rymsdyk and Jenty is also provided by John L. Thornton and Carole Reeves, *Medical Book Illustration: A Short History*, (Cambridge/New York: The Oleander Press, 1983), 86-88.

Subsequent scholars have often summarized and quoted this study, providing only fragmentary, albeit useful, new pieces of information.[10] Despite being mentioned in larger studies that focus on eighteenth century anatomy and surgery and the relation between medicine and music, to my knowledge Jenty has not as yet been the subject of an articulated historical biography.[11]

In reviewing the published literature, Jenty's biography can be synoptically summarized as follows. He was most probably born in Paris where he was educated. While neither his birth nor death dates are known, Jeremy Norman and Simon Chaplin locate Jenty as being active [i.e. *fl.*] between 1720 and 1770, and 1735-1765 respectively.[12] He is believed to have settled in London "about 1745 "[13]. In 1750 he translated from French into Latin Jacques Fabian Gautier d'Agoty's (1716-1785) work *Chroa-Génésie ou Génération des Couleurs contre le Système de Newton* (1749) also

[10] See for instance Roberta McGrath, *Seeing Her Sex: Medical Archives and the Female Body*, (Manchester: Manchester University, 2002), 73-76 and 98-99 n.6, where information about a 1766 sale-catalogue including Jenty's anatomical tables and models is listed.

[11] For instance, Lynda Payne, *With Words and Knives: Learning Medical Dispassion in Early Modern England*, (Aldershot: Ashgate, 2007), 30; Penelope Gouk, "Music, Melancholy, and Medical Spirits in Early Modern Thought," in Peregrine Horden, ed., *Music as Medicine: The History of Music Therapy since Antiquity*, (Aldershot: Ashgate, 2000), 173-194, especially 189-190 and 194 n. 46. More recently, Andrew Cunningham, *The Anatomist Anatoms'd*, provides several excerpts from Jenty's works. Jenty is also discussed in Christelle Rabier, *Les Chirurgiens de Paris et de Londres, 1740-1815. Économie, Identités, Savoirs*, Ph.D. dissertation (Paris: Université Paris-I Pantheon-Sorbonne, 2008). Unfortunately, the two microfilms of this thesis I received were practically illegible. I extend my thanks to Dr. Rabier for having provided a list of her works.

[12] Jeremy M. Norman, ed., *Morton's Medical Bibliography: An Annotated Checklist of Texts Illustrating the History of Medicine (Garrison and Morton)*, 5th. ed. (Brookfield, VT: Scholar Press, 1991), 953; Simon Chaplin, *John Hunter and the 'museum oeconomy' 1750-1800*, Ph.D. dissertation (London: King's College, 2009), 333. My heartfelt thanks are extended to Dr. Chaplin for having directed me to his dissertation and for providing further bibliographical information about Jenty. His contributions will be acknowledged in the appropriate sections of this research.

[13] John L. Thornton and Patricia C. Want, "C. N. Jenty and the Mezzotinto Plates," 12, notice that: "Charles Nicholas Jenty probably came to London about 1745". See also John L. Thornton, *Jan Van Rymsdyk*, 53 and 54. This is the accepted standard working chronology.

providing "An Address to the Reader."[14] In addition to the two anatomical atlases mentioned above, in 1757 Jenty also published *A Course of Anatomico-Physiological Lectures on the Human Structure and Animal OEconomy* in three volumes with no illustrations. At least from 1757 onward he taught anatomy and surgery from his house in Fetter Lane, Fleet Street, and while sometimes being referred to as a man-midwife, it is not clear if he ever practiced midwifery.[15] He was certainly known to the Company of Surgeons because of a gift of "four anatomical prints, coloured, glazed and framed" he made to the Company in 1757, after which he received official thanks and an invitation to a dinner.[16] In 1758 a paper entitled *A Remarkable Case of Cohesions of all Intestines, &c. in a Man of about Thirty-four Years of Age, who died last Summer* was published in the *Philosophical Transactions* of the Royal Society of London.[17] From 1758 Jenty acted as a *membre corréspondant* of the Académie Royale des Sciences in Paris.[18] In 1762, he joined the British Expeditionary forces of Lord Loudon with the rank of surgeon mate during the Seven Years War (1756-1763) and participated in the Portuguese campaign. At the end of the war, rather than returning to England he remained in Portugal.[19] Don

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[14] See Sarah Lowengard, *The Creation of Color in Eighteenth Century*, eBook, (New York: Columbia University Press, 2008). The text is available at http://quod.lib.umich.edu/cgi/t/text/text-idx?c=acls;;idno=heb99017.

[15] Susan C. Lawrence, "Anatomy and Address: Creating Medical Gentlemen in Eighteenth-Century London," in Vivian Nutton and Roy Porter, eds., *The History of Medical Education in Britain*, (Amsterdam/Atlanta, GA: 1995), 199-228. See 209 and especially 210 where Jenty is listed as giving anatomical and surgical classes in 1757 from his house in Fetter Lane.

[16] As quoted by John Thornton, *Jan Van Rymsdyk*, 58. The full passage is included in K.F. Russell, *British Anatomy 1525-1800*, 2nd ed., 117.

[17] John L. Thornton and Patricia C. Want, "C. N. Jenty and the Mezzotint Plates," 114, already mention that in 1758: "Jenty also described a case of cohesion of all the intestines"; however, the specific reference to the Royal Society is not given. This one for instance is already mentioned by Albrecht von Haller, *Bibliotecha Anatomica. Qua Scripta ad Anatomen et Physiologiam Facientia a Rerum Initiis Recensentur*, 2vls. (Zurich, 1774 and 1777), II: 532-533.

[18] His membership was already mentioned in Abbé Rozier, *Nouvelle Tables des Articles contenus dans les volumes de l'Académie Royale Des Sciences de Paris, depuis 1666 jusqu'en 1770* (Paris: Rault, 1775), cxvj. The text is avalable at http://www.archive.org/stream/collectionacad01tabl .

[19] John L. Thornton and Patricia C. Want, "C. N. Jenty and the Mezzotint Plates,"114. See also note 6 above.

Shelton has recently uncovered a record from the IGI (International Genealogical Index) stating that Charles Nicholas Jenty married in Lisbon in 1764.[20] He later emigrated to Spain where in 1766 he published a surgical book in Spanish entitled *Methodo de Hacer la Amputacion del Muslo por su Articulacion con el hueso Innnominado. Operacion tenida comunemente por impracticable. Ván añadidas, y ilustrado con Láminas diversas observaciones prácticas sobre otras operaciones de Cirugía.* [*Method for the amputation of the thigh through the hip joint. An operation commonly considered impracticable. Illustrated with plates, to which are added different practical observations regarding other surgical operations*].[21] Once in Madrid he is believed to have lectured in Anatomy and Surgery. At least since the nineteenth century a book entitled *A Narrative of the Trial of Thomas Pierce's Styptick medicines* published in London in 1767 has been attributed to him.[22]

And yet when it comes to matters biographical regarding C. N. Jenty, crucial published material comprised of primary and secondary sources remain unexplored, and a lack of an integrated and multilingual research has inhibited an appropriate and more comprehensive analysis of Jenty's personal and professional life.

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[20] Don Shelton, *The Real Mr. Frankenstein: Sir Anthony Carlisle, Medical Murders, and the Social Genesis of Frankenstein* eBook (Auckland: Portim, 2009), 195, and Don Shelton, *The Real Mr. Frankenstein*, 2nd ed. 2011, 147.

[21] The book contains one Table including six illustrations.

[22] John. L. Thornton and P.C. Want, "C. N. Jenty and the Mezzotint Plates," 114. The authors notice that "bibliographers have recorded" this publication under Jenty's name. While no bibliographic references are provided, the book is indeed ascribed to Jenty by several sources. For instance see Robert Watt, *Bibliotheca Britannica; or A General Index to British and Foreign Literature* 2vls. (Edinburgh: Archibald Constable and Company, 1824), II: 545. The text is available at http://books.google.ca/books?id=swMJAAAAQAAJ&q=JENTY#v=onepage&q=JENTY&f=false. For a more recent entry see *Biographisches Lexikon der hervorragenden Aarzte aller Zeiten und Volker* (Munchen/Berlin: Verlag, 1962), III: 430-431. Thus far I have not been able to locate this book. To my knowledge the only volume possibly related to the title said to have been penned by Jenty is listed as Thomas Peirce, *A Short, Plain and Exact Narrative of all the Proceedings, relative to the Two Convicts, lately Respited by His Majesty, for the Trial of Mr. Thomas Peirce's Styptic Medicines, And the true Causes of his Disappointment shewn*. (London: Printed for the Author, 1767).

One introductory example relating to Jenty's Spanish period suffices here to illustrate this point. In 1992 Roberts and Tomlinson, after duly acknowledging previous scholarship, concluded that after the publication in 1766 of Jenty's *Methodo*, "no more is known of him after this date."[23] In fact, between 1976 and 1982 Juan Riera, in the course of his research focusing on foreign surgeons present in Spain during the second half of the eighteenth century, published crucial information about Jenty, including the transcription of one of his letters.[24] It will become evident in the course of this thesis that an analysis of the addressee, the content, and the date of the letter allow us to better understand issues of possible patronage, and Jenty's personal network, as well as important biographical circumstances.

In the following pages I present some aspects of my current research on Jenty's biography. It is aimed at restoring to the extent that this is possible his personal circumstances and activities, including the professional networks that were both favourable and unfavourable to him. I highlight numerous instances of his affiliations with learned academies while clarifying and contextualizing his anatomical and surgical knowledge and *modus operandi.* Although I integrate these results with a brief analysis of Jenty's own aesthetic related to the visualization and the written description of anatomical knowledge, the primary objective of this research is to offer a more focused initial portrait of Jenty as a versatile scientific and polymath entrepreneur. In light of this objective, I will focus on the final years of Jenty's permanence in London and his initial

[23] K.B. Roberts and J.D.W. Tomlinson, *The Fabric of the Body: European Traditions of Anatomical Illustration,* (Oxford: Clarendon Press, 1992), 456. The full sentence reads as follows: "A surgical work in Spanish appeared under Jenty's name in 1766. No more is known of him after this date."
[24] Juan Riera, *Cirugía Española Ilustrada y su Comunicación con Europa (Estudio y Documentos de un Influjo Cultural)* (Valladolid: Universidad de Valladolid, 1976), 298. A transcription of Jenty's letter dated 1777 is included in Juan Riera, *Medicina y Ciencia en la España Ilustrada: Epistolario y Documentos I* (Valladolid: Universidad de Valladolid 1981), 78. Finally, Juan Riera, *Anatomía y Cirugía Española del Siglo XVIII (Notas y Estudios)* (Valladolid: Universidad de Valladolid, 1982), 68 and 73.

permanence in Spain. Finally, beginning with Jenty's initial presence in London and ending with his presence in Spain, several biographical dates and events needing to be reassessed are inserted within the body of knowledge characterizing Charles Nicholas Jenty's biography. Because of long periods of residency in England and Spain and the struggle for professional recognition, Jenty's biographical trajectory represents an excellent example of how the multiple peripheries that constituted his career can become centers for expansion into a larger perimeter of discussion involving the acquisition, development, transmission and transformation of anatomical and surgical knowledge in the eighteenth century.

This thesis builds upon previous research to "rescue" forgotten and overlooked documentation, including one of Jenty's letters written in Spanish and an extract from *The Register Book of Marriages* from the Parish of St. George in the County of Middlesex already published in the nineteenth century. Furthermore, several sources will be stitched together and several newspaper advertisements ranging from 1752 to 1768 will be mentioned. Additionally, Jenty's *Methodo,* already defined by Riera as "one of the best, or perhaps the best contribution written in Spanish about the topic of amputation during the eighteenth century, without any doubt" will be presented, in English for the first time**,** to my knowledge.[25] The *Methodo* is crucially important because in addition to providing specific surgical and medical procedures and including a table with six illustrations visualizing the amputation of the thigh through the hip joint, it also narrates several of Jenty's activities in London, Paris and Madrid.

[25] Juan Riera, *Cirugía Española Ilustrada*, 57, points out that: "una de las mejores, or quizá la mejor contribución hecha en castellano en la centuria sobre el tema de la amputación es sin disputa, la obra del cirujano Carlos Nicolás Jenty, titulada *Método de hacer la amputación del muslo* (Madrid 1766)."

One of the critical aspects of these sources is their temporal specificity and the precision of the information they provide, therefore allowing us to better qualify the superficial knowledge thus far acquired when dealing with Jenty's professional activities. One case in point is constituted by Jenty's own London private lectures. In 2002 Roberta McGrath (in summarizing and acknowledging Thornton 1982) states that: "He [i.e. Jenty] was an outsider, trained in France, working in London. There is no evidence that he practiced medicine, surgery or midwifery, or indeed that he even lectured."[26] As recently as 2011 Don Shelton reiterated this view stating that: "Jenty seems to have practiced as neither man-midwife nor surgeon."[27] And yet, already in December 1752 Jenty advertised in *The London Advertiser* his ability to cure numerous "Chirurgical Diseases", his willingness to offer free "Attendance and Advice […] to such as are not able to pay […]" while specifically underscoring that "Also married Women in Distress, with Child, may be delivered gratis, by making Application to the above Gentleman, [i.e. Jenty] some time before their Time &c."[28] Furthermore, in 1753, two months before being robbed, Jenty reminded his perspective clients about a year-long course "[…] in the Theory and Practical Parts of Surgery, by a Method so well contrived to insinuate quickly into the Minds of his Pupils the Principles of that Art[…]." [29] Moreover, in 1756 Jenty entered a contractual obligation with the parents or guardians of a certain Mary Haykin for her

[26] Roberta McGrath, *Seeing Her Sex*, 73, summarizes John L. Thornton, *Jan Van Rymsdyk*, 60.
[27] Don Shelton, *The Real Mr. Frankenstein*, 2nd ed., 146.
[28] *London Daily Advertiser*, December the 14th and the16th, 1752. As indicated above (note 1) these records were uncovered using a search term extrapolated from previously uncovered advertisements indicating Jenty's address. Indeed, within several advertisements preceding the two in question, Jenty was said to be living "near the Faulcon in Fetter-lane, in Fleet Street". These advertisements didn't include Jenty's willingness to deliver "married woman in distress, with child." However, in using the search term Faulcon we were able to rescue evidence regarding one of the most fundamental among Jenty's activities. Dr. Simon Chaplin also uncovered one of these advertisements.

[29] See for instance the *London Daily Advertiser*, January the 3rd 1753.

apprenticeship during seven years at a premium of thirty guineas. It is highly possible that in becoming Jenty's apprentice Mary would have pursued a midwifery career. On the other hand Jenty would have benefitted from the monetary premium and from assistance in his multiple activities.[30] Another example of overlooked evidence concerns Jenty's earliest presence in London. While circumstances that brought Jenty to England still remain unknown, scholarship has commonly located Jenty's arrival in London "about 1745".[31] However, a Charles Nicholas Jenty is nonetheless listed as having married a spinster named Hannah Anderson on May the 25th 1743 at St. George Church in Hanover Square.[32] Unfortunately thus far nothing is known about Hannah Anderson, however, to date this biographical entry appears to be the earliest evidence of Jenty's tangible presence in London.

Furthermore, analysis of both the content and language used in the newspaper advertisements reveals the kind of surgical, anatomical and medical knowledge Jenty advertised, the audience he targeted, and the sort of medical practitioner he wished to appear within the entrepreneurial and heterogeneous networks of lectures that

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[30] Jenty and Haykin's labor relationship is recorded in P. J. Wallis and R. V. Wallis, *Eighteenth Century Medics (Subscriptions, Licences, Apprenticeships)*, 2nd ed. (Newcastle upon Tyre, UK: Project for the Historical Biobibliography,1988), 276 and especially 325. Dr. Simon Chaplin has also uncovered this biographical information independently. Thus far no information about Haykin has been uncovered. For a meticulous analysis of medical apprenticeship in eighteenth century England see Joan Lane, 'The role of apprenticeship in eighteenth-century medical education in England,' in W. F. Bynum and Roy Porter, eds., *William Hunter and the Eighteenth-Century Medical World*, (Cambridge: Cambridge University Press), 57-103.

[31] For instance John L. Thornton and Patricia C. Want, "Jan van Rymsdyk's illustrations,"12.

[32] John H. Chapman, ed., *The Register Book of Marriages belonging to the Parish of St. George Hanover Square, in the County of Middlesex*, vol. I 1725 to 1787 (London: 1886), 29. Jenty is described as a bachelor residing in the parish of St. Ann in Westminster while Anderson is characterized as a spinster residing in the parish of St. George. They obtained a license from the Bishop of London. The entry reads as follows: **May 25 Charles Nicholas Jenty, of St. Ann, Westm. B, & Hannah Anderson, of this parish, S. L.B.L.** The text is available at http://books.google.ca/books?id=sKUKAAAAYAAJ&pg=PA552&dq=CHAPMAN+the+register+book+of+marriages++belonging+to+the+parish+of+st.+george+vol++1&hl=en&sa=X&ei=wJ_KUMLvJOW10QGO2YG4Bg&sqi=2&ved=0CDkQ6AEwAA#v=onepage&q=CHAPMAN%20the%20register%20book%20of%20marriages%20%20belonging%20to%20the%20parish%20of%20st.%20george%20vol%20%201&f=false. I have obtained a copy of the original entry from the City of Westminster Archives Centre.

characterized eighteenth century London. Analogously, news items, such as the robbery quoted at the beginning of this Introduction, where it is clearly specified that one of the thieves "had been concerned for Mr. Jenty in securing some of the Criminals executed at Tyburn", could alert us about a possible desire to negatively expose Jenty publicly as an active participant in what Ruth Richardson has called the "commodification of the human body", that is, the obtaining of corpses for the purposes of dissection through the paid collaboration of body snatchers and grave robbers. In other words: the selling and buying of corpses and body parts. [33]

Although the sources discussed in this thesis reveal Jenty's visibility and to some extent the level of his embeddedness within the enlightened scientific worlds in which he operated, they do not necessarily *per se* qualify the relevance of this presence; neither should they be accepted without proper scrutiny, especially in reconstructing a plausible biographical timeline. Indeed, in order to broaden the knowledge they provide and to ascertain their plausibility, they need to be evaluated in the contexts of their production while being simultaneously contextualized within the discourses in which they are rooted. Therefore, the specificity of the "context" acquires crucial importance and, as recently argued by Mary Lindemann, historians (and historians of medicine) should not take this term for granted without appropriate consideration:

> the use of the term "context" slides so trippingly off the tongues of historians and seems so *selbstverstandlich* to us that we rarely pause to reflect on what

[33] Ruth Richardson "Popular Beliefs about the Dead Body," in Carole Reeves, ed., *A Cultural History of the Human Body in the Age of Enlightenment*, (Oxford: Berg, 2010), 93-112 and 101 for the quotation. See also Ruth Richardson, *Death Dissection and the Destitute*, 2nd ed. (Chicago: Chicago University Press, 2000). Andrew Cunningham, *The Anatomist Anatomis'd*, 227-231, also addresses the complex issue of procurement of corpses and body parts. For societal perceptions of dissections see Peter Linebaugh, "The Tyburn Riot Against the Surgeons," in Douglas Hay et al., *Albion's Fatal Tree*, (New York: Pantheon, 1975), 65-117. However, recently Linebaugh's argument has been reassessed by Kate Kregan, *The Theatre of the Body: Staging Death and Embodying Life in Early Modern London*, (Turnhout: Brespol, 2009), especially 192-196.

> context means or, just as importantly, to consider how we settle on certain contexts, privileging, for instance, one over another, and rejecting alternatives.[34]

In approaching Jenty's life, the temporal boundaries and the contexts of the research have been determined by the scope of the investigation, the available sources, and by the questions I decided to pursue at this stage of the research. For instance the chronological parameters of this investigation have been determined by the earliest and latest records I uncovered, that is to say, forty-four years spanning from 1743 (the earliest Londonian record) to 1777 (the latest Spanish documentary evidence) including several chronological gaps.

Although I agree with Mary Terrall that: "biography is and must be unrelentingly particular, in that biographical details belong to a single individual,"[35] to highlight and better understand Jenty's circumstances has required a deep familiarity with the intellectual and tangible topography he occupied. Therefore, meticulous historical analysis such as those provided by Susan Lawrence and Toby Gelfand regarding eighteenth century London and French medical and surgical practices were particularly instructive starting points. Gelfand's reconstruction of the mechanisms by which an individual became a surgeon in early eighteenth century Paris was crucial in order to obtain the most probable trajectory of Jenty's formative period, in the absence, thus far, of any other direct evidence. From her part, Lawrence provided the necessary

[34] Mary Lindemann, in Jurgen Helm and Renate Wilson, eds., *Medical Theory and Therapeutic Practice in the Eighteenth Century* Stuttgart: Verlag, 2008), 311-321, especially 311 for the quotation.
[35] Mary Terrall, "Biography as Cultural History," *Isis* 97 (306-313), 307.

topographical medical, social and institutional practices Jenty would have faced when living in London.[36]

After having discussed sources and their relevance, a few reflections on the methodology used to better focus Jenty are in order. For the purpose of this thesis I use microhistory as a tool in order to better illuminate Jenty's biography. According to Giovanni Levi, reduction of scale and investigative intensity are two of the main characteristics associated with the practice of microhistory. [37] As eloquently articulated by Carlo Ginzburg, microhistory is carried out by an investigative technique that uses an "evidential paradigm" constituted by the investigation of clues generally not seen or considered irrelevant.[38] In the case of Jenty I would add that the lack of connecting clues and fragments of evidence together could also explain the gaps in the information gathered thus far. Therefore, a microhistorical study should be able to transform what could have been a mere appendix to a body of knowledge. In other words, one fundamental aspect of microhistory is the binomial relationship between the micro-scale

[36]Toby Gelfand, *Professionalizing Modern Medicine: Paris Surgeons and Medical Science and Institutions in the 18th Century*, (Westport, Connecticut: Greenwood Press, 1980). This was anticipated by Toby Gelfand, "'The Paris Manner' of Dissection: Student Anatomical Dissection in Early Eighteenth-Century Paris," *Bulletin of the History of Medicine* 46 (1972:99-130). For a larger study of French medical practices see Laurence Brockliss and Colin Jones, *The Medical World of Early Modern France*, (Oxford: Clarendon Press, 1997), especially 553-620 for surgical developments. Susan C. Lawrence, *Charitable Knowledge: Hospital Pupils and Practitioners in Eighteenth-Century London*, (Cambridge: Cambridge University Press, 1996), especially 362 where Jenty is mentioned as giving anatomical and surgical lectures from his house in 1757. Furthermore, Helen C. Brock, ed., *The Correspondence of Dr. William Hunter, 1740-1783*, 2 vls., (London: Pickering & Chatto, 2009), provides a wealth of biographical information about the numerous medical practitioners and other figures related in differing degrees to William Hunter's large network. The correspondence clearly uncovers loyalties that could have impacted Jenty's own network. Jenty is also briefly mentioned in the context of the anatomical drawings prepared for his atlases by Jan van Rymsdyk, which eventually reached Pennsylvania in 1762, I:156-157. More recently Andrew Cunningham, *The Anatomist Anatomis'd*, provides a larger analysis of European surgical and anatomical practices.

