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Sezione monografica

## Early reception of smallpox inoculation in Italy: insights from the correspondence of the Fellows of the Royal Society

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**Abstract.** In 18<sup>th</sup>-century Europe inoculation of smallpox started being practiced as a form of prevention against the disease itself. Knowledge of this practice arrived from the Ottoman Empire and reached various European countries in the 1710s. As far as Italy is concerned, the literature generally reports that the Italians took no particular interest in inoculation until the 1750s; however, very little attention has been given to the early reception of the practice in Italy. By drawing on early news items and letter exchanges between the Fellows of the Royal Society and the Italian physician and naturalist Antonio Vallisneri, the present paper wants to illustrate and comment on these early sources that showed the Italians' opinions and attitudes towards inoculation when it was first heard about in the peninsula.

**Keywords.** Smallpox inoculation, early 18<sup>th</sup>-century Italy, Antonio Vallisneri, Thomas Dereham, James Jurin, Republic of Letters.

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### 1. INTRODUCTION<sup>1</sup>

In 18<sup>th</sup>-century Europe about 400,000 people died annually of smallpox, and many of those who survived either became blind or permanently disabled. The fatality rate for those who contracted the disease ranged from 20% to 60% and infants died at the highest rates<sup>2</sup>. Smallpox was considered 'uni-

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<sup>1</sup> This article stems from, and expands on, the research I carried out on the Royal Society's relations with Italy for my PhD dissertation. See L. Berti, *Scientific Crosscurrents between Italy and England: Italian contributions to the Philosophical Transactions of the Royal Society, 17th-19th centuries*, University of Milan, Giovanni Iamartino 2020; the dissertation is currently under revision for publication. I would also like to express my gratitude to the following, who have been so kind as to furnish me with copies of primary and secondary sources that were irretrievable during the time in which the research for this paper was being carried out, due to the ongoing lockdown for the COVID-19 pandemic: the Biblioteca dell'Accademia dei Concordi di Rovigo; the Biblioteca Labronica of Livorno; the Biblioteca del Seminario Diocesano of Pordenone; the Biblioteca dell'Archiginnasio of Bologna; the Fondazione Spadolini Nuova Antologia of Florence; and the EKT National Documentation Centre (Athens). Special thanks also go to the librarians of the Royal Society who have always been very helpful during my periods of research at the library.

<sup>2</sup> S. Riedel, *Edward Jenner and the history of smallpox and vaccination*, «Proceedings. Baylor University Medical Center», 18, 2005, 1, pp. 21-25: 21. For figures on the mortality from smallpox in the 18<sup>th</sup> century see also E.J. Huth, *Quantitative evidence for judgments on the efficacy of inocu-*

versal' and it was believed that everyone was bound to catch it at one point in their lives. However, thanks to the introduction of immunisation through vaccination, what was once considered «the most terrible of all the ministers of death<sup>3</sup>» is now a distant memory, which the new generations only learn about from books<sup>4</sup>.

Immunisation and vaccination are today inextricably associated with Edward Jenner who, towards the end of the 18<sup>th</sup> century, empirically demonstrated that the inoculation of cowpox («vaccine inoculation») prevented the contraction of smallpox<sup>5</sup>. However, before the

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lation for the prevention of smallpox: England and New England in the 1700s, «Journal of the Royal Society of medicine», 99, 2006, 5, pp. 262-266; N. Barquet and P. Domingo, *Smallpox: the triumph over the most terrible of the ministers of death*, «Annals of Internal Medicine», 127, 1997, 8, pp. 635-642; U. Tucci, *Innesto del vaiolo e società nel Settecento Veneto*, «Annales Cisalpinnes d'Histoire Sociale», 1, 1973, 4, pp. 199-233; and E.J. Edwards, *A concise history of smallpox and vaccination in Europe*, H.K. Lewis, London 1902.

<sup>3</sup> T. Babington Macaulay, *The History of England* (1914, vol. V: 2468) cited in M. May, *Inoculating the Urban Poor in the Late Eighteenth Century*, «The British Journal for the History of Science», 30, 1997, 3, pp. 291-305: 292.

<sup>4</sup> The World Health Organization (WHO) initiated the Intensified Smallpox Eradication Campaign in 1967 and the defeat of smallpox worldwide was announced in 1980. See World Health Organization, *The global eradication of smallpox: final report of the Global Commission for the Certification of Smallpox Eradication*, World Health Organization, Geneva 1980.

<sup>5</sup> It is thanks to the regular practice of inoculation that Jenner and others became aware of the immunising effects of cowpox. Indeed, several farmers and dairymaids appeared to be resistant to the inoculation for the smallpox and this immunity generally coincided with having previously suffered from cowpox. Unlike other physicians of the time, who had also been informed of this coincidence, Jenner took a real interest in cowpox as a means of preventing smallpox. He devoted the following 25 years of his life to the study of cowpox and learned to distinguish it from other bacterial infections, which were believed to be cowpox by his contemporaries but which did not prevent smallpox. He therefore concluded that true cowpox was the only disease that could prevent smallpox and that inoculated cowpox was much less severe than the naturally contracted disease. Hence, in 1796, Jenner inoculated his first patient – an eight-year old boy – with cowpox and, six weeks later, he inoculated the child again with smallpox. When the child had no response to the inoculation for the smallpox, Jenner was convinced of the efficacy of cowpox inoculation and had provided the first experimental evidence to prove it. He thus submitted a report to the Royal Society, which was however rejected. He continued his studies and carried out further cowpox inoculations in 1798 taking advantage of a new outbreak of cowpox. Jenner finally published his observations privately in *An inquiry into the causes and effects of the variolae vaccinae ...* (London, 1798). Jenner was neither the first to discover the protective effects of cowpox, nor the first to attempt cowpox inoculation for prevention purposes; his true merit instead was to carry out the first clinical investigations to provide scientific evidence for what was only, up until then, known as folk knowledge. Further, he had also envisaged that this procedure could have eventually eradicated smallpox. See R. Weiss and J. Esparza, *The prevention and eradication of smallpox: a commentary on Sloane (1755) 'An account of inoculation'*, «Philosophical Transactions of the Royal Society B: Biological Sciences», 370, 2015, pp. 1-11; A. Boylston, *The origins of vaccination: no inoculation, no vaccination*, «Journal

of the Royal Society of Medicine», 106, 2013, 10, pp. 395-398; Idem, *The origins of inoculation*, «Journal of the Royal Society of Medicine», 105, 2012, 7, pp. 309-313; S. Riedel, *Edward Jenner and the history of smallpox and vaccination*, «Proceedings. Baylor University Medical Center», 18, 2005, 1, pp. 21-25; P. Skold, *From inoculation to vaccination: Smallpox in Sweden in the eighteenth and nineteenth centuries*, «Population Studies», 50, 1996, 2, pp. 247-262; and J.L. Turk and E. Allen, *The influence of John Hunter's inoculation practice on Edward Jenner's discovery of vaccination against smallpox*, «Journal of the Royal Society of Medicine», 83, 1990, 4, pp. 266-267.

introduction of the first vaccination, another effective practice of prevention against smallpox known as 'inoculation', 'engrafting', 'insertion', 'transplantation' and later as 'variolation', had become known and practiced throughout Europe. Inoculation consisted in the introduction into the skin of a sound individual, by means of a small incision, of infected matter taken from a pustule of a person who suffered from smallpox at an early stage. The inoculated would go through a mild case of the disease and become immune as a result.

It took a long time for inoculation to be accepted and practiced in Europe but, had it not been for its existence, history may have taken a completely different course and the affirmation of vaccination as a practice in Europe may have been much slower and possibly tested and proven effective by someone other than Jenner<sup>6</sup>.

Indeed, extensive research has been carried out on the vaccine's predecessor, especially in British and American contexts<sup>7</sup>, but the researches on inoculation in Italy are fewer, scarce and often dated<sup>8</sup> – with Bianca Fadda's *L'Innesto del Vaiolo* (1983) representing the sole

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of the Royal Society of Medicine», 106, 2013, 10, pp. 395-398; Idem, *The origins of inoculation*, «Journal of the Royal Society of Medicine», 105, 2012, 7, pp. 309-313; S. Riedel, *Edward Jenner and the history of smallpox and vaccination*, «Proceedings. Baylor University Medical Center», 18, 2005, 1, pp. 21-25; P. Skold, *From inoculation to vaccination: Smallpox in Sweden in the eighteenth and nineteenth centuries*, «Population Studies», 50, 1996, 2, pp. 247-262; and J.L. Turk and E. Allen, *The influence of John Hunter's inoculation practice on Edward Jenner's discovery of vaccination against smallpox*, «Journal of the Royal Society of Medicine», 83, 1990, 4, pp. 266-267.