[37] Giovanni Levi, "On Microhistory," in Peter Burke, ed., *New Perspectives on Historical Writing*, 2nd ed. (Cambridge: Polity Press, 2001), 97-119. Levi explains how: "Microhistory as a practice is essentially based on the reduction of the scale of observation, on a microscopic analysis and an intensive study of the documentary material," 99.

[38] Carlo Ginzburg, *Clues, Myth, and Historical Method*, translated by John and Anne Tedeschi (Baltimore: John Hopkins University Press, 1989). See the essay entitled "Clues: Roots of an Evidential Paradigm," 96-115.

and macro-result. Indeed, in reflecting on his famous *The Cheese and the Worms*, Carlo Ginzburg notes that one result of such a technique has been the rescue of an historical element like the Protestant Reformation in Friuli from being simply mentioned in a footnote to being the protagonist of an entire book.[39]

However, because primary sources dealing with Jenty are marked by scarcity and intermittency, the question of how to deal microhistorically with these shortcomings arises. The knowledge of the macro picture, that is, the environment occupied and shaped by the subject of a biography becomes imperative in order to solve the difficulty "to demonstrate the existence of intellectual convergence, and contemporaneously, the lack of direct contacts," as noticed by Carlo Ginzburg.[40] Furthermore, historians using microhistory are tangible voices within the text and "the research process is explicitly described and the limitations of documentary evidence, the formulation of hypotheses and the lines of thought followed are no longer hidden away from the eye of the uninitiated."[41]

Analogous to the performance of a dissection, the invisible becomes visible even in all its opaque complexities. It is also worth noting the historical context to which microhistory has initially been applied, as remarked recently by Paula Findlen:

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[39] Carlo Ginzburg, "Microhistory: Two or Three Things That I Know about It," *Critical Inquiry* 20 (1993:10-35), 22. The article has been translated by John and Anne C. Tedeschi. For the story of the famous miller Menocchio see Carlo Ginzburg, *The Cheese and the Worms: The Cosmos of a Sixteenth-Century Miller*, trans. by John Tedeschi and Anne C. Tedeschi (Baltimore: John Hopkins University Press, 1980).

[40] *Ibid*, 28. Recently scholarship has engaged the issue of the microhistorical approach versus a macro-historical analysis. The following are several examples: Soraya de Chadarevian, "Microstudies versus big picture accounts?" *Studies in History and Philosophy of Biological and Biomedical Sciences* 40 (2009:13-19); Matti Peltonen, "Clues, Margins, and Monads: The Micro-Macro Link in Historical Research," *History and Theory*, 40 (2001: 347-359); Andrew Cunningham and Perry Williams, "De-Centring the 'Big Picture': "The Origins of Modern Science" and the Modern Origins of Science," *The British Journal for the History of Science* 26 (407-432).

[41] Giovanni Levi, "On Macrohistory," 110. Furthermore, for discussions on the voice and the silence of the author, see Carlo Ginzburg, "Two or Three Things That I Know about It," especially 23-24.

"interestingly enough, microhistory is a genre of historical writing that emerged from the study of the same period that produced the sweeping narratives of scientific revolutions. Its most powerful practitioners have been historians of the late and early modern era […]"[42] However, in light of the paucity of available evidence and the unfortunate inability to consult specific primary sources it became clear that a sort of embryonic prosopography has also been necessary in order to locate Jenty's own biographical and professional trajectories within those of contemporaneous actors.[43] For instance, this was particularly the case in attempting to discern Jenty's impact as a member of The Society for the Encouragement for Arts, Manufactures and Commerce in pursuing specific chemical experiments focused on the cleaning and improvement of several types of oils. A deeper understanding of the other characters involved in the same pursuit clarified to some extent Jenty's own relevance in what Larry Stewart very aptly defined as: "the knowledge economy" of the Enlightenment.[44]

My present research on Jenty's personal biography is best articulated as being located within a binomial relationship between the connected biographical events provided by a prosopographical approach and a microhistorical focus which helps to clarify the previously unrecognized larger role played by Jenty historically.

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[42] Paula Findlen, "The Two Cultures of Scholarship?" in *Isis* 96 (2005:230-237), 232.
[43] For a general introduction to prosopography see K.S.B. Keats-Rohan, ed., *Prosopography Approaches and Applications: A Handbook*, (Oxford: Oxford University 2007); Steven Shapin, "Prosopography as a Research Tool in History of Science: The British Scientific Community 1700-1900," *History of Science* xii (1974:1-28) and especially David. E. Allen, "Arcana ex Multitude: Prosopography as a Research Technique," *Archives of Natural History* 17 (1990:349-359) are also very useful. More recently, Robin Fleming, "Writing Biography at the Edge of History," *American Historical Review* 114 (2009:606-614), discusses the difficulty in dealing with the scarcity of sources while researching biographies in medieval Britain, pointing to the need for more attention to archeological studies and interdisciplinarity.
[44] Larry Stewart, "Experimental Spaces and the Knowledge Economy," in *History of Science*, xlv (2007:155-177).

This thesis is divided into two main chapters, addressing Jenty's late English and initial Spanish periods respectively. The first chapter comprising the years 1760-1764 includes an analysis of his chemical experiments, his engagement with the British forces during a campaign in Portugal and his final departure to Portugal. Throughout the chapter Jenty's aesthetic regarding his anatomical images and more in general the visualization and the description of the human body will also be briefly discussed.

The second chapter deals with Jenty's Spanish period beginning in 1764 and ending in 1777. In particular I contextualize his presence within the multiple changes that characterized anatomical and surgical practices in eighteenth century Spain, especially due to the influx of foreign medical and surgical knowledge. In judging from the scanty available evidence overall and the *Methodo* in particular, what appears to emerge is a Jenty that is well established in Spain, one who is primarily concerned with the multiple surgical issues that range from specific operations to surgical tools, including the marketing of a specific medical device.

Thornton wrote that Jenty "can almost be considered as a peripatetic lecturer on anatomy and surgery" and that his name "has not been completely forgotten" because of Jan van Rymsdyk's drawings and the dexterity of the craftsmen who printed them.[45] This thesis attempts to better qualify Thornton's "almost", demonstrating that in the case of Jenty's career, his multiple activities were very well grounded within a defined network of social practices, and human agencies, the latter often forgotten and in need of further investigation. As paradoxical as it may seem, ultimately, this thesis attempts to restore Charles Nicholas Jenty's place in history by "liberating" him from the images that made

[45] John Thornton, *Jan Van Rymsdyk*, 60.

him so obscurely famous, even if Jenty emphatically qualified himself as to "having done nothing in the Work, except preparing Nature for the Painter."[46]

[46] Charles Nicholas Jenty, *An Essay on the Demonstration of the Human Structure*, 9.

Chapter I

1760-1761: The Society for the Encouragement of Arts, Manufactures and Commerce and the final years in London

Despite his failure to become a Fellow of the Royal Society[1] Jenty successfully obtained membership in The Society for the Encouragement of Arts, Manufactures and Commerce.[2] The Society was founded in 1754 by the drawing master and inventor

[1] Jenty's application for Fellowship into the Royal Society was supported by the polymath, antiquarian, and physician William Stukeley (1687-1705), Doctor James Parsons (1705-1770), the second Earl of Macclesfield (George Parker 1696/97-1764) who was president at the time of the Royal Society and the primary dedicatee of Jenty's own 1757 *Course of Anatomico-Physiological Lectures*, the natural historian and collector Emanuel Mendes da Costa (1717-1791), the secretary of the Royal Society Thomas Birch (1705-1766), and the painter and experimenter Benjamin Wilson (1721-1766). According to the certificate of candidacy Jenty's application was finally "ballotted and rejected" on April 27th 1758. The document is available at: http://royalsociety.org/DServe/dserve.exe?dsqIni=Dserve.ini&dsqApp=Archive&dsqDb=Catalog&dsqSearch=RefNo==%27EC%2F1758%2F02%27&dsqCmd=Show.tcl. An excellent discussion regarding the necessary qualifications and the importance of the actual wording of the certificate of candidacy is provided by Maurice Crosland, "Explicit Qualifications as a Criterion for Membership of the Royal Society: A Historical Review," *Notes and Records of the Royal Society of London* 37 (1983:167-187), and especially 171 where it is said that when candidates were rejected: "it was usually because it was felt that they had neither sufficient social standing nor scientific eminence." See also Richard Sorrenson, "Towards a History of the Royal Society in the Eighteenth Century," *Notes and Records of the Royal Society of London* 50 (1996:29-46), especially 35-37 and 44 n.17. According to both scholars the phrase by which Jenty's was introduced to the Society for the consideration of Fellowship: "*A gentleman who has shew'd himself well versed in those branches of Science he professes*" was a standard one. More research is in progress in order to precisely ascertain the precise nature of the relationship between Jenty and his supporters especially with regard to Stukeley and Mendes da Costa. Doctor Parsons' further support to Jenty will be discussed below. While general biographical traits of Jenty's proposers are available in the *Oxford Dictionary of National Biography*, the multifaceted figure of Stukeley has been analyzed by David Boyd Haycok, *William Stukeley: Science, Religion and Archaeology in Eighteenth-Century England* (Woodbridge: The Boydell Press, 2002). For the complex and eventually disgraced career of Mendes de Costa see at least: G.S. Rousseau and David Haycock, "The Jew of Crane Court: Emanuel Mendes da Costa (1717-91), Natural History and Natural Excess," *History of Science* 38 (2000:127-170) and Geoffry Cantor, "The Rise and Fall of Emanuel Mendes da Costa: A Severe Case of 'Philosophical Dropsy'," *The English Historical Review* 116 (2001:584-603). Jenty's failed attempt has been also independently uncovered by Dr. Simon Chaplin (personal communication).

[2] The Society is known as RSA (i.e. Royal Society of Arts). A searchable archive is provided at http://www.thersa.org/about-us/history-and-archive/archive/archive-search , however, the large majority of documents are only available *in situ*. A Journal is also associated with the Society. Originally known as the *Journal of RSA*, since 1986 the title has been changed to *RSA Journal.* Already in the eighteenth century the Society was known as "The Society for Arts and Sciences" and the "Premium Society". The Society became officially "Royal" in 1908. In addition to the available digitalized primary sources, several records culled from the Society's website, including one specifically referring to Jenty, and those studies focusing

William Shipley (1715-1803) together with "ten other enthusiasts."[3] The first meeting was held on March 22nd at Rawthmell's Coffee-House, on Henrietta Street, Covent Garden.[4] Such a location "was well chosen as a strategic centre in the geography of London's clubs, being favoured by clientele from the Royal Society."[5]

From the beginning, the Society focused on practical aspects of arts, industry and artisanal practices. For this purpose numerous monetary premiums and numismatic awards were offered in order to foster and recognize new inventions, improve commerce, manufacture and agriculture.[6] Specific premium committees such as Agriculture, Colony and Trade, Manufacture, Mechanics and the Polite Arts were established and the

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on specific aspects of the Society referenced in the course of this section, the following informed my understanding of the Society's rise, development and *modus operandi:* Sir Henry Trueman Wood, *A History of the Royal Society of Arts* (London: John Murray, 1913); Derek Hudson and Kenneth W. Luckhurst, *The Royal Society of Arts 1754-1954* (London: John Murray, 1954); D.G.C. Allan, *William Shipley: Founder of the Royal Society of Arts: A Biography with Documents* (London: Hutchinson & CO, 1968); D.G.C. Allan, "The Society of Arts and Government, 1754-1800: Public Encouragement of Arts, Manufactures, and Commerce in Eighteenth-Century England," *Eighteenth-Century Studies* 7 (1974:434-452); D.G.C. Allan. *William Shipley: Founder of the Royal Society of Arts: A Biography with Documents.* 2nd. rev. ed. (London: Scolar Press, 1979); [Unless otherwise specified all references to Shipley's biography are taken from this 1979 edition]; J. L. Abbot and D.G.C. Allan, eds., *The Virtuoso Tribe of Arts and Sciences: Studies in the Eighteenth Century Work and Membership of the London Society of Arts* (Athens, Georgia: University of Georgia Press, 1994). [The essays comprising this collection were previously published in the Society's Journal] and Susan Bennett, ed., *Cultivating the Human Faculties: James Barry (1741-1806) and the Society of Arts* (Bethlehem: Lehigh University Press, 2008). Also instructive are D.G.C. Allan, *The Houses of the Royal Society: A History and a Guide* (London: RSA, 1966), as well as two entries he provides to the *Oxford Dictionary of National Biography* about William Shipley and the "Founders of the Society of Arts, Manufactures, and Commerce". In indicating the Society as an "author" I elected to retain the full name.

[3]D.G.C. Allan, "*Dear and Serviceable to Each Other*: Benjamin Franklin and the Royal Society of Arts" *Proceedings of the American Philosophical Society* 144 (2000: 245-266), 245. Among the eleven original members we must notice the presence of the surgeon Husband Messiter. Shipley and Messiter were friends living together until March 1755. See Sir Henry Trueman Wood, *A History of the Royal Society of Arts*, 12, and D.G.C. Allan, *William Shipley*, 54-55, 77-78 and 144. Presently very little is known about Messiter.

[4] Transcriptions of the minutes of the first meeting are provided by D.G.C. Allan, *William Shipley*, 188-189 and 191.

[5] N.A. Chambers, "The Society of Arts and Joseph Banks: A First Step in London Learned Society," *Notes & Records of the Royal Society* 61 (2007:313-325), 315. Chambers underscores the crucial relevance of the Royal Society and several of its Fellows in shaping Shipley's new Society.

[6]The Society for the Encouragement of Arts, Manufactures and Commerce, *A Register of the Premiums and Bounties given by the Society Instituted at London for the Encouragement of Arts, Manufactures, and Commerce from the Original Institution in the year 1754 to the present year1776 inclusive* (London: Printed by Order of the Society, James Phillips, 1778). It has been noticed that the Society's system of premiums had been inspired by the Northampton horse fairs Shipley attended.

Society's premiums list increased from the initial four in 1754 to three-hundred and sixty four ten years later.[7] Particular attention was devoted to the industrial applications of drawing, regarded as a fundamental basis for the designs necessary to several trades, ranging from the textile industry to cabinet making, among many others.[8] Shipley himself opened a drawing school for both male and female pupils, several of whom were eventually awarded the society's prizes.[9] Chemistry, due to its numerous potential applications, was a subject of crucial relevance for the Society which adopted from the very start "chemical tests in the promotion of utility."[10] Chemical experiments also epitomized the multiple eighteenth century intersections between natural philosophy, commerce and what today is generally, anachronistically, referred to as technology.[11]

The Society welcomed male and female members and was characterized by the heterogeneous nature of its membership representing different social classes and numerous occupations.[12] An international network was also cultivated through

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[7] Charlotte Grant, "Arts and Commerce Promoted: "female excellence," in *Cultivating the Human Faculties*, 64-75 and 69.

[8] Celina Fox, "Art and Trade-From the Society of Arts to the Royal Academy of Arts," in Sheila O'Connell, ed. *London 1753* (London: The British Museum, 2003), 18-27. See also Anne Puetz, "The Society and the "Polite Arts" 1754-1778: "best drawings," "High" Art and Designs for the Manufactures," in *Cultivating the Human Faculties*, 26-49.

[9] With regard to "Shipley's School" and his pupils: D.G.C. Allan, *William Shipley*, 76-78 and 213-218. For a more general overview see D.G.C. Allan, "Artists and the Society in the Eighteenth Century," in J.L. Abbott and D.G.C. Allan, eds., *The Virtuoso Tribe*, 91-118.

[10]Larry Stewart, "Experimental Spaces and the Knowledge Economy," *History of Science*, 45, 2007:155-177), 162.

[11] Ursula Klein and E.C. Spary," Introduction: Why Materials?" in Ursula Klein and E.C. Spary, eds. *Materials and Expertise in Early Modern Europe: Between Market and Laboratory* (Chicago and London: The University of Chicago Press, 2010), 1-23, especially 3 and n.6. Klein and Spary remark how: "[...] However, both *science* (especially in the singular) and *technology* can have anachronistic meanings when applied to the early modern era. Neither the disciplinary structure of the modern sciences nor the technological networks of industrialized societies existed between 1500-1800. [...] Similarly, the expression "arts and crafts" may be more appropriate for the period before the late eighteenth century than the term "technology."

[12] While the Society was comprised of numerous occupations and reflected different social classes, peerage maintained precedence at least in the recording of the respective last names regardless of the alphabetical order. With regard to female membership it is important to underscore what Alicia C. Percival, "Women and the Society of Arts in its Early Days," *Journal of Royal Society of Arts* 125 (1977:266-269; 330-333;

correspondent members so as to enhance the Society's relationship with other academies and learned societies.[13] Among the most famous and active eighteenth century foreign correspondents one must certainly mention Benjamin Franklin (1706-1789), elected member on September 1st 1756.[14] Ultimately, utilitarianism and patriotism were the two major ideological pillars of the Society, reflecting the larger rise of scientific societies that occurred during the Enlightenment.[15]

Analogously to Franklin and another fifty members, Jenty was proposed for membership by Shipley himself and was elected on November 20th 1760.[16] The Society's *Rules and Orders* stated that after the proposer provided the Society with a signed document indicating the candidate's "Name, Addition[17] , and Place of Abode", the name was to be included in a list displayed within the Society's main rooms. Finally, the candidate's name would have been balloted at the following societal meeting whereupon

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416-418) noticed: "One must admit that those who were most distinguished achieved their distinction *outside* the Society rather than through their connection with it." Furthermore, noticing how "The doors of the Royal Society and of the Society of Antiquaries, for instance, were not open to lady members as, from the beginning, those of this Society had been, even though from difference or lack of encouragement few passed through them." 266. For a statistical portrait of the awards granted to women see Helen Clifford, "Key Document from the Archives: The Award of Premiums and Bounties by the Society of Arts," *RSA Journal* 145 (1997:78-79). Clifford notices how: "....it was the Drawings category which attracted the largest number of female participants and winners." 78. See also Charlotte Grant "Arts and Commerce Promoted: "female excellence," in *Cultivating the Human Faculties*, 64-75.

[13] Part 3 of J. L. Abbott and D. G. C. Allan, *The Virtuoso Tribe of Arts and Science*, is entitled *Overseas Interests*, 199-277. It includes several essays dealing with the Society's relationship with Russia, Germany, and the United States as they occurred through a network of Corresponding members. An essay is also devoted to the famous polymath Count Francesco Algarotti (1712-1764) elected Corresponding member in 1762. Algarotti dedicated to the Society his *Saggio sulla Pittura* dated 1763.

[14] D.G.C. Allan, "*Dear and Serviceable to Each Other*," 248, and D.G.C. Allan, *William Shipley*, 195-198 (for Shipley's letter of invitation to Franklin) and 219.

[15] An excellent overview of the rise of learned societies is provided by James E. McClellan III, *Science Reorganized: Scientific Societies in the Eighteenth Century* (New York: Columbia University Press, 1985). The Society is briefly mentioned at 39.

[16] D.G. C. Allan, *William Shipley*, 218-219. The same reference occurs in Allan's first edition of Shipley's biography, 218-219. It is highly possible that Allan mentions Jenty also in his doctoral dissertation entitled: *The Society for the Encouragement of Arts, Manufactures and Commerce: Organization, Membership and Objectives in the First three Decades 1755-84. An Example of Voluntary and Social Policy in the Eighteenth Century* (London: University of London, 1979). The dissertation was not available to me during the writing of this section.

[17] The word “addition” was used to mean “occupation”.

a two-thirds majority membership would have been granted. A second balloting would have been allowed if demanded immediately.[18]

According to the transcription provided by David G. C. Allan, Jenty was recorded in the Society's M.S. Subscription Book as: "Jenty, Mr. Charles Nicholas" residing at "Bartlett's Buildings" located just off Fetter Lane.[19] His membership is included within *A List of the Society* for the years 1761, 1762, 1763 and 1764.[20] Jenty appears to have been a subscribing member, therefore obliged to pay: "any Sum not less than Two Guineas annually".[21] While the extent of the personal relationships between Jenty, Shipley and other members of the Society still remains to be fully investigated, it is reasonable to assume that in addition to his own scientific reputation, his publications, and the influence carried by Shipley's endorsement, Jenty's membership was facilitated by a gift of anatomical tables he bestowed to the Society. Indeed, in his *Methodo* published in Madrid in 1766, Jenty included a translation of a note of thanks dated January 14th 1761 (almost two months after having obtained the membership) which he received from Dr. Peter Templeman (1711-1769), the Secretary of the Society.[22] Dr. Templeman thanks

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[18] The Society for the Encouragement of Arts, Manufactures and Commerce, *Rules and Orders of The Society Instituted at London for the Encouragement of Arts Manufactures and Commerce* (London: Printed by the Order of the Society, 1760), 16-17.