<sup>6</sup> Boylston, *The origins of vaccination*, cit.; Turk and Allen, *The influence of John Hunter's*, cit.

<sup>7</sup> Other than the works cited in footnotes 2 and 5, see M. DeLacy, *The Germ of an Idea. Contagionism, Religion, and Society in Britain, 1660-1730*, Palgrave Macmillan, New York 2016; S. Coss, *The Fever of 1721. The Epidemic that Revolutionized Medicine and American Politics*, Simon & Schuster Paperbacks, New York 2016; G. Miller, *The adoption of inoculation for smallpox in England and France*, University of Pennsylvania Press, Philadelphia 1957; Idem, *Smallpox Inoculation in England and America. A Reappraisal*, «The William and Mary Quarterly», 13, 1956, 4, pp. 476-492; and R. Stearns and G. Pasti, *Remarks upon the introduction of inoculation for smallpox in England*, «Bulletin of the History of Medicine», 24, 1950, 2, pp. 103-122.

<sup>8</sup> See, among others, C. Munno, *La lotta al vaiolo e le pratiche antivaiolose nel Settecento e nell'Ottocento Veneto*, «Venetica», 54, 2018, 1, pp. 37-69; M. Tanga and G. Gelati, *Quando il pharmakon è la "materia velonosa", da somministrare a che è ancora sano...*, «Atti e Memorie. Rivista di Storia della Farmacia», 3, 2016, pp. 194-205; S. Arieti, *La pratica della vaiolizzazione e della vaccinazione a Bologna fra Settecento e Ottocento*, «L'Idomeneo», 17, 2014, pp. 55-59; S. Sabbatani, *I primi tentativi di innesto del vaiolo (vaiolizzazione) a Bologna nel XVIII secolo*, «Le Infezioni in Medicina», 1, 2004, pp. 76-82; B. Fadda, *L'innesto del vaiolo. Un dibattito scientifico e culturale nell'Italia del Settecento*, FrancoAngeli, Milano 1983; Tucci, *Innesto del vaiolo*, cit.; L. Manzi, *Vaiolo, vaiolizzazione, vaccinazione a Bologna, dai primi del Settecento ai primi dell'Ottocento*, Editrice Compositori, Bologna 1968; and A. Klebs, *Die Variolation im achtzehnten Jahrhundert*, Verlag von Alfred Töppelmann, Giessen 1914, pp. 58-59.

general survey on inoculation in Italy. Moreover, Fadda's work, as well as most other studies on the subject, focus more on the debates that developed towards the mid of the century and less on the early reception of inoculation in the first two decades of the century. This paper thus wants to illustrate and comment on early sources that showed the Italians' opinions and attitudes towards inoculation when it was first heard about in the peninsula. Following this introduction is a brief but necessary report on the reception and practice of inoculation in England and a report of the first published news on inoculation in Italy (§2); the paper will then briefly present an early example of a 'research project' launched by James Jurin, secretary to the Royal Society of London, and a series of letters exchanged between Jurin and Sir Thomas Dereham, a Fellow of the Society living in Italy (§3); finally, the paper will focus on a series of letters exchanged between the physician and naturalist Antonio Vallisneri and Thomas Dereham (§4); and will conclude by commenting on the possible influence that these exchanges had on the practice of inoculation in Italy and on the Italians' relations with the Society with respect to the practice (§5).

## 2. EARLY INTELLIGENCE FROM THE OTTOMAN EMPIRE AND ITS RECEPTION IN ENGLAND AND ITALY

Inoculation was practiced in Africa, India and China long before it became known to the West<sup>9</sup>. First news on inoculation for smallpox was brought into Europe from the Ottoman Empire by Emmanuel Timoni (1669-1718), the son of a dragoman at the Sultan's court in

Constantinople<sup>10</sup>. Timoni graduated in medicine and philosophy in Oxford and Padua, practiced as a physician and rendered his service to the British embassy in Constantinople<sup>11</sup>. In 1713 he sent a letter to the Royal Society which was then partly translated into English and published in the Society's journal, the *Philosophical Transactions* (hereafter *Phil. Trans.*). The paper, entitled *An Account, or History, of the Procuring the Small Pox by Incision, or Inoculation; As It Has for Some Time Been Practised at Constantinople*<sup>12</sup>, provides a brief description of the origins of inoculation, stating that it had been practiced among «the Turks» for about forty years, and had been brought to Constantinople from the «Circassians, Georgians and other Asiaticks<sup>13</sup>». The paper continues by describing the whole process – from the extraction of the infected matter to its subcutaneous instillation into the nonimmune patient and the symptoms that followed the operation – and states that, by the time he wrote the letter, Timoni had witnessed inoculations for eight years and the «happy success» of the practice in «thousands of subjects» had removed all suspicion and doubt about it<sup>14</sup>. In 1716 the *Philosophical*

<sup>10</sup> On Timoni's and Pylarini's communications see, among others, E. Poulako-Rebelakou and J. Lascaratos, *Emmanuel Timonius, Jacobus Pylarinus and inoculation*, «Journal of Medical Biography», 11, 2003, pp. 181-182; A. Eriksen, *Smallpox inoculation: translation, transference and transformation*, «Palgrave Communications», 52, 2020, 6, pp. 1-9; U. Tucci, *Jacopo Pilarino pioniere dell'innesto del vaiolo*, «Θησαυριματα» 37, 2007, pp. 421-434; T. Kyrkoudis et al., *Vaccination of the Ethnic Greeks (Rums) Against Smallpox in the Ottoman Empire: Emmanuel Timonis and Jacobus Pylarinos as Precursors of Edward Jenner*, «Erciyes Med J», 43, 2021, 1, pp. 100-106; and C.N. Alivisatos, *The First Immunologist, James Pylarino (1659-1718)*, and the *Introduction of Variolation*, «Proceedings of the Royal Society of Medicine», 27, 1934, 8, pp. 1099-1104.

<sup>11</sup> Eriksen, *Smallpox inoculation*, cit.

<sup>12</sup> J. Woodward and E. Timoni, *An Account, or History, of the Procuring the Small Pox by Incision, or Inoculation; As It Has for Some Time Been Practised at Constantinople*, «Philosophical Transactions of the Royal Society of London», 29, 1714, pp. 72-82.

<sup>13</sup> Possibly to ensure the primacy of his 'discovery', Timoni also sent his account to the *Academiae Caesareo-Leopoldinae* at Nuremberg and to the editors of the *Acta Eruditorum* in Leipzig. Both the *Academiae* and the *Acta* published the account, but the article in the *Philosophical Transactions* appears to be the earliest publication, see Stearns and Pasti, *Remarks upon the introduction of inoculation*, cit., p. 110. See also G. Miller, *Putting Lady Mary in her place: A discussion of historical causation*, «Bulletin of the History of Medicine», 55, 1981, 1, pp. 2-16.

<sup>14</sup> See also E. Timoni and S. Horseman, *Clausula Excerpta, ex Historia Variolarum quae per Incisionem Excitantur, ab E. Timoni, M.D. Scripta, R.S. Communicavit Sam. Horseman, M.D.*, «Philosophical Transactions of the Royal Society of London», 38, 1733, pp. 296-297 and the abridged and commented republication of Timoni's paper, C. Hutton, G. Shaw, and R. Pearson, *An Account of the Procuring Small Pox by Incision, or Inoculation ... Being an Extract of a Letter from Emmanuel Timonius, Oxon. and Patav., M.D. S.R.S. Dated Constantinople, December, 1713...*, in *The Philosophical Transactions of the Royal Society of London, from Their Commencement, in 1665, to the Year 1800; Abridged, with Notes and Biographic Illustrations, from 1703 to 1712*, ed. by C. Hutton, G.