[19] D.G.C. Allan, *William Shipley*, 219. The same reference occurs in Allan's first edition of Shipley's biography, 219.

[20] The Society for the Encouragement of Arts, Manufactures and Commerce, *A List of the Society for the Encouragement of Arts, Manufactures and Commerce* (London: n.p.,1761), 46; *A List of the Society for the Encouragement of Arts, Manufactures and Commerce,* (London: Printed by Order of the Society, 1762), 33; *A List of the Society for the Encouragement of Arts, Manufactures and Commerce,* (London: Printed by the Order of the Society, 1763), 35; *A List of the Society for the Encouragement of Arts, Manufactures and Commerce* (London: Printed by the Order of the Society, 1764), 37. All these lists are dated March 25th of their respective years.

[21]The Society for the Encouragement of Arts, Manufactures and Commerce, *Rules and Orders of the Society*, 16-17 and 23. As a perpetual member, Jenty would have been required to pay "Twenty Guineas at one Payment." Jenty is not recorded anymore after 1764.

[22] Carlos Nicolas Jenty, *Methodo de Hacer la Amputacion del Muslo por su Articulacion con el Hueso Innominado. Operacion tenida comunmente por impracticable. Ván añadidas, y ilustrado con Láminas diversas observaciones prácticas sobre operacions de Cirugía* (Madrid: Imprenta Real de la Gazeta, 1766). The document provided by Jenty begins as follows: "La Sociedad, para el adelantamiento de las Artes,

Jenty for the *regalo* (i.e. gift) of unspecified anatomical tables, while remarking their "infinite superiority to similar images produced in foreign countries".[23] Despite the fact that Dr. Templeman doesn't specify the nature of the anatomical tables, a volume in octavo recorded as "Jenty's Anatomy" included within *A Catalogue of the Books, Pamphlets, and Maps, belonging to the Society* dated 1790 offers us a possible clue to the specific nature of Jenty's gift.[24] The volume could be the text accompanying the four anatomical tables "Half as large as Nature" comprising Jenty's *An Essay on the Demonstration of the Human Structure* [...]. Jenty specified that the explanatory text should be in octavo for the comfort of meticulous readers: "I thought it more convenient to have the Explanations in Octavo, than as large as the Tables; therefore they may be bound separately, for the readier finding the References."[25] Indeed, as noticed by Thornton: "the fact that text and atlas were of different sizes has often led to their separation, although they are occasionally found bound together, either with the plates folded in half or with the text leaves mounted."[26] While an analogous situation also occurred with Jenty's *The demonstrations of a pregnant uterus*[...], in judging from the

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Manufacturas, y Commercio, dá á V. md. muchas gracias por el regalo que V. md. le ha hecho de sus figuras anatómicas." The author is given as "*Pedro Templeman* Médico y Secretario" and the addressee as: "Señor Jenty". 61. The letter is topographically located and dated as follows: "Londres, y Enero 14. de 1761". 61. For a biographical profile about Dr. Templeman see D.E. Allen, 'Templeman, Peter (1711-1769),' *Oxford Dictionary of National Biography.* (Oxford: Oxford University Press, 2004). [http://www.oxforddnb.com/view/article/27124, accessed 19 Dec. 2001]. Allen notices that Templeman "had a complete command" of the French language, therefore, allowing us to speculate that he could have written to Jenty in the surgeon's native language. Dr. Templeman's papers and correspondence related to the Society's business and publication are included in Dr. Templeman's *Transactions* available in the Society's Archive.

[23] Carlos Nicolas Jenty, *Methodo de Hacer la Amputacion*, 61. Jenty's anatomical tables are considered to be "infinitamente superiores a otras de la misma especie, que han salido en otros paises."

[24] *A Catalogue of the Books, Pamphlets, and Maps, belonging to the Society Instituted at London for the Encouragement of Arts, Manufactures, and Commerce* (London: Printed, by the Order of the Society, T. Spilsbury and Son, 1790), 10.

[25] Charles Nicholas Jenty, *An Essay on the Demonstrations of the Human Structure*, 9.

[26] John L. Thornton, *Jan van Rymsdyk: Medical Artist of the Eighteenth Century.* (Cambridge and New York: The Oleander Press, 1982), 54-55.

title by which the book has been filed, i.e. "Jenty's Anatomy," it is plausible to infer that it referred to the entire body rather than to the more specific gynecological images.

Jenty's anatomical tables did not arrive critically unannounced to the Society. Dr. Templeman's private acknowledgment and praises were indeed anticipated by a more public laudatory testimony pronounced by another member of the Society eleven months before Jenty's membership was officially recorded. In fact in the *Methodo*, we also find the translation of an *informe* (i.e. report) read by Dr. James Parsons at the Royal Society on January the 12th 1760 regarding anatomical tables offered (*ofrecidas*) by Jenty to the Royal Society.[27]

Dr. Parsons was a member of both Societies and more specifically at the time of his report he occupied the position of Assistant Secretary for Foreign Correspondence to the Royal Society.[28] We recall him being among the supporters of Jenty's earlier attempt to become a Fellow of the Royal Society and he was particularly interested in the visualization of anatomical knowledge. His own research, publications, and drawings regarding hermaphrodites and monstrous births are a testimony of his interest. [29] He was

[27] Carlos Nicolas Jenty, *Methodo de Hacer la Amputacion del Muslo*, 59-60. The document presented by Jenty is entitled "Informe leído a la Real Sociedad de Londres" and it is dated "12 de Enero 1760." The report, addressed to the Society's President and Members (i.e. Fellows), begins as follows: "Obedeciendo a los preceptos de nuestro ilustre Presidente, tengo hecha relación general de la Tablas curiosas Anatómicas, ofrecidas a la Sociedad Real por el Señor Jenty, [...]." In order to remain the closest as possible to Jenty's own document I have elected to translate the term "ofrecidas" with the literal equivalent "offered." However, in several of his newspaper advertisements Jenty uses the terms "laid" and "presented" when referring to the display of his anatomical Tables at the Royal Society; for instance *The Public Advertiser* dated May the 8th 1755 (for laid) and the *London Evening Post* dated August the 30th 1759 (for presented). The term "laid" is also used in an advertisement sheet included in Jenty's *A Course of Anatomico-Physiological Lectures*, 1757, I:n.p. The author of the report is given as "Diego Parsons" without any specification about his title. Because of his membership and his numerous contributions Parsons was very well known by the Royal Society.

[28] For a biographical portrait of James Parsons see Giles Hudson, 'Parsons James (1705-1770)', *Oxford Dictionary of National Biography*. (Oxford: Oxford University Press, 2004). [http://www.oxforddnb.com/view/article/21461, accessed 14 June 2012].

[29] Palmira Fontes da Costa, *The Singular and the Making of Knowledge at the Royal Society of London in the Eighteenth Century* (Cambridge, UK: Cambridge Scholars Publishing, 2009). Therein numerous references are made regarding Parsons' interests and visual anatomical communication.

a well-regarded draughtsman and "at the beginning of his career, he had been an artist and anatomical assistant to the distinguished physician James Douglas."[30] He was an acquaintance of William Shipley and since 1759 an "influential member" of the Society for the Encouragement of Arts.[31]

Dr. Parsons praises Jenty's anatomical tables in particular for their pedagogical value while discussing several technical aspects of the compositions. He underscores the large scale of the drawings, while noticing that despite the fact that other anatomical tables were more exact, Jenty's ones were preferable because of their clarity and uniqueness. Due to these qualities the images were useful to medical students and to a non-specialist audience alike. [32] The compositional succinctness, that is to say, the use of few illustrations in displaying the human body, was also praised, resulting in the human parts being displayed in their natural positions. This contrasted with other representations where the natural bodily environment was not respected, therefore confusing the students. Because of the manner by which Jenty organized his tables, they were distinguished for their pedagogical efficacy.[33]

The topographical bodily correctness, the compositional conciseness and the pedagogical effectiveness underscored by Dr. Parsons echoed Jenty's own concerns for proper anatomical illustrations. For instance Jenty observed in his *A Course of*

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[30] Palmira Fontes da Costa, "The Culture of Curiosity at the Royal Society in the First Half of the Eighteenth Century," *Notes & Records of the Royal Society* 56 (2002:147-166), 150.
[31] D.G.C. Allan, *William Shipley*, 169-170, 173-174, and especially 185 n.4 for the quotation.
[32] Carlos Nicolas Jenty, *Methodo de Hacer la Amputacion del Muslo*, op.cit. (note 20), 59. "[...] la anchura de la escala en que están hechas: pues por más exactas que sean las tablas de otros Profesores de Anatomía, éstas ciertamente deben ser preferidas, no solo para los Estudiantes de Medicina, sino también para los curios, y aplicados a la extructura del cuerpo humano, por razon de su mayor claridad, y distinción."
[33] *Ibid*., 59-60. "Fuera de esto, la perspectiva general de la extructura humana está representada en pocas figuras, quedando las partes conservadas en su vecindad natural, quando en las otras tablas quedan con frecuencia apartadas de su sitio natural, sin fundamento justo, para confusión de los Estudiantes. A más de esto, el Señor Jenty ha dispuesto sus figuras en situaciones muy instructivas, y algo diferentes de otras de la misma especie hasta aquí publicadas."

Anatomico-Physiological Lectures how: "the Stomach is not situated in the left Hypochondrium and Epigastric Region, in the Manner represented in most of the Figures." Furthermore, in a lecture devoted to the Cartilages and Ligaments he also argued how:

> the Hand is generally represented in Skeletons and Figures as lying in the same Plane, and in the same longitudinal Direction with the Bones of the Fore-arm. This gives a very false Idea of its true Situation, which, with respect to the Fore-arm, is oblique in two Respects.[34]

Equally, in justifying his choice of having represented the entire human anatomy only in four tables in *An Essay on the Demonstration of the Human Structure*, he noticed that: "it must be observed, that all the useless and Perplexing Repetitions, usually met with in Figures of this Kind, are entirely avoided."[35]

Dr. Parsons concludes stating that Jenty' s tables deserved to be highly praised because the very good anatomical knowledge they provided allowed Anatomy to be learned without performing dissections (*sin necesidad de la disección*), without much effort (*sin una obra de mucho trabajo*) and easily (*y despejo*).[36] For this reason alone, Dr. Parsons' endorsement would have certainly elicited the Society's interest for the tables' pedagogical utility.

At this point one cannot help but recall Tobias Smollett's appraisal of Jenty's plates for his *Demonstration of the Human Structure* as it appeared four years earlier in the *Critical Review*:

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[34] Charles Nicolas Jenty, *A Course of Anatomico-Physiological Lectures*, I: 206 (for the hand) and II:21 (for the stomach).
[35] Charles Nicholas Jenty, *ibid*. n.p. This is an advertisement sheet.
[36] Carlos Nicolas Jenty, *Methodo de Hacer la Amputacion del Muslo*, 60. The full paragraph reads as follows: "estas Tablas contienen una tan buena instrucción de Anatomía, que ésta se puede aprender por ellas, sin necesidad de la diseción, y sin una obra de mucho trabajo, y despejo, y por consiguente juzgo que esta Obra es harto digna de alabanza. Soy, Senores, de Vms."

> we are very sorry to say the execution is not accurate as we could wish; no do we think he has a happy manner of communicating his knowledge. We censure the more freely on this occasion, as Mr. Jenty, in his proposals, hath given his own work the preference to everything hitherto published on the same subject.[37]

These opposite views could also reflect loyalties to the respective networks. In Smollett's case, his friendship and collaboration with William Hunter and William Smellie are amply recorded.[38] In the meantime Jenty continued his private lectures as they were advertised one week later in the *Daily Advertiser* and reprinted in the *Public Ledger* dated January the 19th.[39]

One month after Dr. Parsons' London presentation, Jenty received another favorable review, this time from France. His *A Remarkable Case of Cohesions* [...], already read at the Royal Society in 1758, published in the Society's *Philosophical Transactions* in 1759 and most probably personally presented in 1758 at the Académie Royale des Sciences in Paris, was reviewed by Jean-François Clément Morand (1726-1784), the son of Sauveur-François Morand (1697-1773) for whom Jenty eventually became *corréspondent* at the Académie, and François David Hérissant (1714-1773) under the direction of the Académie. On February the 20th they recommended that Jenty's observations be mentioned in the form of narrative summaries (*par extrait*) within the

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[37] The reference to Smollett's severe criticism of Jenty is included in James G. Basker, *Tobias Smollett: Critic and Journalist*, (Newark: University of Delaware Press, 1998), 51 and 222 (for the reference regarding the *Critical Review* dated November1756, 373-374). I quoted from Smollett's complete text available at http://books.google.ca/books?id=he8vAAAAYAAJ&pg=PP7&redir_esc=y#v=onepage&q&f=false.

[38] C. Helen Brock ed., *The Correspondence of Dr. William Hunter*, 2vls. (London: Pickering & Chatto, 2008). Brock provides several letters written between Hunter and Smollett. See especially I: 18,154-155, and 168-169, among others.

[39] *The Public Ledger*, January 19th 1760. Therein an index of advertisements from multiple papers is provided. Jenty's advertisement is listed as originally being published in the *Daily Advertiser* one day earlier. *The Public Ledger* records Jenty under the heading *Lectures* as "Anatomical by Dr. Jenty."

Académie's own publication: the *Histoire et Mémoires de mathématique et de physique.* This eventually occurred in 1765 in the section titled *l'Histoire*.[40]

Back in London the reviews of Jenty's anatomical tables by Drs. Templeman and Parsons are worth pondering, so as to effectively underscore their differences and contextualize them. Admittedly they addressed two distinct audiences and they served two different purposes, nevertheless it is interesting to remark the varying degrees of epistemological emphasis they convey, especially with regard to the role played by the Society of Arts in presenting a "superior" British empire.

Ultimately, Dr. Parsons compares Jenty's anatomical images to other anatomical images, locating them in the context of an anatomical body of scientific knowledge. On

[40] A digitalized copy of the autographed document signed by Hérissant and J.F. Clement Morand and dated 20 février 1760 is available at http://www.biusante.parisdescartes.fr/histmed/medica/cote?ms05541
The document is filed as *Morand, Jean-François Clément.-Manuscrit autographé. Rapport à l'Académie des sciences sur une observation de Charles-Nicholas Jenty.*
Jenty's observations were published by Académie Royale des Sciences, *Histoire de L'Académie Royale des Sciences. Avec les Mémoirs de Mathématique & de Physique* vol. 61 (Paris: Imprimerie Royale, 1765), 89-91. They are included in a sub-section entitled *Observations Anatomiques*, 81-95, in turn belonging to a larger section entitled *Anatomie*, 61-95. The French text is a commented version of Jenty's observations. Indeed while the English text included in the *Philosophical Transactions* is written in the first person and doesn't present any comments beyond Jenty's own observations, the text of the Académie refers to Jenty in the third person defining him as an "habile anatomiste" from London, furthermore adding extra comments. This text appears to confirm that Jenty visited the Académie most probably in 1758-59 while he was living in London. This appears evident from the following statement: "L'Académie tente tout ce que nous venons de rapporter, de M. Jenty lui- même qui était venu à Paris lui en a donné le détail," 91. All the complex publishing mechanisms involving the *Histoire et Mémoire* are meticulously explained by James E. McClellan III, *Specialist Control: The Publications Committee of the Académie Royale des Sciences (Paris), 1700-1793* (Philadelphia: American Philosophical Society, 2003). Publishing decisions were made by the *Comité de Librairie/*the publication Committee. As stated above, Jenty's observations were included in the *Histoire* section, which served as a "repository for miscellaneous scientific reports and observations, and the Comité selected what appeared there." 34. Because of McClellan's painstaking research we are able to ascertain with an excellent degree of certainty the writer/s of Jenty's observations, 35. While the volume including Jenty's observations was published in 1765 it relates to the year 1759 of the Royal Academy of Science. The 93 volumes published by l' Académie Royale des Sciences between 1699-1790 are known as *Histoire et Mémoires.* Two fundamental works analyzing the *Histoire et Mémoires* are Robert Halleux et *al.*, *Les Publications de L'Académie Royale des Sciences Royales de Paris (1666-1793)* 2vls. (Turnhout: Brepols, 2001) and Eric Brian and Christiane Demeulenaere, eds., *Histoire et Mémoires de l'Académie des sciences, guide de recherches* (Paris: Tec et Doc Lavoiser, 1996), especially 113-114. Upon researching the *Histoire et Mémoires* it became crucially important to know that each volume has two tables of contents, that is one for the *Histoire* and the other for the *Mémoires*. In other words "the *Histoire* and the *Mémoires* sections are separately paginated" as noticed by James E. Mc Clellan III, "The *Memoires* of the *Académie Royale Des Sciences*, 1699-1790: A statistical Overview," in Robert Halleux and *al.*, *Les Publications*, II: 8-36,8.

the contrary Dr. Templeman, proudly writing in the name of The Society for the Encouragement of Arts, compares the bodies of anatomical knowledge corresponding to other nations, limiting his comments to English superiority versus foreign inferiority. Indeed, in addition to having told Jenty that his tables were infinitely superior to those produced in other countries, he also recognizes the honor that Jenty had bestowed on England with his anatomical works.[41]

The alleged "national" anatomical superiority of Jenty's images reflects the patriotic purpose of the Society and should also be contextualized within the larger role played by British arts during the Seven Years' War (1756-1763).[42] 1760 is particularly noteworthy as the Society organized the first British exhibition of contemporary art, free of charge, which was apparently attended by 20,000 visitors.[43] Because of the war, anatomical and surgical knowledge also became a sort of patriotic commodity to be highlighted within the crowded London marketplace of private lecturing. Indeed surgeons advertised the war and the consequent increasing need for qualified surgeons as one of the compelling reasons for attending their own private courses and/or producing their books.[44] For instance, in December 1756 Jenty advertised his course noticing how "...especially at this critical Juncture there is Occasion for a great many surgeons to go

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[41] Dr. Templeman "Reconoce perfectamente la Sociedad el valor inestimable de su favor, y de la honra que V. md. ha hecho a esta Nación por medio de sus producciones [...] al mismo tiempo que disfruto la honra de firmarme en nombre de la Sociedad". 61.

[42] Douglas Fordham, *British Art and the Seven Years' War: Allegiance and Autonomy* (Philadelphia: University of Pennsylvania Press, 2010). While Fordham notices that "the promotion of art was just one, and by no means the most important, of the society's initiatives", he underscores the fact that "...the society draws a sharp distinction between commercial development on the imperial fringe and cultural development at home. Contemporary art exhibitions were indeed, according to this logic, to secure Britain's greatly expanded imperial responsibilities to a firmer moral foundation through the promotion of 'those politer Arts' that made cultural superiority transparently evident." 142. When Dr. Templeman defines Jenty's anatomical tables superior to those of foreign countries he perfectly echoes this logic.

[43] *Ibid*., 144.

[44] Susan Lawrence, *Charitable Knowledge: Hospital Pupils and Practitioners in Eighteenth –Century London* (Cambridge: Cambridge University Press, 1996). Especially the section entitled "*Surgeon's pupils: the call of war?*" 137-140.

abroad."[45] In 1757 he explained that the *raison d'être* of his *An Essay on the Demonstration of the Human Structure* was the promotion:

> of Anatomical Knowledge, without which no Surgeon can perform any Operation with Skillfulness, and for want of which, Numbers of Lives are lost, especially in Time of War; when many young Gentlemen take upon them, or are obliged, especially Abroad, to exercise the Office of Surgeon.[46]

Susan Lawrence has noticed how between 1755 and 1756 (the beginning of the Seven Years' War) the number of surgeons joining the Navy increased from seven to sixty eight, while those enlisting in the Army rose from eight to forty-four.[47] And in November 1758 Jenty reiterated to his audience that: "Gentlemen continue to be speedily qualified either for the Navy or the Army, &c."[48] During the 1760s the Society also contemplated offering prizes for prosthetic limbs, eventually implementing such awards early in the nineteenth century, and furthermore rewarding the invention of numerous surgical instruments. [49] For instance in 1814 a gold medal was awarded to the surgeon and obstetrician Paolo Assalini (1759-1840) for "his Improvements in Surgical

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[45] As quoted by A.Q.Morton, "Lectures on Natural Philosophy in London, 1750-1765: S.C.T. Demainbray (1710-1782) and the 'Inattention' of his Countrymen," *The British Journal for the History of Science* 23 (1990:411-434), 426. "Demand for medical training also became greater with the outbreak of the Seven Years War in 1756. In December that year Jenty, a lecturer on Anatomy, advertised his course saying '...especially at this critical Juncture there's Occasion for a great many surgeons to go abroad'." This reference is also included in Alan Q. Morton & Jane A. Wess, eds., *Public & Private Science: The King George III Collection* (Oxford: Oxford University Press in association with the Science Museum: 1993). 77 and note 66.

[46] Charles Nicholas Jenty, *An Essay on the Demonstration of the Human Structure*, 9.

[47] Susan Lawrence, *Charitable Knowledge*, 138 and n.91 with bibliographical references. "For the beginning of the Seven's Years War, however, they record that in 1755, seven surgeons entered naval service, while in 1756 sixty-eight did so. This rise corresponds to the increase in army medical entrants during the same years from eight to forty four."

[48] A. Q. Morton, "Lectures on Natural Philosophy," 426 and n. 91, and Alan Q. Morton & Jane A. Wess, eds., *Public & Private Science*, 77 note 66.

[49] Sir Henry Trueman Wood, *The History of the Royal Society of Arts*, 290.