<sup>9</sup> The manner of the operation could differ; in China, for instance, the procedure was carried out by introducing pulverized infected scabs into the nostrils of a sound individual, see A. Emch-Dériaz, *L'Età dei Lumi: le scienze della vita. Lepidemiologia e la medicina di Stato*, in *Treccani. Storia della Scienza*, 2002, <[https://www.treccani.it/enciclopedia/l-eta-dei-lumi-le-scienze-della-vita-l-epidemiologia-e-la-medicina-di-stato\\_%28Storia-della-Scienza%29/>](https://www.treccani.it/enciclopedia/l-eta-dei-lumi-le-scienze-della-vita-l-epidemiologia-e-la-medicina-di-stato_%28Storia-della-Scienza%29/>) (5/2021). An account of the Chinese practice had already reached the Royal Society in 1699/1700 (Stearns and Pasti, *Remarks upon the introduction of inoculation*, cit., p. 107 and Miller, *The adoption of inoculation*, cit., p. 49). Another variant of the Chinese practice was to insert a small piece of fabric soaked with infected matter in the newborn's nostrils, see *Descriptio inoculation variolarum a Gualtero Harris, Londini & c. cioè Descrizione de l'Introduzione de' Vajouli di Gualtero Harris. Londra & c.*, «Giornale de' Letterati Ultramontani ... tradotto dalla lingua francese», vol. VII, Venice 1722, pp. 111-115: 114. Also, in the Ottoman Empire inoculation could be carried out by inserting the infected matter in incisions made in the arms only; arms and legs; both arms, forehead and breast in order to mark the shape of a cross; or by lifting the patient's skin and inserting a dry infected scab underneath it, see Miller, *The adoption of inoculation*, cit., p. 63.

*Transactions* published another paper on the practice of inoculation in the Ottoman Empire, *Nova & Tuta Variolas Excitandi per Transplantationem Methodus, Nuper Inventa & in Usum Tracta: Per Jacobum Pylarinum, Venetum, M. D. & Reipublicae Venetae Apud Smyrnenses Nuper Consulem*<sup>15</sup>. This paper was written by Jacopo Pylarini (1659-1718) – a physician and diplomat for the Venetian Republic who, like Timoni, had taken his medical degree in Padua. Pylarini was requested an account on inoculation by his friend William Sherard, British consul at Smyrna and later Fellow of the Royal Society. Sherard himself had received a request from the Society's secretary Richard Waller to provide an account that could corroborate the information they received from Timoni and especially whether it was true that the inoculated were left without «any scars or disfiguring on the face, and that they are undoubtedly secured from ever catching the Distemper again tho' ever so much exposed to the hazard thereof»<sup>16</sup>. Sherard sent Pylarini's treatise, which had also been published in Venice in 1715<sup>17</sup>, to the Royal Society, and stated that «a man that should doubt of the truth thereof at Smyrna would pass for a Grand Herretick»<sup>18</sup>.

Timoni's and Pylarini's communications were circulated in Europe and the Colonies and were the very first accounts to elicit interest in the Western medical community<sup>19</sup>. In Boston, Massachusetts, for instance, the

minister Cotton Mather, after reading Timoni's paper from the *Phil. Trans.*, convinced the physician Zabdiel Boylston to initiate a campaign of inoculation in the city during a smallpox epidemic in 1721. Although Mather had already heard of this practice from a slave in 1706, it was Timoni's published account that persuaded him to attempt inoculation and write to the Royal Society confirming Timoni's observations<sup>20</sup>.

In England instead, while the two physicians' accounts started raising interest in inoculation, the credit of spreading the actual practice is generally given to a much more influential person, Lady Mary Montagu. Montagu had moved to Turkey as the wife of the English ambassador to the Ottoman Empire, and, in 1718, she had her five-year old son inoculated by the English physician to the Embassy Charles Maitland. Even before returning to England Montagu had started sending letters to her English friends about the practice and, once returned in 1721, she had her three-year old daughter inoculated as well<sup>21</sup>. The word of these first successful operations spread rapidly and soon a new trial was performed on six prisoners in Newgate, all of which survived and one, that was later exposed to smallpox, appeared to be immune. Gradually various members of the aristocracy started being inoculated, including Princess Caroline's two daughters in 1722.

Despite the sharp criticism initially addressed to the practice and to those who supported it<sup>22</sup>, in England

Shaw, and R. Pearson, C. and R. Baldwin, London 1809, vol. V, pp. 88-91.

<sup>15</sup> J. Pylarini, *Nova & Tuta Variolas Excitandi per Transplantationem Methodus, Nuper Inventa & in Usum Tracta: Per Jacobum Pylarinum, Venetum, M.D. & Reipublicae Venetae Apud Smyrnenses Nuper Consulem*, «Philosophical Transactions of the Royal Society of London», 29, 1716, pp. 393-399. See also the commented translation in C. Hutton, G. Shaw, and R. Pearson, *A New and Safe Method of Communicating the Small-Pox by Inoculation, lately invented and brought into use. By Jacob Pylarini, M.D. formerly Venetian Consul at Smyrna ... Translated and Abridged from the Latin*, in *The Philosophical Transactions*, cit., pp. 207-210.