Instruments and Operations" and a silver medal was given to John Hyslop, Esquire, "for an improved Lancet for opening deep-seated Abscesses."[50]

Presently the full extent of Jenty involvement's with the Society's activities and its members remains to be fully investigated. However, thanks to the research carried out by Walter M. Stern on the Society's interest for the improvement of the British whaling industry and in particular its attempt to find an effective method for the purification of train oil extracted from whales, one learns that in the summer of 1761 a certain Dr. Jenty, a member of the Society's Committee of Chemistry, submitted several samples of purified oils.[51]

Generally referred to as train oil, the common whale oil was characterized by an horrendous odor and it needed to be properly purified in order to be suitable for multiple usages ranging from illumination, wool combing, leather treatment, to the making of common candles.[52] The train oil was considered inferior to the more expensive

[50] For Assalini see John Kirkup, *The Evolution of Surgical Instruments: An Illustrated History from Ancient Times to the Twentieth Century* (Novato, California: historyofscience.com, 2006), 287-288. More recently, see John Kirkup, "Paolo Assalini's artery forceps," *Journal of Medical Biography* 18 (2010:137). For specifics on Assalini and Hyslop's awards see Society for the Encouragement of Arts, Manufactures, and Commerce, *Transactions of the Society Instituted at London, for the Encouragement of Arts, Manufactures, and Commerce; with the Premiums offered in the Year1815*, XXXIII. (London: Wilks, 1815), 94-115.

[51] Walter M. Stern, "The Society and the Improvement of Whaling" in D.G.C. Allan and J. L. Abbott, *The Virtuoso Tribe of Arts & Sciences*, 158-182 and 396-399 (for the end notes) . "[...] another member of that Committee, Dr. Jenty, had engaged in experiments on oil purification which he submitted to the Society on 26th August; they were of course referred to the Committee of Chemistry."168. The discussion of Jenty's experiments relies almost exclusively upon Stern's investigation. Originally published in 1980 in the *Journal RSA* it is to the best of my knowledge the only source meticulously reconstructing the various vicissitudes of the Committee and the characters involved. Brief references regarding the final outcome of the Society's judging process are also provided by Sir Henry Trueman Wood, *A History of the Royal Society of Arts*, 282-283. A little more extensive narrative is provided by Derek Hudson and Kenneth W. Luckhurst, *The Royal Society of Arts 1754-1954*, 123-124. Stern acknowledges both these sources.

[52] *Ibid.*, 162. "The sickening smell of the common train oil made it extremely unpleasant to use; it was foetid, and when burnt in lamps, gave off an odour normally associated with organic matter in a state of putrefaction."

spermaceti oil provided by sperm whales, which was used for instance in the production of fine quality candles as well as for the production of unguents and electuaries.[53]

In 1718 Dr. John Quincy wrote in the first edition of his *English Dispensatory*: "It is a noble Medicine in many cases, tho chiefly us'd in Bruises, inward Hurts, and after Delivery," furthermore noticing that "it is most conveniently made up into the Forms of *Electuaries* and *Boles,* with proper *Conserves*." The thirteenth edition of the *Dispensatory* published in 1761 recites the same explanation.[54] At the end of the eighteenth century *spermaceti* was eventually included in the English Navy medical chest upon the recommendation of Dr. Gilbert Blane (1749-1834)[55] "who was appointed physician to the Fleet in 1780."[56] In 1796 George Smith Gibbes (1771-1851) M.D. and a Fellow of the

[53] *Ibid*., 162. For a review of the British whaling trade see Gordon Jackson, *The British Whaling Trade* (St. John's, Newfoundland: International Maritime Economic History Association, 2005), 41-42, (for the importance of spermaceti oil in candle making of superior quality). For the import of spermaceti see Patrick Wallis, Exotic Drugs and English Medicine: England's Drug Trade, c. 1550-c.1800,"*Social History of Medicine* 25 (2011:20-46), 40. Wallis reports the import of "Spermaceti course oily and Spermaceti fine. An excellent discussion regarding multiple oils and their industrial uses is provided by Sharron Ryan, *The Ice Hunters: A History of Newfoundland Sealing to 1914* (St. John's, NF: Breakwater, 1994), especially Chapter 1 entitled "Market Place," 65-91, in particular 68-79. A specific *unguentum* which included as ingredients three ounces of spermaceti is recorded by Robert Dossie, *Theory and Practice of Chirurgical Pharmacy: comprehending a complete dispensatory for the use of surgeons* (London: 1761). The ointment is called *unguentum album/*white ointment and it is described as follows: "Take of olive oil, one pint; of white wax, four ounces; and of *spermaceti*, three ounces. Melt the whole together with a gentle heat; and stir them very briskly, without ceasing, till they be fully cold." According to Dossie "this ointment is defenfative and emollient, from the nature of the *spermaceti*. It is, however, more frequently used compounded with other medicaments of various properties, than simply" 240.

[54] John Quincy, *Pharmacoeia Officinalis & Extemporanea: or A Compleat English Dispensatory, in Four Parts*, (London: A. Bell, 1718), 148. For the thirteenth edition "much enlarged and corrected" see John Quincy, *Pharmacopoeia Officinalis & Extemporanea: or, A Complete English Dispensatory, in Two Parts. Theoretic and Practical.* (London: Longman, 1761), 139-140.

[55] Reference to Dr. Blane is included in Iris Bruijin, *Ship's Surgeons of the Dutch East India Company. Commerce and the Progress of Medicine in the Eighteenth Century* (Leiden: Leiden University Press, 2009), 350 n.101.

[56] Margarette Lincoln, "The Medical Profession and Representations of the Navy, 1750-1815," in Geoffrey L. Hudson, ed., *British Military and Naval Medicine, 1600-1830* (Amsterdam: Rodopi, 2007), 201-226. 211.

Royal Society, published a pamphlet arguing for the possibility of transforming animal matters "into a Substance resembling Spermaceti."[57]

Because of industrial practices and illumination needs both vegetable and animal oils were in high demand in the eighteenth century British marketplace; therefore, the ability to find a proper process for purifying the train oil would have had an important impact on England's economy.[58] For instance wool combers had to use a more expensive olive oil imported from the Italian town of Gallipoli located in the southern region of Apulia.[59] Indeed, it has been noticed that since the middle of the seventeenth century the town of Gallipoli was a "sort of English colony"[60] and "a British vice-consul resided there permanently to foster trade with England, which, by the end of the century, had become a leading oil importer." [61]

Following the recommendation of physician and chemist Peter Shaw (1694-1763) in 1757 the Society decided to offer a premium of ten pounds for the most effective

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[57] George Smith Gibbes, *A Few Observations on the Component Parts of Animal Matters; and on Their Conversion into a Substance resembling Spermaceti* (Bath: W. Meyler, 1796).
[58] Shannon Ryan, *The Ice Hunters: A History of Newfoundland Sealing to 1914* (St. John's, NF: Breakwater, 1994).
[59] Walter M. Stern, "The Society and the Improvement of Whaling," remarks how: "Indeed, wool combers could not use train oil at all and were reduced to a coarse form of olive oil, known to the trade as Gallipoli oil (from the area whence it was imported), which was more expensive." 163
[60] Biagio Salvemini, "The Arrogance of the Market: The Economy of the Kingdom between the Mediterranean and Europe," in Girolamo Imbruglia, ed., *Naples in the Eighteenth Century: The Birth and Death of a Nation State* (Cambridge: Cambridge University Press, 2000), 56.
[61] Massimo Mazzotti, "Enlightened Mills: Mechanizing Olive Oil Production in Mediterranean Europe," *Technology and Culture* 45 (2004:277-304), 293. Mazzotti also quotes the sentence: "a sort of English colony" related above. He also notices that: "from 1782 on the price of oil from Gallipoli was published in London, which gives a sense of the significance of this trade." 293. The crucial importance of Gallipoli as an "English port" and the high quality of Gallipoli's oil is underscored by Gigliola Pagano De Divitiis, *English Merchants in Seventeenth-Century Italy*, transl. by Stephen Parkin (Cambridge University Press, 1997). De Divitiis remarks how: "the importance of Gallipoli stemmed partly from two factors: its convenient position on the southernmost extremity of the heel of the Italian peninsula, and its excellent cisterns for the conservation of olive oil which gave it a virtual monopoly over the export of high-quality oil." 124-125.

process of "edulcoration- that is, the sweetening and purification- of train oil".[62] In 1760 the premium was discontinued because of the ineffectiveness of the proposals received, however, the Society remained highly interested in the subject. In fact the Committee of Chemistry devoted at least 45 meetings "between 28th April 1761 and 2nd January 1762" to the subject.[63] Benjamin Franklin might also have attended a meeting held the 20th of June.[64] According to Stern it was exactly on August 26th that Dr. Jenty proposed his first samples of purified oils to the Society.[65]

Because Stern mentions neither Dr. Jenty's first nor middle names, sometimes referring to him solely as Jenty, before proceeding further it is necessary to confirm the identity of "Dr. Jenty" so as to exclude a possible case of homonymy or a misidentification. Despite the fact that among all the members of the Society I have surveyed only one is recorded as Jenty Charles Nicholas, addressing the path for verification of his identity will allow us to highlight a discrepancy in the manner by which Jenty's membership was recorded in 1761. It also allows us to consider some inconsistencies in Jenty's own newspaper advertisements, as well as to underscore certain changes in the Society's recording of members. This in turn will permit us to better

[62] Walter M. Stern, "The Society and the Improvement of Whaling,"163. Peter Shaw was a crucial figure within the chemical Enlightenment. I have consulted F.W.Gibbs, "Peter Shaw and the Revival of Chemistry," *Annals of Science* 7 (1951:211-237); Jan V. Golinski, "Peter Shaw: Chemistry and Communication in Augustan England," *Ambix* 30 (1983:19-29); James Sumner, "Michael Combrune, Peter Shaw and Commercial Chemistry: the Boerhaavian Chemical Origins of Brewing Thermometry," *Ambix* 54 (2007:5-29).
[63] Walter M. Stern, *ibid.* Stein recognizes that his final tally is subject to some reservation also due to a "puzzling meeting of 27th November 1761, which is described as devoted to edulcorating train oil, with twenty members present, but with no record of what happened." 165. On the other hand, Derek Hudson and Kenneth W. Luckhurst, *The Royal Society of Arts 1754-1954*, calculated that "altogether thirty-five meetings were devoted partly or wholly to this nauseating business," 123.
[64] D.G.C. Allan, "*Dear and Serviceable to Each* Other," points out how: "He [i.e. Franklin] also attended the committee of chemistry, which was wrestling with the problem of how to sweeten "train oil" (a fish based and evil-smelling substance), and he was present when the matter was resumed on 20 June."255.
[65] Walter M. Stern, "The Society and the Improvement of Whaling," 168.

ascertain and to quantify the number of surgeons and other medical practitioners listed as members of the Society once their professions were clearly indicated in the Society's *List.*

As stated above, in 1760 Jenty's membership was recorded in the Society's M.S. Subscription Book as "Jenty, Mr. Charles Nicholas." While the occupation was not specifically stated, the title of "Mr." was generally given to surgeons and as such Jenty would have provided it to the Society.[66] In fact, Dr. Templeman's letter addresses Jenty as *Señor*, (i.e. Mister), clearly differentiating it from his own title of *médico*, (i.e. physician). However, in the Society's *List* of members published on 25th of March 1761 (four months after Jenty became a member) Jenty is recorded as "Jenty, Charles Nicholas, M.D. *etc.*" This error could have been easily replicated in the summer of 1761 by the compiler of the Committee of Chemistry's minutes in turn obliging Stern to transcribe it for the purpose of his research. Where could the original error have originated? While it could certainly be attributed to simple oversight or/and common parlance, several of Jenty's own newspaper advertisements from 1758 to 1760 present him as a doctor and/or M.D. coexisting with other advertisements displaying the customary A.M. or M.A.[67] This incongruence could have certainly provided the public textual basis for the error, especially if we consider the abbreviation "*etc."* that follows the title of M.D. as it appears in the Society's *List.*[68] Such an abbreviation was indeed sometimes used in Jenty's advertisements in order to indicate unnamed academic affiliations following the publicly stated ones. For instance in the *London Evening Post* dated June the 7th –June

[66] Irvine Loudon, "Why are (male) surgeons still addressed as Mr.?" *BMJ* 321 (2000:1589-1591).
[67] The following are three samples: *London Evening Post*, January 12th –January 14th, 1758 (as M.A.), *London Evening Post*, December 5th – December 7th, 1758 (as M.D), *London Evening Post*, June 7th – June 9th, 1759 (as M.D.).
[68] The Society for the Encouragement of Arts, Manufactures and Commerce, *A List of the Society*, 1764, 46. Jenty is indeed recorded as "Jenty, Charles Nicholas, M.D. *etc.*"

the 9th 1759 Jenty is presented as an M.D. being member of "the Royal Academies of Sciences and Surgery at Paris, &c." while in the same newspaper dated August the 21st 1759 Jenty is styled as an M.D. being a member of "the Royal Academies of Sciences and Surgery at Paris, Rouen, Stockholm, &c. &c.". The latter advertisement concludes by noticing that "the Doctor begins his Anatomical Lectures the first of October next."[69] Because the term Doctor occurs in the context of the advertisement selling of Jenty's anatomical tables and books it could also reflect a mere marketing strategy. However, the question of the extent of Jenty's control over his own advertisements, as paradoxical as it may seem should at least be raised.

In the end, the fact that Jenty was styled as MD had to be relevant to somebody as the error was corrected and Jenty appears in the Society's *List* for 1762, 1763 and 1764 as "Jenty, Mr. Charles Nicholas."[70] This in turn further confirms his identity. D. G. C. Allan has noticed that "by 1764 (i.e. the last time Jenty was recorded) there were "99 medical men; and 812 entitled 'Mister' with or without an additional occupational description" recorded as members of the Society.[71] Paradoxically, despite the fact that Jenty has been recorded with both titles (M.D. and Mr.), limiting ourselves simply to the Society's *List* would not help in ascertaining Jenty's real occupation. Indeed, it appears that only after 1765 (when Jenty is not recorded anymore) did specific occupations and addresses begin to be more consistently added to the generic title of "Mr." in the Society's *List.* For instance in 1764 John James and John Hume are recorded as Misters while in 1765 they

[69] The same advertisement is repeated in the same newspaper dated August the 30th – September the 1st , 1759.
[70] The Society for the Encouragement of Arts, Manufactures and Commerce, *A List of the* Society, op. cit., (note 18).
[71] D.G.C. Allan, "Artists and the Society," 95. Allan appears to derive the occupation(s) from the Society's Subscription Book rather than from the *List*.

are both clearly defined as being surgeons living respectively at Sice Lane and Whiteball.[72] From his part John Allen recorded as Mr. in 1764, is listed one year later as being a surgeon, however, without mention of any address.[73] In the end, according to the 1765 *List* twenty-six individuals are listed as surgeons and eighty-one as physicians. Together with twenty-one apothecaries and five druggists they make the category of individuals involved in the market of medical practitioners one of the Society's most conspicuous presence.[74]

Jenty's specific expertise regarding the purification of oils is difficult to properly ascertain at this stage; however, his *A Course of Anatomico-Physiological Lectures* contains several references to the mixing of oils, manufacturing of soaps, as well as to Robert Boyle's (1627-1691) experiments dealing with water and oil.[75] A more general and necessary chemical expertise is clearly evident in Jenty's discussion about anatomical preparations and the injecting of cadavers where turpentine, olive and tartar per deliquium oils are mentioned.[76] Finally, Jenty would have known the oils specifically involved in the treatment of those surgical diseases he claimed to cure at least since 1752 as well as oils included in general pharmacopeias.[77]

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[72] The Society for the Encouragement of Arts, Manufactures and Commerce, (London: Printed by Order of the Society, 1764), 36 ("James, Mr. John") and 35 (Hume, Mr. John). In the 1765 *List* they are recorded as follows: "Hume, Mr. John, Surgeon, Whiteball and "James, Mr. John, Surgeon, Sice Lane, 35-36.

[73] The Society for the Encouragement of Arts, Manufactures and Commerce, *List*, 1764,"Allen, Mr. John", 5 and *List*, 1765, "Allen, Mr. John, Surgeon", 5.

[74] The Society for the Encouragement of Arts, Manufactures and Commerce, *A List of the Society for the Encouragement of Arts, Manufactures and Commerce* (London: Printed by Order of the Society, 1765). This list is dated July the 3rd.

[75] Charles Nicholas Jenty, *A Course of Anatomico-Physiological Lectures* I: 280.

[76] Charles Nicholas Jenty, *Ibid.*, *clxviii- clxx*, and *clxxxii.*

[77] We recall that Jenty claimed to be able to cure for example: Sore Breasts, Cancers, the Whites, Jaundice, among other "Chirurgical Diseases" already in December 1752. See for example *London Daily Advertiser* dated December the 16th.

In 1761 Jenty was competing with another member of the Committee of Chemistry named Robert Dossie (1717-1777).[78] Dossie was an internationally renowned chemist, a prolific writer often producing works anonymously or using a pseudonym, a son of an apothecary, most probably an apprentice to one and an expert in agriculture. Before becoming a member of the Society he dedicated to it *The Handmaid to the Arts [...]* published in 1758. These two volumes have been considered "by far the best treatise on the practice of the industrial arts that had yet appeared in the language".[79] The book discusses techniques for gilding, varnishing, engraving and scraping in mezzotinto among numerous others. Painting and the preparation of colors are also addressed together with the analysis of the necessary oils.[80] While Jenty would have found the volumes to be of a certain interest, especially with regard to his own choice of mezzotinto technique, more akin to his own medical and chemical expertise certainly would have been Dossie's other books published in the following three years. Indeed, *The Elaboratory laid Open[...]*, the *Institutes of Experimental Chemistry: Being An Essay toward reducing that branch of Natural Philosophy to a Regular System* and especially *Theory and Practice of Chirurgical Pharmacy[...]* published between 1758 and 1761, in addition to providing extensive pharmacological and chemical knowledge, included specific references to the spermaceti oil. These references ranged from its definition to its medical usage and included as well the instructions for substitution.[81] The three volumes epitomize what

[78] F. W. Gibbs, "Robert Dossie (1717-1777) and the Society of Arts," *Annals of Science* 7 (1951:149-172), especially 162-163 for the discussion of edulcorating train oil.
[79] *Ibid.*,154. Rober Dossie, *The Handmaid to the Arts*, 2vls. (London: Nourse, 1764).
[80] Robert Dossie, *The Handmaid to the Arts*, I: 154-156 (for linseed oil).
[81] A definition of spermaceti oil is provided by Robert Dossie, *Theory and Practice of Chirurgical Pharmacy: comprehending a complete dispensatory for the use of surgeons* (London: Nourse, 1761): "Spermaceti is the concreted oil found in the head of whales. But the same substance is now formed artificially from the oil of any kind of fish; which is, in general, substituted for the original kind obtained

Ursula Klein has recently called the "permeable boundaries of eighteenth century chemistry" explicitly pointing toward the intermingling of chemical and pharmaceutical knowledge and practices.[82]

While Dossie failed to become the Secretary of the Society, he was elected nonetheless member on April the 2nd 1760, six months before Jenty's own induction.[83] He remained extremely involved within the Society's activities and served on multiple committees for the duration of his life. In 1767 he was given the Society's gold medal for: "effectually aiding to establish the Manufacture of Pot Ash in North America."[84] Between 1768 and 1771 he published two volumes entitled *Memories of Agriculture and other Oeconomical Arts*, both of which were mostly an account of the Society's activities and premiums.[85] It has been noticed that the first volume, sponsored by the Society: "provided a useful, if excessively rosy, summary of the Society's activities during the first dozen years of its existence."[86] A third volume was finally published posthumously in

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from the head of the species of whale, thence called spermaceti. It is white; and of a very firm and hard consistence, somewhat flaky and brittle." 146.
For a more articulate explanation and justification for the substitution of spermaceti oil see Robert Dossie, *The Elaboratory laid Open, or the Secrets of Modern Chemistry and Pharmacy Revealed* (London: Nourse, 1758). Dossie approves of the substitution as follows: "The form and consistence of spermaceti not being owing to the state or nature of the oil, of which it is made, when taken from the whale, but to an artificial concretion produced by the addition of saline bodies, the same art is practised on other animal oils; even on the most feculent part of the train oil, and that extracted from pilchards: and the fictitious spermaceti, thus prepared, is sold, and used, in common, with that prepared from the proper part of the fat of the whale. As, however, the nature of animal oils is the same in all respects, except with regard to consistence, and their sweet or putrid state, and as all such oils are rendered alike solid and sweet, by that treatment of them, by which the spermaceti is prepared, the substitution of train, or other oils, instead of that originally used, cannot be accounted an injurious fraud, with respect to medicine; and, with respect to other purposes, it will be a very valuable improvement." 357-358.

[82] Ursula Klein, "Blending Technical Innovation and Learned Knowledge: The Making of Ethers," 125-170, in Ursula Klein and E. C. Spary, eds., *Materials and Expertise*, 150.

[83] F.W. Gibbs, "Robert Dossie," 158.

[84] *Ibid*., 161. In addition, Gibbs points out that Dossie's life: "soon became wrapped up in the Society and his main friendships were formed within that circle."156.

[85] Robert Dossie, *Memoirs of Agriculture, and other Oeconomical Arts* (London: Nourse, 1758).

[86] Celina Fox, "Art and Trade," 22.

1782.[87] Dossie's polymath research and publications also included translations from French and Latin into English of several medical books.[88] In particular between 1762 and 1767 his anonymous translations from French of Jean Astruc's (1706-1789) works dealing with female diseases and midwifery were published. Analysis of both the *Preface* and the *Appendix* provided by Dossie along with the translation of Astruc's *The Art of Midwifery reduced to Principles [...]* published in 1767 has prompted F. W.Gibbs to assert that Dossie: "had much more than a mere passing acquaintance with the art of the *accoucheur*." [89]

Dossie was involved with oil experiments before 1761. Indeed, after having participated in the appraisal of the earlier failed attempts that led, under his recommendation, to the discontinuing of the premium in 1760 he began to pursue multiple processes of edulcoration. He wrote an anonymous letter signed with the pseudonymous A.B. to the Society offering to explain three methods of edulcoration whereupon he received an award of 100 pounds. The laboratory of Dr. George Fordyce (1736-1802), a medical and a chemical lecturer, was used for experiments of this type, which were also attended to varying degrees by several members of the Committee of Chemistry.[90] After five meetings Dossie was unanimously awarded the 100 pounds by the Society for process n.1 and he: "was invited to write up his method for publication."[91]

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[87] F. W. Gibbs, "Robert Dossie,", 171 n.29.
[88] F. W. Gibbs, "Robert Dossie (1717-1777)," *Annals of Science* 9 (1953: 191-193).
[89] *Ibid*., 192.
[90] W. Stern, "The Society and the Improvement of Whaling," explains as follows: "The processes to which the Committee had to subject the train oil during experiments were complicated and lengthy; many of them took place in the laboratory of Dr. Fordyce, one of the members, with sometimes only two other members of the Committee present, of whom Dossie was one. Without running instructions from the author of the method to guide them, it is unlikely that the experimenters could have acted appropriately throughout the long series of trails."165. For Fordyce see Noel G. Coley, "George Fordyce M.D., F.R.S. (1736-1802): Physician-Chemist and Eccentric," *Notes & Records of the Royal Society of London* 55 (2001:395-409).
[91] W. Stern, "The Society and the Improvement of Whaling," 166.

However, in publishing his methods Dossie also included process n.3 even if after three meetings the Committee he chaired appears not to have reached a definitive conclusion as to its worth.[92] Jenty's samples were received by the Society when the Committee was deciding on Dossie's process n.2.

According to Stern, Jenty submitted samples of purified train, cod, rape, and linseed oils together with two oils named compounds n.1 and n.2 aimed specifically at woollen manufacture. In following the timeline proposed by Stern one can surmise that the Committee's final decision occurred sometime during the autumn of 1761. Indeed, after the initial August 26th submission Jenty required six weeks in order to consider the request of the Committee chaired by Dossie for the disclosure of his methods. In addition, we know that on October the 21st Joseph Banks (1743-1820), who eventually became the longest serving president of the Royal Society, attended his first ordinary meeting at the Society for the Encouragement of the Arts as a new member, having been elected the same day. At the meeting he learned that: "the committee of Chemistry, was investigating Dr Jonty's [*sic*] 'edulcorated oil', on which experiments were to be performed."[93]

Once Jenty agreed with the request, the Committee initially released its opinion on train and cod oils. The judgment regarding the other oils was released subsequent to the Society's directions to the Committee. A substantial improvement of *both* color and smell of the different oils constituted the parameter for an initial successful outcome. Jenty's edulcoration process appears to have been considered *fully* successful only when

[92] *Ibid.*, 168. "This did not prevent Dossie from including process No. 3 in the published description of his methods."

[93] N.A. Chambers, "The Society of Arts and Joseph Banks," explains that: "Thus at his first ordinary meeting as an elected member of any society or club, held in the Strand on 21 October 1761, Banks sampled some of the economic and artistic work of London learned society. He heard that the committee of Manufactures and Mechanic [...]. The committee of Correspondence reported [...]. The committee of Chemistry was investigating Dr. Jonty's [*sic*] 'edulcorated oil', on which experiments were to be performed." 316.

applied to cod oil as it was "considerably improved in both respects." On the contrary, while the train oil was considered to have improved in both color and smell, the improvement in smell was judged to be insufficient. The colors of both rape and linseed oils were both improved; however, improvement on their smells was lacking, and was thought to have worsened respectively. [94]

With regard to Jenty's compounds n.1 and n.2 the Committee noticed that the smell of compound n.1 represented an improvement when compared to that of the Gallipoli Oil. On the other hand, compound n.2 was considered to be ineffective because it smelled worse than compound n.1. Because Jenty's compound oils were specifically created for industrial usage the Committee had to verify their effectiveness during actual manufacturing practices. Therefore, compound n.1: "was sent to a wool comber and spinner and to a hosier." In addition, shortly thereafter "Mr. James Maynard from Honiton, occupation not stated, applied for three gallons of it to make proper experiments." According to Stern, after Jenty's oils were sent and acquired for testing no mention of them was made anymore.[95]

And yet, the Society's archive includes a letter/certificate written by a certain Thomas Hurst, about "Dr. Jenty's oil" dated the 11th December 1761.[96] The Society's *List* doesn't include any member named Mr. Thomas Hurst, and thus far his identity has not

[94] Walter M. Stern, "The Society and the Improvement of Whaling," summarizes the Committee's decision as follows: "The Committee then gave its opinion: the vicious train oil was improved in colour and smell by Jenty's treatment, but the improvement in smell was small; whereas the cod oil had been considerably improved in both respects. Jenty had submitted specimens of further oils, but the Committee did not pronounce upon them until it received a direct instruction from the Society's meeting. It thereupon decided that Jenty had considerably improved the colour of rape oil, but not its smell, that his linseed oil had been improved in colour, but smelt more offensively after than before treatment, [...]" 168.

[95] *Ibid.*, where it clearly states that :"[...] a little later a Mr. James Maynard from Honiton, occupation not stated, applied for three gallons of it to make proper experiments. This was the last time Dr. Jenty's oils received mention".

[96] The record is available at http://www.thersa.org/about-us/history-and-archive/archive/archive-search2/archive/r17272 . The document is filed as follows: "Letter from Thomas Hurst, certificate about Dr. Jenty's oil" and dated 11/12/1761. Reference number: RSA/PR/MC/105/10/433.

been ascertained. To complicate matters further, according to another transcription of the document the author was Thomas Hirst rather than Thomas Hurst.[97] And a certain Thomas Hirst, styled as Esquire was indeed a member of the Society from 1761 to 1765.[98] Furthermore, the author of the letter could also have been the hosier or/and the wool comber and spinner to whom the samples were sent for testing. While it is certainly possible that the similar pronunciation involving Hirst and Hurst could have led to a possible mistranscription, it must be noticed that Wallis and Wallis identified several surgeons, apothecaries and drysalters as having both Hirst and Hurst patronymics.[99]

In addition to the document specifically referring to Jenty's oil mentioned above, the Society's archive also includes another letter "about manufacture of oil" dated June the 16th 1762 written by Mr. James Maynard, who had previously applied for "three gallons" of Jenty's compound n.1.[100] Although Stern was not able to provide Maynard's occupation, the fact that he indicated his geographical provenance (i.e. Honiton) ultimately has proved fundamental for the confirmation of his profession and the uncovering of several biographical circumstances.

According to a sermon preached by Joshua Toulmin on the occasion of his death, James Maynard died in 1781 at the age of 63. He was a clothier who at a young age established himself at Honiton located at "126 computed, and 156 measured miles from London" in the county of Devon. He eventually took over his uncle Jeremiah's

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[97] This record is available at http://library.wellcome.ac.uk/assets/wtl039788.pdf . The document is recorded as follows: "Thomas Hirst on Dr. Jenty's oil 1761".
[98] I make reference here only to the 1761 membership. The Society for the Encouragement of Arts, Manufactures and Commerce, *A List of the Society*, 41.
[99] P. J.Wallis and R. V. Wallis, *Eighteenth Century Medics (Subscriptions, Licenses, Apprenticeships)*. 2nd ed. (Newcastele-upon Tyre, UK: Project for Historical Biobibliography. 1988). Wallis and Wallis list several Hurst(s) and Hirst(s) on pages 311 and 291 respectively.
[100] The record is available at http://www.thersa.org/about-us/history-and-archive/archive/archive-search2/archive/r24387. The document is filed as follows: "Letter of James Maynard about manufacturing oil" and dated 16/6/1762. Reference number: RSA/PR/GE/110/13/14

business.[101] Honiton was part of the large English rural textile manufacturing network and it was also known for lace making.[102] Two 1752 newspapers reported that both Jeremiah and James Maynard suffered large losses due to a fire that occurred in several of their Honiton properties. Moreover the reports reveal that James, in addition to being a clothier, was also a serge-maker, therefore pointing to additional manufacturing skills and procedures.[103]

In 1760, one year before applying for Jenty's oil compound n.1, James wrote to the Society proposing a method for the manufacturing of druggets, a type of cloth similar to serge, however, woven without a twill.[104] In 1761 he received a societal premium of 20 pounds for having made the best drugget for "the Lisbon market" and in 1762 a similar premium of 30l pounds was given to John Maynard likewise from Honiton.[105] In 1758 Robert Dossie explained the Society's interest in the manufacturing of English druggets targeting the Portuguese market as an attempt by English manufacturers to enter a trade otherwise dominated by France.[106]

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[101] The sermon was published by Joshua Toulmin, *The present and the future State of the human Frame, considered in a Sermon Preached at Honiton, Devon, June the 24th 1781, on occasion of the death of Mr. James Maynard, Clothier* (Taunton: Poole, 1781),13. For the topography of Devon and Honinton see Theophilus Botanista, *Rural Beauties; or, the Natural History of the four following Western Counties, Cornwall, Devonshire, Dorsetshire, and Somersetshire* (London: Fenner and C. Henderson, 1757),151. Botanista (most probably a pseudonym) styles himself as an M.D.

[102] John Smail, *Merchants, Markets and Manufacture: the English Wool Textile Industry in the Eighteenth Century* (MacMillan Press LTD, 1999), especially 32-74.

[103] *London Evening Post*, January 14th -16th 1752 and *General Advertiser*, January16th 1752.

[104] The record is available at http://www.thersa.org/about-us/history-and-archive/archive/archive-search2/archive/r24373 . For the specific nature of drugget see John Smail, ed., *Woollen Manufacturing in Yorkshire: The Memorandum Books of John Brearley Cloth Frizzer at Wakefeld 1758-1762* (Boydell Press, 2001). Smail provides an extremely useful glossary, xviii-xxi.

[105] Robert Dossie, *Memoirs of Agriculture*, 15-16.

[106] Robert Dossie, *Memoirs of Agriculture*, explains as follows: "The making of Drugget in England, *fit for the Lisbon market*, was another of the early articles relating to manufactures, of which the Society took up the encouragement. The reason of their attention to this matter lay in these circumstances. The French dispose of a great quantity of drugget at Lisbon: and from the neglect of our not making the proper kind, we obtain no share of this trade [...]." I: 99.

While Dossie and Jenty submitted their experimental results "in the summer, when the stink of the train oil must have been at its most offensive",[107] a third member of the Committee of Chemistry by the name of Dr. Michael Morris (?-1791) presented two procedures for the edulcoration of oil in the middle of autumn. Morris was a member of the Society at least since 1758 and he was aware of both Jenty and Dossie's presentations given that he had chaired several sessions of the Committee of Chemistry.[108] Between 1754 and 1757 Dr. Morris gave chemistry lectures, and like Jenty, he eventually participated in the Portuguese campaign.[109] Elected Fellow of the Royal Society in 1764 he was a member of the Royal College of Physicians and, from 1761 to 1791, a physician at the Westminster Hospital. [110] Dr. Morris was particularly interested in chemical experiments for therapeutic purposes. In 1758 he wrote a letter about his own experiments in the making of Ether and its possible therapeutic value, and in 1764 his experiences with spa waters were published.[111] Dr. Morris proposed to "clean the oil" using water.[112] In the end Dr. Morris's two processes and Jenty's samples were not considered worthy of the Society's award. Dossie's processes of edulcoration were

[107] Walter M. Stern, *The Society and the Improvement of Whaling*, 169.
[108] *Ibid.*, "The third member of the Committee of Chemistry to engage in edulcorating experiments was more considerate; not until 21st October 1761 did Dr. Michael Morris acquaint the Society with the fact he also wished two methods to be tested. He had been in the chair of the Committee of Chemistry for some of the Dossie and Jenty proceedings [...]."169.
[109] *Ibid.*, 169-170.
[110] Susan Lawrence, *Charitable Knowledge*, 263-264.
[111] Dr. Morris' letters relating his experiment with spa water and ether are included in the Society of Physicians in London, *Medical Observations and Inquiries* (London: Johnston, 1764), vol. II: 22-26 and 176-186 respectively. In addition, as reported by Susan Lawrence, *Charitable Knowledge*, 299, Dr. Morris "wrote that he first tried using Peruvian bark on his own children when they had whooping cough and, helpful about its beneficial effects, then he tried it on a case at the Westminster Hospital and on a private patient." With regard to the Society of Physicians Lawrence points out that: "at mid-century members of the Society of Physicians were still on the fringes of London's medical elite, which was primarily composed of RCP [i.e. *Royal College of Physicians*] Fellows", 263 and n.18. Dr. Morris's experiments are also mentioned by Fenwick Beekman, "John Hunter in Portugal," *Annals of Medical History* 8 (1936:288-296), 296.
[112] Walter M. Stern, "The Society and the Improvement of Whaling," points out that he was "....informing the Committee that his methods consisted of mixing the oil with either cold or warm water". 169.

published in 1761 and 1802; however, they didn't become as "widely known as the Society had hoped." [113]

Further research is certainly required in order to better understand Jenty's relationship with Dossie, the other members of the Committee of Chemistry, and the appraisal of oil samples he submitted. Scholarly commentaries clearly point toward Dossie's major influence on the Committee of Chemistry while emphasizing that his narratives of the earlier failed attempts of edulcoration and the final publication of his own methods should be studied with caution, since they are currently the only testimonies available.[114]

What is clear at this point is Jenty's eagerness to become an active participant in what Larry Stewart has aptly defined as a "knowledge economy" involving numerous actors ranging from artisans, merchants, natural philosophers, chemists, physicians and surgeons.[115] These multiple actors performed the commoditization of knowledge within a polymath physical environment constituted by laboratories where the boundaries between mechanical and philosophical epistemologies blurred and where too often the "assistants to enlightenment" remain anonymous.[116] In light of these communities of practitioners so akin to the Society's ultimate aims it would be extremely beneficial to clarify Jenty's own personal network, especially in order to uncover eventual commercial connections. It is worth recalling here that in 1758 Jenty, in writing to the Rouen Academy, indicated as a

[113] *Ibid.*, 170.
[114] *Ibid.*, Stern is explicit here: "there is no evidence that these findings were endorsed by the Society of Arts, except insofar as it had countenanced Dossie's *verbatim* report on his methods". 168.
[115] Larry Stewart, "Experimental Spaces," op. cit. (note 9).
[116] Larry Stewart, "Assistants to Enlightenment: William Lewis, Alexander Chisholm and Invisible Technicians in the Industrial Revolution," *Notes & Records of the Royal Society* 62 (2008:17-29).

reference address that of the Hennessy's of Ostend, a family of powerful merchants.[117] The prospect of possible financial gains, also to remedy a difficult financial situation, would have been a powerful incentive for pursuing oil experimentations. Jenty was indeed involved in a legal litigation seeking recovery of money owed to him. Probably sometime in 1760 or early in 1761 Jenty brought a lawsuit against Randall Edmund, a tailor of Fetter Lane and Rodsell Aaron, a pawnbroker of San George Hanover Square in Middlesex.[118] Eventually the two debtors were incarcerated at the King's Bench and Fleet prisons respectively, strongly suggesting their inability to put up the required bail and Jenty's willingness to recuperate whatever amount of money was owed to him.[119] According to the law current at the time a minimum of forty shillings of unpaid debt was required in order to begin a "civil process."[120]

In order to seek release from jail both debtors resorted to the 1761 Insolvency Act stipulating that debtors ought to appear in front of a justice of the Peace submitting a

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[117] It is possible that Jenty would have given the address of the Hennessys merely for shipping services. However, the question remains: Why did he select this powerful merchant family? An excellent and concise discussion of this family of merchants is provided by Jan Parmentier, "The Sweet of Commerce: The Hennessy of Ostend and their Network in the Eighteenth Century", in David Dickson, Jan Parmentier and Jane Ohlmeyer, eds., *Irish and Scottish Mercantile Networks in Europe and Overseas in the Seventeenth and Eighteenth Centuries* (Gent: Academia Press, 2007), 67-91.

[118] For an overall overview of English debt and credit culture see Margot C. Finn, *The Character of Credit: Personal Debts in English Culture* (Cambridge: Cambridge University Press, 2003), especially 110-111 and notes 4-7. For the more specific legal mechanisms involving creditors and the jailing of debtors see Joanna Innes, "The King's Bench prison in the later Eighteenth Century," in John Brewer and John Styles, eds., *An Ungovernable People: The English and their Law in the Seventeenth and Eighteenth Centuries* (New Brunswick, New Jersey: Rutgers University Press, 1980), 250-298 and 371-387 for crucial endnotes. Innes notices how: "In order to understand the ways in which the debt laws functioned we have to remember the circumstances of most actions for debts. An action was not usually brought against someone who was penniless or who had a balance of debts over assets; but simply against someone who had contracted a financial obligation which he had failed to discharge. A creditor would commonly try appeals, demands and threats before actually going to the law. Only when these failed to move a recalcitrant debtor would a creditor initiate proceedings to gain for himself an enhanced coercive negotiating power." 254. Unfortunately we don't know Jenty's own circumstances.

[119] Joanna Innes, "The King's Bench," 224-225.

[120] *Ibid.*, "The process current in Hannoverian England was a *civil* process, which could be initiated by any creditor owed a debt of forty shillings or more, in any of the more important courts handling civil cases." 253.

truthful inventory of their properties. Furthermore, their names would have been published in the *London Gazette.*[121] It is indeed in the *London Gazette* that we find two formulaic public notices dated April 17th and June 13th 1761, notifying that the two debtors were compelled by Charles Nicholas Jenty to "subscribe a Schedule of his [i.e. their] Estate[s] and Effects."[122] On November 21 1761, one year and one day after Jenty became a member of the Society of Arts, the *Public Ledger* providing the list of the debtors "appeared in the London Gazette, in order to be cleared by the Compulsive Clause of the last Insolvent Act' . "Cha. Nich. Jenty" was indeed listed as one of the "compelling creditors".[123]

The legal process would have then resulted in two possible outcomes: either the prisoners would have been released from jail and Jenty could have attempted to seize their properties without the possibility of compelling them to jail again for the same debts, or the prisoners would have remained incarcerated.[124] Presently we don't know the final outcome of the litigation; however, it appears to be unlikely that Jenty would have been able to recover his money.[125]

To sum up: in January 1760 Dr. Parsons favorably reviewed Jenty's anatomical tables at the Royal Society while Jenty advertised a course of anatomical lectures. In

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[121] *Ibid.*, "After 1711, debtors seeking release under Insolvency Acts were required to publish their names in the *London Gazette* in order to avert their creditors. Not *all* debtors who sought release were released [...]", 374, n.22.
[122] *London Gazette*, April 14th –April 18th, 1761 and *London Gazette*, June 13th – June 16, 1761.
[123] *The Public Ledger*, November 21st, 1761. The list provided is entitled: "Exact LIST of the DEBTORS NAMES which have appeared in the London Gazette, in order to be cleared by the Compulsive Clause of the last Insolvent Act". It is evident from the capitalized words that the debtors were publicly emphasized. *The Public Ledger* includes the specific dates when Jenty's debtors were publicly published.
[124]Joanna Innes, "The King's Bench Prison," notices how: "Between the late seventeenth and early nineteenth century centuries, parliamentary intervention chiefly took the form of a series of Temporary Relief or Insolvency Acts. [...] Creditors of the debtors discharged could then proceed against debtors' *property*, as listed in their schedules, but were not allowed to return them in prison for the same debts." 260
[125] *Ibid.*, "When debtors held out against their creditors long enough to be imprisoned, the chances of their paying were exiguous." 235.

February, Jenty's anatomical observations were recommended for a mention within the *Histoire et Mémoires* of the Royal Academy of Sciences at Paris. In September George Arnaud de Ronsil's *Observations on Aneurisms* would be published in the *British Magazine*. Jenty is mentioned as being an active surgeon and anatomist, having witnessed together with John Hunter and other anatomists and surgeons an autopsy and a surgical procedure. In November he obtained membership in the Society for the Encouragement of Arts, Manufactures and Commerce at London. In January 1761 he received Dr. Templeman's official thanks for a gift of anatomical tables he bestowed to the Society. In August, while still a member of the Society's Committee of Chemistry, he presented samples of several oils. Simultaneously he was involved in a legal litigation attempting to recover money owed to him. Between April and November he was indeed publicly listed at least three times as a compelling creditor within local newspapers. In December Mr. Hurst/Hirst provided the Society with a written appraisal of Jenty's oil.

Concurrently to these events, on the Continent on October the 15th 1761 in Barcelona (Spain) the surgeon Pedro Virgili (1699-1776), one of the most important and influential figures of the Spanish surgical Enlightenment, signed a bill of purchase itemizing all the expenses accumulated since November 1760 for the Barcelona Royal College of Surgery he founded the same year.[126] In addition to the customs fees and to the expenses for construction works for the Anatomical Amphitheatre, the costs were overwhelmingly constituted by the numerous books and surgical instruments brought

[126] Juan Riera, *Cirugía Española Ilustrada y su Comunicación con Europa (Estudio y Documentos de un Influjo Cultural)* (Valladolid: Universidad de Valladolid, 1976). Riera provides the following transcription of the document's title: "Cuenta del total Costo de los Libros, Ynstrumentos, y Maquinas, que he echo (sic) benir de Paris, por Orden de su Magestad, para l Real Colegio, que se establece en Barcelona, con todo lo demás que he gastado en favor de este Projecto, desde 29 de noviembre de 1760 hasta la fecha de ésta; haciéndome Cargo del Dinero que ha entrado en mi poder para este mismo fin, y es como sigue." 292-306.

from Paris. Jenty's six plates illustrating his "pregnant uterus" were also listed as: *seis láminas de partos por Jenty Yngles (*six Tables on pregnancy by Jenty the English man).[127] This document published by Riera as early as 1976 demonstrates that Jenty's eventual physical residency in Spain was anticipated by the anatomical atlas he conceived, therefore making Jenty already known in Spain, or at least in Catalonia. Furthermore, in Germany, the physician and botanist Casimir Christoph Schmedel (1718-1792) would translate Jenty's *Demonstrations of a Pregnant Uterus at Her Full Time [...]*. The volume was published in 1761 with German and Latin parallel texts and the illustrations were engraved by Seligmann Johann.[128]

Eventually 1761 would turn out to be Jenty's last full year of residency in London, as several months later he joined the British Army, participating in the same Seven Years' War he previously alluded to in his advertisements to "young Gentlemen." Indeed after the earlier diplomatic maneuvers between England and Portugal that occurred toward the end of the year, in 1762 a new military front opened in the Iberian Peninsula and Jenty went to Portugal as a surgeon mate earning five shillings a day. John Hunter was one of the three staff surgeons who gained ten shillings a day and Dr. Michael Morris, who

[127] *Ibid.*, 298. The price given is 005 libras torneras. In addition to Jenty's Tables, it is worth noticing that Virgili purchased Albinus' *Historia musculorum hominis* and Gautier D'Agoty's *Myologie complète en couleur et grandeur naturelle*, 293-294.

[128] Charles Nicholas Jenty, *Demonstratio uteri praegnatis mulieris cum foetu ad partum maturi: in tabulis sex[....]*cura et studio Carol Nicolai Jenty *[...] ad exemplar Londoniense translata D. Casimiro Christophoro Schmidel; in aes incisa et rcusa Iohanne Michaele Seligmanno/Abbildung der Gebahr-Mutter aus[...]* verfasset durch Carl Nicolaus Jenty *[...]*. (Numberg: Gedruckt mit Felsseckerichen Schriften, 1761). The colophon indicates it is dated 1765. I consulted the copy recently acquired by the McGill Osler Library of Medicine. For bibliographical references see K.F. Russell, *British Anatomy 1525-1800: A Bibliography of Works published in Britain, America and on the Continent* 2nd. ed. (London: St. Paul's Bibliographies, 1987), 118-119 and John L. Thornton, *Jan van Rymsdyk*, 58.

previously presented a sample of oils to the Society for the Encouragement of the Arts, was one of the two physicians making a pound a day.[129]

Thornton suggests that Jenty joined the Army because of the highly competitive London marketplace, and in particular from the competition provided by William Hunter's school.[130] Furthermore, Jenty likely would have "disposed of his possessions before going abroad."[131] Jenty could have sold some of Rymsdyk's anatomical drawings to Dr. John Fothergill (1712-1780) who eventually gave them as a gift to the Pennsylvania Hospital at Philadelphia through Dr. William Shippen Jr. (1736-1808), who used them in his anatomical teaching in the United States.[132] However, an advertisement published in *The Public Advertiser* on September the 30th 1762 (once Jenty was already in Portugal) alerted the public about Jenty's "tables and printed lectures". Furthermore it noticed the following: "NB Some curious skeletons and Preparations of the Doctor's, to be sold cheap." Simon Chaplin, who uncovered this source, notices how: "this may correspond with Fothergill's purchase of the material for the Pennsylvania Hospital."[133]

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[129] For the diplomatic vicissitudes between Portugal and England see Kenneth Maxwell, *Pombal: Paradox of the Enlightenment* (Cambridge: Cambridge University Press, 1995), 111-115, and especially 113. In addition, David Francis, *Portugal 1715-1808: Joanine, Pombaline and Rococo Portugal as seen by Britsh Diplomats and Traders* (London: Tamesis Books 1985), 146-48. Details of the campaign as well as the main sources for the medical aspects of it will be discussed in the following section.

[130] John L. Thornton, *Jan van Rymsdyk*, is explicit in saying: "As a lecturer he probably encountered heavy competition from the Hunter school and other individual lectures, and this may be why in 1762 he went as Surgeon's Mate with the British Expeditionary Force [...]," 54.

[131] *Ibid.*, 60.

[132] *Ibid.*, 60. Thornton notices that John Fothergill "was also acquainted with Jenty" and that: "Fothergill probably acquired the drawings, casts and skeleton direct from Jenty."

[133] My thanks to Dr. Simon Chaplin for having provided this reference. Once we include Dr. Chaplin's temporal reference (September the 30th 1762) within the chronology of Dr. Fothergill's gift to the Philadelphia Hospital (through Dr. Shippen), it appears to open a new line of inquiry regarding Jenty's possible additional teaching material. Indeed, as pointed out by John L. Thornton, *Jan van Rymsdyk*, 58, Dr. Fothergill wrote a letter dated April the 7th 1762 alerting James Pemberton in Philadelphia "that he was sending by Dr. Shippen a present to Pennsylvania Hospital which could be used for teaching purposes." In retracing Thornton's bibliography and in particular according to Francis Packard, *Some Account of the Pennsylvania Hospital of Philadelphia from 1751 to 1938* (Philadelphia: Engle Press, 1938), 97-98, and to Florence M. Greim (foreword by), "Anatomical Illustrations from the Fothergill Collection at the Pennsylvana Hospital," *What's New* (April 1952, n.p.): the arrival of the material was discussed in a

To the financial problems that Jenty would have incurred due to the lack of a consistent body of students we must add the fact that the sales of his prints could have also significantly diminished. Indeed we must recall that already in August 1759 Jenty publicly complained about a smear campaign by "some malicious Persons" preventing interested customers from buying his anatomical plates.[134]

Furthermore the legal aggressiveness by which Jenty attempted to recuperate money from his two debtors and the fact that he was not awarded the premium of the Society for the Encouragement of the Arts for his chemical experiments could also suggest dire financial straits.

However**,** recently Don Shelton has argued that Jenty, and John Hunter, joined the military in order to escape a possible prosecution for burking. "The two younger anatomists, John Hunter and Jenty, joined the army and went with it to Portugal, in the knowledge that being serving army officers they were safe from prosecution."[135] Shelton specifically is referring to his broader and ongoing claim that William Hunter and William Smellie, together with their respective assistants, i.e. John Hunter and Colin Mackenzie (1697-1775), knowingly ordered the killing of pregnant women in order to be able to continue their respective obstetrical investigations and create their gynecological atlases. One quotation suffices here in order to summarize the claim.

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meeting at the Philadelphia Court House on November the 8th 1762. Therefore, a question should be posed: who did acquire Jenty's skeletons and preparations uncovered by Dr. Chaplin and dated September 1762?

[134] It is difficult for me to ascertain if Jenty is referring specifically to his anatomical and gynecological Tables already published or if he is specifically pointing to two new Tables he intended to market. However, the public claim for a smear campaign directed towards him is significant in the context of his decision to leave London.

[135]Don Shelton, *The Real Mr. Frankenstein: Sir Anthony Carlisle, Medical Murders, and the Social Genesis of Frankenstein.* 2nd. ed., revised and partially condensed. (eBook edition, Auckland: Portim Press, 2011), 196.

> So which anatomist was the prime catalyst for this research? Evidence of murder is more clear than who actually performed the murders. It is obvious that William Smellie, Colin Mackenzie, William Hunter, and John Hunter, had to be cognizant of the murders. Smellie and William Hunter bear overall responsibility, as the murders were committed to supply material for research initiated under their management.[136]

Shelton uses literary, iconographic and statistical evidence, together with the laws of probability in support of his claims. In essence he argues that because it was almost impossible for the anatomists involved in gynecological research to obtain a cadaver of a pregnant woman at full term, they ordered the killings of the women they needed. His thesis has proven to be very controversial. It received international press coverage and it has been strongly disputed especially by Helen King among others.[137] However, according to Shelton "a number of internationally respected Professors and medical history authors in UK, USA, Germany, and New Zealand" have privately supported his conclusions.[138]

Here is certainly not the place to appraise Shelton's argument with regard to the provenance of the female pregnant cadavers used by the Hunters' brothers and Smellie. However, because Jenty is also directly implicated, a brief discussion of the sources used is necessary. In his website Shelton states:

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[136] *Ibid*., 188. Initially these claims had been articulated in Don Shelton, *The Real Mr. Frankenstein: Sir Anthony Carlisle, Medical Murders, and the Social Genesis of Frankenstein* (eBook edition, Auckland: Portim Press, 2009).

[137] Don Shelton, "The Emperor's New Clothes," *The Journal of the Royal Society of Medicine* 103 (2010:46-50) provides a synopsis of his argument using the laws of probability. His article has been disputed by a series of letters published in *The Journal of the Royal Society of Medicine* 103 (2010:166-167) where Shelton's answer is also provided. A longer article by A.D.G Roberts et *al.* "William Smellie and William Hunter: Two Great Obstetricians and Anatomists," *The Journal of the Royal Society of Medicine* 103 (2010:205-206) also strongly dispute Shelton's conclusions. More recently Helen King analyzed the spreading of Shelton's claims through the internet ultimately focusing on historical methodologies and the use of sources in the context of Internet research. See Helen King, "History without Historians? Medical History and the Internet," *Social History of Medicine* 25 (2012:212-221). Don Shelton answered with "The Internet and 'New Historians' " *Social History of Medicine* 25 (2012: 222-231). A further answer is provided by Helen King, "Response to Shelton," *Social History of Medicine* 25 (2012: 232-238).

[138] http://therealmrfrankenstein.blogspot.ca/ accessed July 4, 2012

> In continuing study with this research, I continue to be surprised by wider evidence of unethical research in 18C, 19C, and early 20C medicine. For example, the research revealing evidence of widespread murders for dissections by other 18C anatomists, such as Charles Nicholas Jenty, John Hunter, and John Sheldon.[139]

First of all one must notice that Shelton provides no new information about Jenty's London and Spanish periods. Indeed, an argument can be made that the few biographical traits he highlights are too synoptic even for the standard acknowledged study of Thornton. Therefore, Shelton's claims that Jenty: "seems to have practiced as neither man-midwife nor surgeon"[140] must be amended in light of the two December 1752 newspaper advertisements already noted above where Jenty specifically offers his services to: "married Women in Distress with Child, [who] may be delivered gratis, by making Application to the above Gentleman, some time before their time."[141] What are the specific pieces of evidence proposed against Jenty?

Shelton begins with an abbreviated quotation of Jenty's own explanation about the provenance of the cadaver of the pregnant woman later used for illustrating his *The Demonstrations of a Pregnant Uterus of a Woman at her Full Time [...]*. The quotation provided is the following: "she died suddenly...about a fortnight after her reckoning." Shelton continues summarizing Jenty's explanation of the individual cause of death as follows: "he [i.e. Jenty] observed she likely died from a heart ailment." However, Shelton notices: "but it is impossible to confirm this." [142]

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[139] http://therealmrfrankenstein.blogspot.ca/ accessed July 4, 2012
[140] Don Shelton, *The Real Mr. Frankenstein*, 2011,146.
[141] We recall these two advertisements from the *Introduction* to this Thesis. One of these advertisements is also being independently uncovered by Dr. Simon Chaplin. I extend my thanks to Dr. Chaplin for having provided this reference through personal communication.
[142] Don Shelton, *The Real Mr. Frankenstein*, 2011,141.

Following is Jenty's complete quotation as he describes the circumstances of the woman in question:

> This Woman died (some Time last Summer) suddenly; and, before she died, she said, she thought herself about a Fortnight after her Reckoning: So, then, we may conclude, she must have been near her Time. She was young, and had had Children before. The Cause of her Death was, as I have a great deal of Reason to believe, that the Aorta was ulcerated just as it arose from the Heart, on that Side which is near to the pulmonary Artery, and was lacerated. The Aorta appeared no ways dilated; so that it could not be occasioned by an Aneurism. In the Thorax, on the left Side I found a great Effusion [...] of Blood, which proceeded from the Heart. She was in perfect Health a little before she died, and had no Complaints. This is the second Woman I have had an Opportunity of opening, in this State of Pregnancy [...][143]

First of all let us focus on Jenty's sentence: "this woman died (some Time last Summer) suddenly." Shelton notices that William Hunter also used the same sentence, i.e. "she died suddenly", in speaking about the first pregnant woman he was able to dissect for his atlas finally published in 1774. While noticing that Hunter doesn't provide any explanation for her death, Shelton argues that "the words 'died suddenly' are a euphemism, chosen to encompass death by murder." And yet Shelton rejects Jenty's own explanations because they cannot be confirmed! If Hunter's omission is considered a sign of guilt, Jenty's explanations cannot be trusted either because: "being made after Smellie published in 1755, they cannot be relied upon, as they were probably made to allay suspicion over the source of the subject." [144] I fail to see how Jenty's own explanations can be linked to Smellie's publication in order to hide a murder; furthermore, to make

[143] Charles Nicholas Jenty, *The Demonstrations of a Pregnant Uterus*, 5-6.
[144] For the reference regarding William Hunter see Don Shelton, *The Real Mr. Frankenstein*, 142-143. The full paragraph reads as follows: "The words 'a woman died suddenly' are significant. He [i.e William Hunter] does not say was drowned, or poisoned, or died from accident or disease. As will be shown later, the words 'died suddenly' are a euphemism, chosen to encompass death by murder". For the reference to Jenty, *Ibid.*, 146.

Hunter's silence about the causes of death of the pregnant woman he dissected equivalent to Jenty's explanation is simply to elicit certainty from a conjecture.

In addition, we should also underscore the fact that Jenty's explanation allows us to have at least bits of biographical information regarding the unnamed woman in question well beyond Shelton's synoptic quotation. For instance, we are told that previously she had children, she died in summer and that "she said" to be in good health. Jenty could have obtained this information from acquaintances of the deceased woman, and/or from the person/s who provided the corpse to him. It must be noticed that Jenty mentions that the woman thus far described was the second woman similarly pregnant he had an opportunity to dissect. However, he doesn't specify the causes of death of the first woman.[145]

Because of the numerous biographical gaps with regard to Jenty's life, at this point it is impossible to concretely fully reconstruct his Londonian personal and professional networks *per extenso*. Therefore, with the exception of "the young Fellow" who apparently "had been concerned for Mr. Jenty in securing some of the criminals at Tyburn"[146] presently we don't know the possible network of sextons, gravediggers and resurrectionists that Jenty would have had and who could have provided him with male and female corpses. Certainly the question of how Jenty obtained bodies for his atlases and the reasons why he decided to join the military and later move to Spain must be

[145] The woman Jenty describes as being the subject of his *The Demonstrations of a Pregnant Uterus* was already "announced" by Jenty himself in his *An Essay on the Demonstration of the Human Structure*, where it is stated that: "I shall publish, however, in a short Time, a pregnant Uterus, [...]. This pregnant Uterus is taken from a young Woman who died suddenly (not in Labour) and was above a Week beyond her Reckoning." 8.

[146] We recall these advertisements from the *Introduction* to this Thesis. *The London Evening Post* dated March the 3rd to March the 6th, *The Public Advertiser* March the 5th and the *Old England Journal* March the 10th.

pursued; however, I think that presently the most plausible reason is that Jenty was not able to be as successful as he wanted in the London marketplace.

1762-1764: The Campaign in Portugal[147]

The Portuguese campaign that saw John Campbell the fourth Earl of Loudoun **(**1705-82**)** successfully commanding a British Expeditionary Force of about 7,000 soldiers joining the Portuguese forces against a Franco-Spanish army was a brief military event characterized more by sickness-related deaths than by casualties caused by major battles. In the larger theatre of the Seven Years War and despite the large number of troops involved, the campaign has been repeatedly defined as "a side show."[148] However, scholarship has noticed that while the campaign faded into oblivion for "short as it was, [it] had been a high point in Anglo-Portuguese co-operation."[149]

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[147] We learn about Jenty's own presence in the campaign because of the scholarly interest shown in the more famous John Hunter. It was indeed such an interest that prompted the Royal College of Surgeons in 1935 to purchase Lord Loudon's papers related to medical matters of the Portuguese Campaign. A synoptic account of these papers is available at http://www.rcseng.ac.uk/museums/archives and more specifically at http://surgicat.rcseng.ac.uk/%284lqbg2zmvp4aiv2m0n51j355%29/detail.aspx
No entries about Jenty are provided by the RSC online catalogue. Analogously to the documents related to Jenty discussed in the context of the Society for the Improvement of Arts, Commerce and Manufactures, the Loudoun's papers are only available *in situ*. The fact that Jenty's participation is known represents another example of his biographical occurrences rediscovered through the lives of others, therefore reminding the researcher always to cast the widest of nets in approaching a biographical endeavor. The fundamental reference is: G. E. Gask, "John Hunter in the Campaign in Portugal, 1762-30," *The British Journal of Surgery* 24 (1936-1937: 640-668). Unless otherwise indicated all references relate to this article. This essay (with a minor change to correct a typographical error in the title) is also included in G. E. Gask. *Essays in the History of Medicine* (London: Butterworth & CO, 1950), 116-144.

[148] For a biographical profile of Lord Loudoun see Stephen Brumwell, 'Campbell, John, fourth Earl of Loudoun (1705-1782),' *Oxford Dictionary of National Biography* (Oxford: Oxford University Press, 2004); online ed. January 2008 available at http://www.oxforddnb.com/view/article/4516, accessed 1July 2012. G. E. Gask, "John Hunter in the Campaign," defines the military engagement as: "[...] really a sideshow, and a very unimportant one at that [...],"641. Kenneth Maxwell, *Pombal*, further remarks how "the peninsular campaign of 1762 remained very much a sideshow at the tail end of the Seven Years War,"113-114. Finally, Wendy Moore, *The Knife Man: The Extraordinary Life and Times of John Hunter, Father of Modern Surgery* (New York: Broadway Books, 2005), indicates that: "the campaign was a little more than a side show at the tail end of a costly war, [...]." 97.

[149] A.D. Francis, "The Campaign in Portugal, 1762," *Journal of the Society for Army Historical Research* LIX (1981: 25-43), 41.

British involvement was deemed necessary, because of the agreement made by France and Spain to force Portugal "to close its ports to British shipping" therefore attempting to break a well-established Anglo-Portuguese alliance and curtail the British mercantile industry.[150] To the carefully crafted Portuguese request for assistance Britain answered with an army and financial assistance, as well as military advisers.[151] Ultimately, Britain's assistance revealed Portugal's poor defense conditions and its dependency on British military expertise beyond the end of the war[152]. Spain invaded Portugal early in May 1762, moving toward the city of Oporto, a crucial hub for British imports of wine.[153]

After having conquered Belle Ile on April 1761, the French island in the Gulf of Biscay, where John Hunter was initially stationed, the first British troops sailing from England and Ireland arrived in Portugal in May. Lord Loudon, after having joined the forces at Belle Ile, was finally in Lisbon on July the 26th.[154] The hostilities lasted about four months; in November 1762 a European general armistice was signed. The month of September and the period following the armistice were characterized by widespread

[150] Franz A. J. Szabo, *The Seven Years War in Europe, 1756-1763* (Harlow, UK: Pearson/Longman, 2008), 406.
[151] Kenneth Maxell, *Pombal,* indicates that: "Pombal when requesting British military assistance in 1762, was careful not to invoke the Anglo-Portuguese treaties, a fact the British minister in Lisbon noted with unease", 113. Maxell also notices that the English's support for the intervention was not unanimous as "British aid did not come without vocal protest in the House of Commerce,"112. Finally Maxell clarifies how the protest was articulated by the spokesman for the London merchants. 112 n.4.
[152] A. D. Francis, "The Campaign in Portugal," 40-41, Kenneth Maxell, *Pombal*, 114.
[153] Franz A. J. Szabo, *The Seven Years War in Europe*, 407. From his part David Francis, *Portugal 1715-1808*, notices how: "there was a great alarm in Oporto where the Factory feared for their wine and effects. Some 30,000 pipes were said to be awaiting shipment,"151. Daniel Baugh, *The Global Seven Years War, 1754-1763: Britain and France in a Great Power Context* (Harlow, UK: Pearson, 2011), clarifies that: "British residents at Oporto began to move their families to Lisbon and put out panicked calls for transports to carry away their wines," 594.
[154] Daniel Baugh, *The Global Seven Years War*, 593.

sickness.[155] Eventually on February the 10th 1763 the Peace of Paris formalized the end of the Seven Years War.

Meticulous planning for the necessary medical facilities was made as early as February 1762 and it represented an organizational novelty because "for the first time we come across a previously prepared hospital plan based on estimated sick rate."[156] According to Simon Chaplin, "on the18th of February 1762 Jenty was examined and passed as Surgeon's Mate to an army hospital"[157]and by May the 9th Jenty was formally recorded as one of "the Officers of the Hospital appointed to attend the Forces in an expedition to Portugal."[158] In reviewing the reference to Jenty included in Lord Loudon's papers and presented originally by Gask, Thornton and Want state that Jenty served from April the 13th 1762. However, once the reference is contextualized with Gask's own reading of other data therein, it can be argued that April the 13th refers to Jenty's official last day of service (April the 13th 1763) rather than to his initial warrant (April the 13th

[155] G. E. Gask, "John Hunter in the Campaign," 653; David Francis, *Portugal 1715-1808*, 54; and in particular Erica Charters, "The Caring Fiscal-Military State during the Seven Years War," *The Historical Journal* 52 (2009: 921-941), 928-29 and especially 923 where it is argued that: "during the 1762-3 Portuguese campaign, disease was regarded as a sign of ill discipline, and jeopardized military and politically alliances."

[156] Neil Cantlie, *A History of the Army Medical Department*, 2 vls. (Edinburgh and London: Churchill Livingstone, 1974), I: 134. For the campaign's preparations see G. E. Gask, "John Hunter in the Campaign," 642-645.

[157] The date of Jenty's examination has been provided by Dr. Simon Chaplin through personal communication. For the nature and election of the surgeon mates see A. Peterkin, William Johnston and R. Drew, *Commissioned Officers in the Medical Services of the British Army, 1660-1960* 2vls. (London: The Wellcome Historical Medical Library, 1968), I: xxi, xxiv-xxv, xxxii, xxxv-xxxvi.

[158] G. E. Gask, "John Hunter in Portugal", states that: "On May 9 Robert Adair, Inspector-General of Hospitals, furnished Lord Loudon with a "List of the Officers of the Hospital appointed to attend the Forces in an Expedition to Portugal", 643. Gask provides a transcription of the list (644), however, there is an inconsistency regarding the tally of surgeon mates specifically transcribed as being sixteen in number. Indeed once the names provided are added up the resulting sum is 15 (including Jenty). A further comparison of Gask's transcription of the officers' list with a copy of it included in Robert Drew, "John Hunter and the Army," *Journal of the Royal Army Medical Corps* 113 (1967:5-17), 9, clarifies the discrepancy. Gask (1936-1937: 644 and 1950:120) omitted a certain John Digby included instead in the copy of the Loudoun list provided by Drew. On the other hand, Digby is included by Gask in the final list provided at the end of the campaign (667). He is recorded as having died on December the 4th 1762. His name is the one that just precedes Jenty's.

1762).[159] What is certain, however, is that by May Jenty would have already begun or would have been in the process of taking the necessary steps in order to put his affairs in order before going to Portugal.

The medical facilities were characterized by main hospitals located at Lisbon, spread over four houses, and Santarem in addition to several subsidiary and temporary facilities.[160] Jenty was one of the eighteen surgeon mates making five shillings a day, the salary being the standard pay for surgeon mates during the eighteenth century.[161] The salary would have been paid at the end of the campaign rather than on a weekly or monthly basis. He also received some unspecified allowance while in Portugal. [162] In addition to the surgeon mates, the Portuguese medical contingency was comprised of one medical director, three surgeons, two apothecaries, and four physicians. A group of nurses led by a head nurse was also part of the medical staff, together with female cooks, servants and washerwomen.[163]

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[159] The final list of the officers is provided by G. E. Gask, "John Hunter in Portugal," 667. John L. Thornton and Patricia C. Want, "C.N. Jenty and the Mezzotint Plates in his 'Demonstrations of a Pregnant Uterus', 1757," *The Journal of Audiovisual Media in Medicine* 1(1978:113-115), state that: "He [i.e. Gask] reproduced a list of the hospital officers, and under "Cr Nich. Jenty", Loudoun records that he had served since April 13th, 1762," 115. The same chronology is put forward by John L. Thornton and Patricia Want, "Jan van Rymsdyk's Illustrations of the Gravid Uterus drawn for Hunter, Smellie, Jenty and Denman," *The Journal of Audiovisual Media in Medicine* 2 (1979:111-15),12. My understanding of the transcription of Lord Loudoun's list provided by Gask is deduced from a comparison between Jenty's own record and that of another surgeon mate called Samuel Hayes whose date (only one) is transcribed as being exactly the same as Jenty's. Because Gask concludes noticing that Hayes: "[...] was left behind to look after them [i.e. the sick soldiers], and as the date on which he was left is given as April 13, [...]," Jenty should have had equal chronological circumstances. Gask's final list is also included in Neil Cantlie, *A History of the Army*, I: 501 (Appendix B). However, the list is rewritten and it omits the name of the surgeon mate Christopher Johnston. Jesse Dobson, "The Army Nursing Service in the Eighteenth Century," *Annals of the Royal College of Surgeons of England* 14 (1954:417-19) also provides the same rewritten list, however, including surgeon mate Johnston, 419.

[160] G. E Gask, "John Hunter in the Campaign," 645-651.

[161] For the standardized salary see Paul. E. Kopperman, "Medical Services in the British Army," *Journal of the History of Medicine* XXXIV (1979: 428-455), 432.

[162] G. E. Gask, "John Hunter in the Campaign," 644.

[163] G. E. Gask, "John Hunter in the Campaign," 644- 645, 653 and 668 (for the list of nurses and servants); For the rewritten list of nurses and servants see Jessie Dobson, "The Army Nursing," 419 and N. Cantlie, *A History of the Army*, 501 (Appendix B).

While John Hunter's movements during the Belle Ile and Portuguese campaigns can to some extent be determined because of his private- and service-related correspondence, thus far it has been impossible to discern Jenty's locations during a campaign that was characterized by numerous marches, difficult transportation of the sick and problems in supplying the troops.[164] In the *Methodo*, published three years after the end of the war, Jenty doesn't provide any specific details about his role, limiting himself to the fact that he was a surgeon with the Royal English Army.[165]

On April the 13th 1763 Jenty remained in Portugal "by his own affair" and so did J.W. Kingston, another surgeon mate. On the same day, Samuel Hayes was instead "left on Duty in Portugal", taking care of "the few unfortunate invalids." [166] Lord Loudoun returned to England on April the 25th. [167]

Jenty's whereabouts are unknown until the following year when according to a document from the International Genealogical Index uncovered by Don Shelton, on July the 2nd 1764 he is listed as having married a certain Catherine MacKinnon at the chaplaincy of the British Factory at Lisbon.[168] Thus far no information has been

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[164] For instance, G. E. Gask, "John Hunter in the Campaign," describes how "by the middle of November it would appear from the various letters that active military operations were for the time being at an end, and that the army had to contend with sickness, which was considerable. It is evident also that the Director William Young was greatly concerned with the amount of very sick men with whom he had to deal, and that he was not satisfied with the way they were being handled." 658. The extensive marching has been underscored by David Francis, "Portugal 1715-1808," 159 and Daniel Baugh, *The Global Seven Years War*, 597.

[165] Carlos Nicolas Jenty, *Methodo de Hacer la Amputacion*, "y habiendo desembarcado en Portugal con el Exercito *Ingles*, del qual era Quirujano, y pasado a Madrid despues de la Paz [...].5. Jenty also notes his qualification in the *Methodo*'s frontepiece.

[166] G.E. Gask, "John Hunter in the Campaign," 666-667. Contrary to both Jenty's and Hayes' records, J. W. Kingston's time of service is very clearly recorded: he apparently served from August the 14th 1762 to April the 13th 1763.

[167] A.D. Francis, "The Campaign in Portugal, 1762", 40.

[168] Don Shelton, *The Real M. Frankenstein*, 2009, 195 and *The Real Mr. Frankenstein*, 2011, 147.
I confirmed this record at https://familysearch.org/pal:/MM9.1.1/F2Z5-V32 .

uncovered about Catherine; nor have any circumstances been found with regard to the registered marriage. She was not listed as one of the nurses serving in the campaign.[169]

The Factory at Lisbon was the main center of British merchants and diplomats and the chaplaincy fell under the ecclesiastic jurisdiction of the Bishop of London. In addition, it was also "the provider and organizer of all charity for protestants" and at least in 1717 it provided a physician to the community. [170] During the military campaign, it was the place where British officers could relax, and indeed a certain Charles Rainsford has been reported to have "found solace with the ladies of the Factory."[171] As a former medical officer, Jenty could have gravitated toward the Factory and he could also have come in contact with medical professionals at Lisbon Royal hospital of All Saints. The later contacts might have already been suggested to him in London by Manuel Mendes de Costa, who supported his bid to the Royal Society, or through the acquaintance of some of the numerous Portuguese expatriates living in London. [172]

Presently it is impossible to precisely know either when Jenty left Portugal or when he reached Spain. Notwithstanding, it was in Spain that he would eventually find a fertile space where he could propose a more focused professional identity, claiming to have the surgical will and dexterity needed in order to propose an amputation considered unachievable.

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[169] The fact that Catherine was not listed in Lord Loudoun's list (according to Gask's own transcription) does not necessarily mean that she was not part of the campaign. Indeed, G. E. Gask, "John Hunter in the Campaign," points out the presence of four married women, only one of which was listed, working as nurses. Gask speculates that: "it seems likely that these ladies were volunteers from the married women who followed the fortunes of their husbands in the army," 653.

[170] To the best of my knowledge the more accurate analysis of the Lisbon Factory is L.M.E. Shaw. *The Anglo-Portuguese Alliance and The English Merchants in Portugal 1654-1810.* (Aldershot: Ashgate, 1998), 62-74.

[171] A. D. Francis, "The Campaign in Portugal, 1762," 27.

[172] Timothy D. Walker. *Doctors, Folk Medicine and the Inquisition: The Repression of Magical Healing in Portugal during the Enlightenment.* (Leiden: Brill, 2005), especially the section entitled "The London Community of Portuguese Doctors*:* A Conduit for Enlightenment Ideas", 119-134.

Chapter II

'Yo, aunque Estrangero': Don Carlos Nicolas Jenty in Spain.[1]

Presently the exact chronology of Jenty's arrival in Spain is not clear. However, if we assume that he left Portugal immediately after his marriage in Lisbon, recorded as having occurred July the 2nd 1764, it is plausible to place him in Madrid during the summer or early autumn of the same year.[2] The time elapsing between his arrival and the publication of his surgical treaty two years later would have been critical in order to settle his own personal affairs, credibly establish himself among the Madrilenian learned community and finalize the publication.[3] Thus far the only fragmentary information

[1] The phrase *' yo aunque estrangero,'* i.e. 'despite the fact that I am a foreigner', is used by Jenty in the *Methodo*'s dedication. The relevance of Jenty's own remark about his own foreignness will be discussed below and contextualized within the crucial role played by foreign surgical and medical knowledge in Spain during the eighteenth century.

[2] The time, conditions and trajectory of Jenty's journey from Portugal to Madrid are presently unknown. It is possible that Jenty and his wife (?) would have traveled, alone or in the company of other travelers, using horses and/or mules. They could also have used a stage coach. Traveling conditions would not have been pleasant considering the terrain and the difficult conditions of the "roads." James Casey, *Early Modern Spain: A Social History* (Routledge, London and New York: 1999), 15, points out the following: "Returning to the ordinary traveller, one may note the improvements which were being introduced towards the end of the old regime. After 1763 stagecoaches offered a regular service from Madrid to Barcelona or Seville. They promised to cut the old journey time in half, just to six days; but they remained scarce and expensive. No doubt improvements to the roads and the mountain passes under Charles III made such speed increasingly feasible. But the roads in much of the peninsula remained very uncertain down to the nineteenth century." Albeit traveling twenty years after Jenty the Englishman, Joseph Townsend recommended the following: "To travel as an oeconomist in Spain, a man must be contented to take his chance for conveyance, and either go by post, wherever it is established; or join with officers, going to their various stations; to hire a coach, or quietly resign himself to a calash, a calasine, a horse, a mule, or a *borrico.* These last are the most convenient for the purpose of crossing the country, or of wandering among the mountains." Townsend explains that a *borrico* is an ass. Joseph Townsend, *A Journey through Spain in the years 1786 and 1787; with particular attention to the Agriculture, Manufactures, Commerce, Population, Taxes, and Revenue of that Country; and Remarks in passing through a part of France* 3 vls. (London: Printed for C. Dilly, 1791), I: 2. Poor road conditions were also highlighted by Spanish travelers. For instance Antonio Ponz, in the 18 volumes comprising his *Viaje de España* published between 1772 and 1794, also notices the problem, according to the excellent analysis of Ponz's *Viaje* provided by José Luis Ramos Gorostiza, "La economia en el viaje de España de Antonio Ponz: contexto de ideas y contraste con la mirada extranjera," *Biblio 3W. Revista Bibliográfica de Geografía y Ciencias Sociales* 27 (25 de Junio 2012), Barcelona: Universidad de Barcelona. Accessible online at http://www.ub.es/geocrit/b3w-981.htm

[3] Because the *Methodo* is illustrated, Jenty would have needed to find a suitable artist. The circumstances of how this occurred are not known thus far. The table with six illustrations (engravings) are indeed signed by

uncovered about this period is provided by Jenty's own narrative, as dispersed within the initial pages of the *Methodo*.[4] It is instructive, therefore, to begin with an analysis of the book itself, as it represented Jenty's printed self-introduction to the learned scientific communities in Madrid, elsewhere in the Iberian Peninsula and possibly even in Spanish colonial America.[5]

The upper register of the frontispiece announces the complete title comprised of three distinct sentences, which read as follows: METHODO DE HACER LA AMPUTACION DEL MUSLO POR SU ARTICULACION CON EL HUESO INNOMINADO. OPERACION TENIDA COMUNMENTE POR IMPRACTICABLE. Ván añadidas, y ilustrado con Láminas diversas observaciones prácticas sobre otras operaciones de Cirugía.[6] The font type and the order by which the title is composed clearly reflect a

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Ricarte *del. et sculp.* indicating that Ricarte executed the drawings and the engravings. A possible identification of this artist will be discussed below.

[4] Carlos Nicolas Jenty, *Methodo de Hacer la Amputacion*, 1-10 and 17.

[5] The impact of Jenty's operative method in Spanish America is well beyond the scope of this current research. However, it should be noted that in 1767 the *Methodo* was announced in the *Gaceta de Madrid* and in *El Mercurio histórico y politico*, respectively. These were two official governmental publications. Given that since 1765/1766 both newspapers were also sent to Spanish America, it is possible to argue that some readers would have learned about the operation through this venue. The *Methodo* was publicized in the *Gaceta* dated January the 20th 1767 and in the monthly *El Mercurio* dated January 1767, 94-95. For details regarding the *Gaceta* and the *Mercurio* in America, see Luis Miguel Enciso Recio, *Cuentos del "Mercurio" y La Gaceta"* (Valladolid: Universidad de Valladolid, 1957), 74-75, 83-87 and 138-139. For the Spanish press and the public, albeit toward the end of the eighteenth century, see Elisabel Larriba, *Le Public de la Presse en Espagne à la fin du XVIII Siècle (1781-1808)* (Paris: Honoré Champion, 1998).

[6] To the best of my knowledge the only summary (a synopsis) of the *Methodo* is provided by Antonio Hernández Morejón, *Historia Bibliográfica de la Medicina Española* 7 vls. (Madrid: Imp. José Rodríguez, -1852), VII:292-293. A reprint of Morejón's work has been published in 1967 as Antonio Hernández Morejón, *Historia Bibliográfica de la Medicina Española* (New York and London: Johnson Reprint Corporation, 1967), with an introduction by Francisco Guerra. The other nineteenth century Spanish medical "encyclopedia" written by Anastasio Chinchilla Piquears does not include Jenty. Anastasio Piqueras Chinchilla, *Anales Históricos de la Medicina en general y biográfico-bibliográfico de la Espanola en particular* 4 vls. (Valencia: Imp. José Mateu y Cervera, 1846). For a comparative analysis of the authors included in the two "encyclopedias" see M. L. López Terrada, C.P. Aguirre Marco and J.L. Fresquet Febrer, "Indices de la Historia Bibliografica de la Medicina Española de Antonio Hernández Morejón y la Historia de la Medicina Española de Anastasio Chinchilla Piqueras," in C.P. Aguirre Marco, J.L. Fresquet and M.L. Lopez, *Hernández Morejón, Anastasio Chinchilla y la Historia de la Medicina Española* (Valencia, PUV-Instituto de Historia de la Medicina y la Ciencia: Universidat de Valencia, 2008), 199-275. Jenty is listed on page 234. For a complete bibliographical reference and in order to access the text online see http://hdl.handle.net/10261/11162.

typographical and editorial hierarchy apt to draw immediately the readers' attention toward the main subject of the book: the amputation through the hip joint. The operation is also known as hip disarticulation.[7] The second sentence locates the operation within an historical surgical context underscoring the fact that amputation was generally considered unachievable. This in turn suggests Jenty's unique operative method and surgical dexterity. Lastly, the third sentence reflects that the book contains illustrations and that practical observations concerning other (unspecified) surgical operations will also be discussed. Thus, Jenty's multiple areas of expertise and practical surgical experience are once again highlighted. The title can be translated as follows: *Method for Amputation Through the Hip Joint. An Operation commonly considered Unachievable. Illustrated with Plates, to which are added different practical observations regarding other surgical operations.*[8] Below the title we find two verses from Manilius' *Astronomica "Per various usus artem experientia fecit..."* and "*Exemplo monstrante viam...* Manil. " (*by repeated practice and with examples pointing the way experience built up the science*)[9], which form a motto encapsulating Jenty's epistemological belief that surgical and anatomical

[7] The definitions "Amputation through the hip joint" and "hip disarticulation" have been considered as interchangeable by the following: Henry E. Loon, "The Past and Present Medical Significance of Hip Disarticulation," *Artificial Limbs* 4 (1957:4-21). Loon notes that: "hip disarticulation, or amputation through the hip joint, is one of the most drastic surgical removals known to medicine," 4; M.H. Kaufman and S.J. Wakelin, "Amputation Through the Hip Joint During the Pre-Anaesthetic Era," *Clinical Anatomy* 17 (2004:36-44); Sonia J. Wakelin, Christopher W. Oliver, Matthew H. Kaufman, "Hip Disarticulation-the Evolution of a Surgical Technique," *Injury* 35 (2004: 299-308); John Kirkup, *A History of Limb Amputation* (London: Springer, 2007), 73-74 and 136-137.

[8] The Spanish term *hueso innominado* could have been translated with the English equivalent "innominate bone". Such a term is indeed used in the medical lexicon. However, due to the context provided by the references above (n.7) I have opted to use "hip joint".

[9] I have used the translation provided by the Loeb edition of Manilius' *Astronomica*, with an English translation by G.P. Goold (Cambridge; Ma: Harvard University Press, 1997), 9. For the first century Roman poet Manilius, whose biography is still more mysterious than Jenty's, two very recent and interesting works are: Katharina Volk, *Manilius and his Intellectual Background* (Oxford and New York: Oxford University Press, 2009) and the collections of essays in Steven J. Green and Katharina Volk, eds. *Forgotten Stars: Rediscovering Manilius' Astronomica* (Oxford and New York: Oxford University Press, 2011).

knowledge are acquired and refined through multiple experiences and demonstrated through practical applications. In turn the verses reinforce the last sentence of the title where Jenty's practical observations about different surgical operations are mentioned.

The use of a classic source as a motto was not new to Jenty as he already in 1757 quoted from Horace's *Ars Poetica* on the frontispiece of his *A Course of Anatomico-Physiological Lectures* dedicated to the president of the Royal Society in London[10]. Below the motto lays the central portion of the frontispiece immediately specifying in capitalized letters Jenty's authorship (*SU AUTOR DON CARLOS NICOLAS JENTY*), and his Parisian birth place (*NATURAL DE PARIS*). Following in lower case letters are the title of Professor of Anatomy and Surgery in Madrid (*Profesor de Anatomía, y Cirugía en esta Corte*) and his membership in the Madrid Academy of Medicine (*Academia Médica Matritense*).[11] Further memberships in the Royal Societies of Sciences, Arts and Surgery of Paris, London, Stockholm, Rouen and Toulouse are likewise indicated, ending with the Dijon Academy of Sciences, Humanities and Arts (*de las Ciencias, y Bellas Letras de Dijon*). The list finalizes by recording Jenty's service as a surgeon (*Cirujano*) with the British Expeditionary Forces in Portugal. Finally, the bottom register of the frontispiece indicates that the *Methodo* was published with the permission of the Supreme Council of Castile (*Con Superior Permiso*) in Madrid by the Royal Press of the *Gazeta* (En la *Imprenta Real de la Gazeta*) in 1766[12].

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[10] The frontispiece recites the following verses: *Omne tulit punctum, qui miscuit utile dulci.*

[11]The *Academia Médica Matritense* (i.e. the Madrid Medical Academy) began informally in 1733; it was officially approved by Philip V in 1734. See Luis Sánchez Granjel *Historia de la Real Academia de Medicina* (Madrid:Real Academia Nacional de Medicina, 2006).

[12] With regard to censorship and the Supreme Council of Castile Richard Herr, *The Eighteenth-Century Revolution in Spain* (Princeton, N.J., Princeton University Press, 1958) notes that: "The Consejo de Castilla took seriously its task of censoring works for publication in Spain. The manuscripts were sent by it to qualified persons, whose opinions were used to guide its decisions,"201-202. From his part Michael Burke, *The Royal College of San Carlos: Surgery and Spanish Medical Reform in the Late Eighteenth Century*

The frontispiece is followed by two dedicatory pages addressing Pedro Rodriguez, Count of Campomanes (1723-1803), one of the crucial figures during the Spanish Enlightenment. At the time, Campomanes was a crown attorney (*fiscal*) of the Council of Castile and he was involved in promoting social, cultural, and economic reforms especially during the Bourbon reign of Carlos III (1759-1788).[13] His educational reforms embraced the reassessment of anatomical, surgical and medical teaching and the implementation of new curricula across Spain, therefore fortifying the Crown and diminishing the powers of both guilds and the Royal Protomedicato. For instance, he was instrumental in fostering and imposing changes at the Universities of Salamanca, Seville, Valladolid and Alcalá in addition to playing a vital role in the creation of the Royal College of Surgery at Barcelona in 1760. His role was also crucial in the establishment of the Madrid Royal College of Surgery of San Carlos, formally inaugurated in 1787.[14] Scholarship has characterized Campomanes as the "intellectual of the Council".[15] To be sure, in addition to his numerous occupations on behalf of the Crown and his economic writings, he pursued the study of history and antiquities and learned Arabic and Greek as

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(Durham, N.C. Duke University Press, 1977) explains how "No books could be published legally in eighteenth-century Spain without a royal license. Political and religious censorship is well known, but the Crown was also concerned that only reliable scientific texts freely circulate, and that the public not be confused by 'useless work'. The Council of Castile, which had the final authority to grant or withhold a license, frequently sought expert advice when faced with a work of science," 129.

[13] The bibliography regarding Campomanes is growing and his role as a reformer is well known. Two recent collections of essays illuminating some aspects of his biography as well as his intellectual pursuits are: Gonzalo Anes y Álvarez de Castrillón, eds., *Campomanes en su II Centenario* (Madrid, Real Academia de la Historia, 2003) and Dolores Mateos Dorado, ed. *Campomanes Doscientos Anos Despues* (Oviedo: Universidad de Oviedo, 2003).

[14] Michael E. Burke, *The Royal College of San Carlos*, especially 43-86. For the reforms at Salamanca University see George M. Addy, *The Enlightenment in the University of Salamanca* (Durham, N.C. Duke University Press, 1966).

[15] *Ibid*., "Pedro Rodriguez, the Conde de Campomanes, was the intellectual of the Council. Few men exercised the position of fiscal to such telling effect," 13.

well, furthermore known for recognizing the importance of epigraphic work.[16] In 1758 he became a corresponding member of the Académie des Inscriptions et Belles Lettres of Paris. In 1763 he obtained full membership in the Royal Spanish Academy and in 1766 he was elected president of the Spanish Royal Academy of History.[17] Indeed, all three of these affiliations are underscored by Jenty when he addresses Campomanes at the beginning of the *Methodo.* Eventually he became president of the Council of Castile, and in 1780 he was granted the title of Count. In 1787 he obtained membership of the American Philosophical Society of Philadelphia, and had occasion to correspond with Benjamin Franklin and Adam Smith.[18] Finally, he was also a member of several Spanish learned societies; his personal library was a sign of his erudition and multiple interests.[19]

Campomanes was clearly a force to be reckoned with, however presently it is not clear whether or not Jenty already personally knew him at the time of the dedication or in which circumstances they would eventually meet. We do know with certainty that in 1777 (eleven years later) Jenty corresponded with Campomanes and benefitted from his influence.[20] Jenty begins his dedicatory pages by explaining that he offered his lecture

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[16] Martín Almagro Gorbea, "Pedro Rodríguez Campomanes y las "antiguedades," in Gonzalo Anes y Alvarez de Castrillón, eds., *Campomanes en su II Centenario*, 117-159.

[17] The information regarding membership is provided by Laura Rodriguez Diaz, *Reforma e Ilustración en la España del Siglo XVIII Pedro Rodriguez de Campomanes* (Madrid: Fundación Universitaria Española 1975), 78.

[18] For the American Philosophical Society of Philadelphia, see *Ibid*, 78. For the lette from Franklin to Campomanes see Jerónimo Herrera Navarro, "La Personalidad de Campomanes a Través de su Epistolario," in Dolores Mateos Dorado, ed., *Campomanes*, 35-45, especially 45.

[19] Membership in several Spanish learned societies is noticed by For Campomanes's personal library and interests Luis Miguel Enciso Recio, "Campomanes, bibliofilo," in Dolores Mateos Dorado, ed. *Campomanes*, 77-116.

[20] The year 1777 represents the last documented date concerning Jenty's period of residency in Spain. The letter to Campomanes is transcribed in Riera, Juan, *Medicina y Ciencia en la España Ilustrada: Epistolario y Documentos I*, (Valladolid: Universidad de Valladolid, 1981), 78. Jenty notifies Campomanes of his departure from Madrid to his country and he asks Campomanes to use his authority in order to facilitate the purchase of four anatomical tables he needs to sell. We know that Jenty was apparently successful in the selling of his plates because of Juan Riera, *Anatomía y Cirugía Española del Siglo XVIII (Notas y Estudios)* (Valladolid: Universidad de Valladolid, 1982), 44.

(*Disertacion*) to Campomanes because he recognized his willingness to protect the Arts and Sciences and everything that was useful for the public good.[21] Analogously to what he had done in his London advertisements, Jenty also continued to underscore his foreignness. Indeed, he makes it a point to articulate that "despite the fact that I am a foreigner (*Yo aunque Estrangero*) I will contribute as much as possible to the promotion of Surgery and Anatomy, in a Nation where this necessary knowledge is appreciated, and from which humankind receives so much help."[22] Jenty ends the dedication by saying that in order to pursue his objectives (*por esta causa*) he is addressing Campomanes in his capacity as a magistrate (*Magistrado*), one who was persuaded of the usefulness (*utilidad*) of improving (*adelantar*) anatomical and surgical studies".[23]

Jenty was fully aware of Campomanes' reformist approach, and in "offering" to him a method for an operation considered unachievable he not only would underscore his own dexterity but also his own novel and proven approach to surgery, thereby equating his surgical innovation to the ambitions of the reformists' endeavors. In addressing Campomanes Jenty uses two key words for the Spanish Enlightened (*ilustrados*) reformers: *bien publico* (public good) and *utilidad* (usefulness). Burke captured this point succinctly when he observed how: "Unlike many French phylosophers, the *ilustrado* was immensely practical. He saw the new sciences not as the key to all truth but as concrete tools to improve human life. Again and again, the Spanish innovators used

[21] Carlos Nicolas Jenty, *Methodo de Hacer la Amputacion del Muslo*, "Ofrezco á V.S. esta Disertacion, porque he reconocido sus desoes de proteger las Ciecias, las Artes, y todo lo que sea util al bien público," n.p.
[22] Carlos Nicolas Jenty, *Methodo de Hacer la Amputacion del Muslo*, "Yo, aunque Estrangero, contribuiré en cuanto pueda a promover la Cirugía, y la Anatomía en una Nación, en que se aprecian tan necesarios conocimientos, y de que tanto socorro recibe el Genero Humano," n.p.
[23] *Ibid*., "Por esta causa me dirijo a un Magistrado, que está persuadido de la utilidad de adelantar estos importantes estudios,[...]", n.p.

the term 'useful knowledge'."[24] In addition to locating himself within the circle of reformers, Jenty capitalizes on the fact that foreign surgical and anatomical knowledge was highly regarded in eighteenth century Spain. Indeed, scholarship repeatedly reiterates the presence of numerous foreign surgeons and physicians at the Bourbon Court from the start of the century, as well as the numerous translations of medical, surgical and anatomical texts, which increasingly occurred, culminating in a particularly vibrant period around the 1750s.[25] French surgeons especially had been considered crucial for the improvement of Spanish surgery.[26] In pledging to work for the benefit of Spanish public good, despite the fact that he was a foreigner, Jenty highlights his own skills and appears to argue for a sort of "naturalization" of his surgical knowledge. In other words, Jenty creates a reciprocal need crafted through the use of rhetorical politeness and the practice of a surgical procedure described as being innovative and effective. He would have found a very receptive ally in Campomanes who stated that the

> government is obliged to supply the public with advancements achieved in other places, so long as [Spanish] law can accommodate them, without distinction between indigenous and foreign. The accident of being born outside Spain does not deprive them of the privileges which they deserve.[27]

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[24] Michael E. Burke, *The Royal College of San Carlos*, 5. French surgery, in having practical and useful applications, represented a complete different matter.

[25] The importance of translation as a fundamental vessel for medical and scientific knowledge in Spain has been highlighted numerous times by Juan Riera. For a short summary of the importance of translation see Juan Riera, *Capítulos de la Medicina Española Ilustrada (Libros, Cirujanos, Epidemías y Comercio de la Quina)* (Valladolid: Universidad de Valladolid, 1992), 11-29. More recently there is the fundamental guide of translators found in Juan Riera Palmero and Luis Riera Climent, *La Ciencia Extranjera en la España Ilustrada: Ensayo de un Diccionario de Traductores* (Valladolid: Universidad de Valladolid, 2003). Whether or not Jenty's *Methodo* was translated or written directly in Spanish is a question that deserves substantial consideration, given the historical context at the time.

[26] The importance of foreign surgeons and physicians, and in particular French surgery, has often been noted. See at least the following: Juan Riera, *Cirugía Española Ilustrada y su Comunicacíon con Europa* (Valladolid: Universidad de Valladolid, 1976).

[27] As quoted by Gabriel B. Paquette, *Enlightenment, Governance, and Reform in Spain and its Empire, 1759-1808* (New York: Palgrave MacMillan, 2008).

This beneficial reciprocity between the Crown, in this case represented by Campomanes, and enlightened professionals, as embodied by Jenty, has also been considered as one of the reasons propelling Spanish reforms.[28]

Before beginning analysis of the Introduction of the *Methodo*, it is necessary to provide a sketch of how and where anatomical and surgical studies were pursued, and the position of surgeons within the pluralistic landscape of healing practitioners inside the Iberian Kingdom up to 1766.[29] At the time, surgeons were divided into two main categories: the *latinos* who had obtained a university degree and the *romancistas* who despite their empirical experience and knowledge possessed no degree and generally didn't know Latin. In order to legally practice, both groups needed to be licensed by the Royal Protomedicato.[30] Surgical and anatomical academic education was pursued at universities within medical faculty programs where Galenism remained the prevalent medical system.[31] However, "by the beginning of the eighteenth century, despite nominal

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[28] This point has been made by Mikel Astrain Gallart, *Barberos, Cirujanos y Gente de Mar. La sanidad naval y la profesión quirúrgica en la España ilustrada* (Madrid: Ministerio de Defensa, 1996), 118 and n. 224. "Las críticas evidencian una cierta ceguera histórica, producto quizá de la mentalidad de los que las sostuvieron. Desde nuestro propio análisis, el decidido apoyo que desde la Corona y sus ministros se prestó a la fundación y mantenimiento de los colegios de cirugía no resultó en absoluto gratuito. Como han destacado algunos historiadores, la relación entre la Corona y las élites ilustradas es esencial para entender y explicar las reformas del siglo XVIII español (224). Cada parte utilizó a la otra para su beneficio."

[29] This synoptic review is far from comprehensive and does not take into consideration the complexities of the environment of numerous Spanish healers. It is a merely a check of the main surgical traits. For an analysis of earlier relationship between the Crown physicians, surgeons and pharmacists see *Medicine, Government and Public Health in Philip II's Spain. Shared Interests, Competing Authorities* (Surrey and Burlington: Ashgate, 2011), in particular 75-110.

[30] For an excellent analysis of the Protomedicato see John T. Lanning, *The Royal Protomedicato: the Regulation of the Medical Professions in the Spanish Empire*, ed. by John TePaske, (Durham: Duke University Press, 1985). Unfortunately I was not able to analyze Maria Soledad Campos Diez, *El Real Protomedicato Castellano: Siglos XIV-XIX* (Cuenca: Ediciones de la Universidad de Castilla-La Mancha, 1999). For an excellent article that also provides an up-to-date bibliography, see Maria Luz Lopez Terrada, "Medical Pluralism in the Iberian Kingdoms: The Control of Extra-academic Practitioners in Valencia," *Medical History* 29 (2009:7-25). The relationship between the Protomedicato and surgeons has been summarized by Mikel Astrain Gallart, "El Real Tribunal del Protomedicato y la Profession Quirúrgica Española en el siglo XVIII," *Dynamis* 16 (1997:135-150).

[31] While Galenism was the prevalent system, there were areas of renovation, related especially in Sevilla to Iatrochemistry. See Alvar Martínez Vidal and José Pardo Tomás, "*In tenebris adhuc versantes*. La

recognition of surgery as an academic career, the vast majority of practicing surgeons still had learned their craft as apprentices."[32] This situation appears not to have changed toward the end of the century, at least in some academic centers. One remarkable example is provided by Astrain Gallart who points out how "in 1771 the cloister of the University of Alcalá, where the chair of Anatomy was practically continuously vacant, recognized that many of the *romancistas* surgeons knew more anatomy than the most brilliant among its graduates."[33] Anatomical theatres, linked to universities or to local hospitals, were discernibly present, as witnessed for instance by the one in Madrid built in 1679 in connection to the General Hospital, or at Saragossa, Valencia, Barcelona and Seville, just to cite a few examples. [34]

Notwithstanding, in 1766 surgical education was not standardized. One can argue that the professionalization of surgery began with two specific Royal colleges of surgery that had been established within the context of the Navy and Military, outside the realm of universities.[35] They were fully supported by the Crown and provided surgeons for their respective Forces. The first of these two colleges was the Royal College of Surgery in Cadiz, created in 1748 by Pedro Virgili and the French surgeon Jean la Combe, generally

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respuesta de los novatores españoles a la invectiva de Pierre Régis," *Dynamis*, 15 1995, 301-340). José Pardo-Tomás and Àlvar Martínez-Vidal, "Medicine and the Spanish *Novator* Movement: Ancients vs. Moderns, and Beyond," in Victor Navarro Brotóns and William Eamon (eds), *Más allá de la leyenda negra: España y la revolución científica/Beyond the black legend: Spain and the scientific revolution* (Valencia: Instituto de Historia y Documentación López Piñero, 2007), 323, 344.

[32] Michael E. Burke, *The Royal College of San Carlos*, 27.

[33] Astrain Gallart Mikel, *Barberos, Cirujanos y Gente de Mar*, 102. "En 1771 el claustro de la Universidad de Alcalá, en donde la cátedra de cirugía estuvo vacante prácticamente de continuo, reconocía que qualquier cirujano romancista conocía más anatomia que el más brillante de sus graduados." It is worth noting that Astrain Gallart adds that a similar situation was present in the other Spanish university centers. "El panorama era similar en el resto de los centros universitarios españoles,"102.

[34] See for instance Alvarez Martínez-Vidal and José Pardo-Tomás, "Anatomical Theatres and the Teaching of Anatomy in Early Modern Spain, *Medical History* 49 (2005: 251-280). For the specificity of the Madrid Anatomical Amphitheatre see José Pardo Tomás and Alvar Martínez Vidal, "Los origines del Teatro Anatómico de Madrid (1689-1728)," *Asclepio* 49 (1997:5-38).

[35] Astrain Gallart Mikel, *Barberos, Cirujanos y Gente de Mar* (note above 28), offers the most comprehensive treatment of the subject.

known in Spain as Juan Lacomba (c.1680-1748).[36] It has been noticed that Gautier's anatomical tables were hanging along the College's corridors (*pasillos*).[37] The college became a very successful model and eventually, ten years later, both students and professors in Cadiz had access to medical and surgical books that were otherwise prohibited by the Inquisition.[38] The Cadiz model was later implemented to create the Royal College of Surgery in Barcelona, instituted by Pedro Virgili in 1760 and formally inaugurated in 1764.[39] It is worth recalling that while in Paris, Virgili purchased Jenty's gynecological tables exactly on the wake of the establishment of this college. Both Royal colleges, to different degrees, faced the resentment and the opposition of the Protomedicato and the universities' physicians. For instance, Campomanes played a fundamental role in strengthening the power of the Crown and curtailing the Protomedicato's jurisdiction during the establishment of the Royal College of Barcelona.[40] In the end, the two colleges developed their own curricula and issued their own degrees. Furthermore, they became centers for medical, surgical and scientific education, with the most promising graduates being sent to major European centers such

[36] For the history of the Royal College of Cadiz, see Astrain Gallart Mikel, *Barberos, Cirujanos y Gente de Mar*, discussed throughout the entire book.
[37] Luis S. Granjel, *Anatomía Española de la Ilustración* (Salamanca: Universidad de Salamanca, 1963) points out how: "Los pasillos del Colegio gaditano se adornaban con láminas anatómicas hechas por Gautier y traídas de Paris antes de 1754," 26.
[38] Astrain Gallart Mikel, *Barberos, Cirujanos y Gente de Mar*, 113 and n.214. The passage reads as follow: "Significativo fue, también, el privilegio que gozaron los colegiales de Cádiz de tener acceso a las obras de medicina y cirugía prohibidas por edicto inquisitorial, privilegio que compartieron con los profesores del centro a título particular."
[39] For the Barcelona Royal College see Manuel Usandizaga Soraluce, *Historia del Real Colegio de Cirugia de Barcelona* (Barcelona: Instituto Municipal de Historia, 1964); Diego Ferrer, *Cirujanos del "Camp" en el siglo XVIII: Su Contribución a la Restauración de la Cirugía* (Reus: Asociación de Estudios Reusenses, 1968), especially 89-107.; Astrain Gallart Mikel, *Barberos, Cirujanos y Gente de Mar*; and more recently, Núria Peréz-Pérez, "Medicine and Science in a New Medical-surgical Context: The Royal College of Surgery of Barcelona (1760-1843)," *Medicine Studies* 2 (2010: 37-48).
[40] Mikel Astrain Gallart, "El Real Tribunal del Protomedicato," 139, explains how: "Así, el papel jugado por el Fiscal del Consejo de Castilla, Pedro Rodriguez Campomanes, y por el propio Sumiller de Corps, José Fernández de Miranda (Duque de Losada) resultaron decisivos."

as, for instance, Leyden, Bolonia or Paris [41] Perhaps the most critical achievement of both colleges was the ability to offer surgical degrees equivalent to those provided by the universities, that is: a bachelor degree in philosophy. [42]

Contemporaneously to the events transpiring in Cadiz and Barcelona, an attempt to improve surgical practices and professionalize surgery was made in Madrid during the reign of Ferdinando VI (1746-59). In 1747 a group of learned surgeons working at the royal court and in the city hospitals obtained the Crown's support in order to set up a "college of surgery", i.e. the Surgical College of San Fernando.[43] These *Profesores Cirujanos de Madrid*, led by the King's first surgeon Thomas Duchesnay Despres, adopted the French model of the Parisian *Acádemie Royal de Cirurgie* and intended to elevate surgical practices and knowledge through the performance of dissections, surgical and anatomical experiments, as well as communal meetings and debates. These latter discussion circles, known as *juntas* and/or *tertulias*, followed a well established Spanish practice. They occurred, for instance, at the *Regia Sociedad de Medicina y otras Ciencias* (The Royal Society of Medicine and Other Sciences), which had received Royal recognition in 1700 in Seville.[44] Because the Madrilenian "college", in essence a professional group, wanted to license its own members, it faced double opposition from

[41] Mikel Astain Gallart, *Barberos,Cirujanos y Gente de Mar*, 112. For the Colleges' publications, see Juan Rafael Cabrera Afonso, *El Libro Médico-Quirúrgico de los Reales Colegios de Cirugía Españoles en la Ilustración* (Cadiz:Universidad de Cadiz, 1990).
[42] *Ibid*., 48,112 and 159 (for the Bachelor of Philosophy in Cadiz) and 162 (for the Bachelor of Philosophy at Barcelona).
[43] For all the details about the surgeons involved, and the Crown privilege, see Juan Riera, *Anatomía y Cirugía Española*, 13-34; Michael E. Burke, *The Royal College of San Carlos*, 39-41, 59-60, and 68-69.
[44] As already noticed above the *Regia Sociedad* was a very interesting center for reform. An article that illustrates this well is Manuel Valera and Carlos López Fernández, "Giuseppe Cervi, Guillaume Jacobe y las relaciones entre la Regia Sociedad de Medicina y demás Ciencias de Sevilla y la Royal Society of London en 1736", *Dynamis*, 1998, 18, 377-426. With regard to the Seville institution, we should keep in mind that more investigation is necessary in order to untangle all the protagonists and their respective networks. See for instance Jóse Pardo-Tomás and Alvar Martinez-Vidal, "Medicine and Spanish *Novator*," in Victor Navarro Brotóns and William Eamon (eds), *Más allá de la leyenda negra: España y la revolución científica/Beyond the black legend: Spain and the scientific revolution*, 341.

the brotherhood of surgeons and barber- surgeons of Saint Cosme and Damian, and the Protomedicato. In 1749 the "college" lost its standing when the Council of Castile ceased to grant it licensing privileges.[45] Even while continuing to carry out their pedagogical and scientific activities, the members also continued to petition the Council of Castile for an autonomous school of surgery. In 1764 the Council removed the licensing privileges from the brotherhood of Saint Cosme and Damian, henceforth strongly diminishing its power.[46]

Ultimately, and importantly, as summarized by Burke: "by the 1760s there was a strong movement toward radical innovations among reformist elements both in the government and the profession itself. The hospital instruction and, above all, the colleges in Cadiz and Barcelona had shown what such innovation could accomplish".[47] It was in this environment that the *Methodo,* published in 1766, emerged. The book, defined by the author himself as an *Obrita,* that is, "a little work", would set out to explain one of the most difficult and disastrous of amputations.[48]

[45] Michael E. Burke, *The Royal College of San Carlos*, 40 and Astrain Gallart Mikel, *Barberos, Cirujanos y Gente de Mar*, 154.
[46] *Ibid*., 41. Burke adds that three years later the Council "restricted the once powerful guild to religious and social activities."
[47] *Ibid.,* 69.
[48] Carlos Nicolas Jenty, *Methodo de Hacer la Amputacion del Muslo*, 12.

Conclusions

In ending their 1978 essay about Jenty's mezzotinto plates illustrating the *Demonstrations of a Pregnant Uterus* Thornton and Want noticed how: "Although many gaps remain in the career of Charles Nicholas Jenty, we have recorded some of his activities during his residence in London, his services in Portugal and his transfer in Madrid."[49] To the extent that this thesis has highlighted several new professional and biographical events it has also generated more questions about Jenty's career and personal vicissitudes and his role within the larger eighteenth century medical and scientific networks in which he operated and to which he aspired to belong.

For instance, to the best of my knowledge nothing is known about his Parisian formative period, his decision to move to London and his initial English period. Neither are any of Jenty's patients known thus far. Likewise, how should we understand his two recorded marriages, his decision to join the military Portugal campaign and eventually move to Spain? And did his apprentice pursue his master's career? Furthermore, his relationship with Gautier d'Agoty and his role as translator of an anti-Newton scientific text is certainly in need of further analysis, especially in light of Jenty's own experiments concerning several oils. Analogously, a more meticulous and deeper analysis of his *Course of Anatomico-Physiological Lectures* could certainly offer insights about his medical and anatomical understandng of the body while clarfying his own scientific and medical rhetoric. While a translation of his *Methodo* is currently underway, very little is still known about Jenty's activities in Spain, and the impact of the *Methodo* on Spanish

[49] John L. Thornton and Patricia C. Want, "C.N. Jenty and the Mezzotinto plates," 115.

surgical practices remains to be studied. In other words, there are still many gaps in Jenty's own life and career.

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