<sup>16</sup> Richard Waller to William Sherard, 8 July 1714, cited in Stearns and Pasti, *Remarks upon the introduction of inoculation*, cit., p. 111.

<sup>17</sup> J. Pylarini, *Nova & Tuta Variolas Excitandi per Transplantationem Methodus, Nuper Inventa & in Usum Tracta: Qua ritè peracta, immunita in posterum praeservantur ab hujusmodi contagio Corpora*, Jo. Gabrielem Herzt, Venice 1715.

<sup>18</sup> Waller's communication of Sherard's letter to the Royal Society, 24 May 1716, cited in Stearns and Pasti, *Remarks upon the introduction of inoculation*, cit., p. 112.

<sup>19</sup> There is evidence of other instances of the knowledge and practice of smallpox inoculation in Europe before Timoni's and Pylarini's communications. For instance, Thomas Bartholin of Copenhagen had started an inoculation campaign in the Danish countryside as early as 1675 (Tanga and Gelati, *Quando il pharmakon è la "materia velonosa"*, cit.) and letters from physicians in Wales published in 1722 state that inoculation had been in use there as early as 1600 (Boylston, *The origins of inoculation*, cit.). Stearns and Pasti (cit.) report that «the knowledge of the art became the property of medical practitioners almost simultane-

ously in England, Italy, France, the Germanies, and Scandinavia. But it also appears that the English set the example in the *practice* of inoculation, and by their reported successes the Continentals were encouraged to follow suit».

<sup>20</sup> Weiss and Esparza, *The prevention and eradication of smallpox*, cit., and Boylston, *The origins of inoculation*, cit.

<sup>21</sup> Lady Mary Montagu's experience and promotion of inoculation has here only been hinted as her story goes beyond the scope of the present paper. There is a considerable amount of literature that can be consulted for more information on Montagu; I shall here only mention a few examples consulted for the above sketch: Miller, *Smallpox Inoculation in England and America*, cit., Miller, *The adoption of inoculation*, cit.; Miller, *Putting Lady Mary in her place*, cit.; Weiss and Esparza, *The prevention and eradication of smallpox*, cit.; D. Barnes, *The Public Life of a Woman of Wit and Quality: Lady Mary Wortley Montagu and the Vogue for Smallpox Inoculation*, «Feminist Studies», 38, 2012, 2, pp. 330-362; and Stearns and Pasti, *Remarks upon the introduction of inoculation*, cit.

<sup>22</sup> The few cases of death that occurred triggered the rage of those who were against the practice. Inoculation was condemned for being dangerous, unreligious, lacking sufficient experimental evidence, and coming from «ignorant», «illiterate» and «unthinking» people (W. Wagstaffe, *A Letter to Dr. Freind: Shewing the Danger and Uncertainty of Inoculating the Small Pox*, Samuel Butler, Holborn 1722<sup>3</sup>, p. 6). However, the reports from Boston; following papers published in the *Phil. Trans.*; James Jurin's project to promote further trials of the practice and his comparative mortality figures between naturally contracted smallpox and artificially instilled smallpox (see below); and subsequent writings in favour of the practice – such as Crawford's *The case of inoculating the small-pox consider'd, and its advantages asserted* (1722) and

inoculation continued to be practiced and studied and eventually became, by the mid of the century, a standardised procedure through which large portions of both rural and urban society were treated. It became a matter of public health; parish authorities saw the investment in 'general inoculations' as a wise choice to prevent epidemics in rural villages<sup>23</sup>, while in urban areas 'partial inoculations' were practiced on portions of the population. In London, moreover, the first Hospital for Smallpox and Inoculation was founded in 1746.

While England pioneered inoculation from the 1720s onwards<sup>24</sup>, other European countries, including the Italian states, appear not to have shown the same interest in this practice until the second half of the century. In the Italian peninsula the debate on inoculation, which had started much earlier in England, sparked off only from the 1750s<sup>25</sup>. However, the focus of this paper is on the earliest Italian reception of inoculation, that is, when the very first knowledge of this practice reached the peninsula; the following pages will thus only focus on the period between 1715 and 1730 and not on the later debate.

First published news of smallpox inoculation in Italy appears to be the above-mentioned treatise by Pylarini (Venice 1715). The literature then generally mentions Cesare Marescotti's *De Variolis tractatus* (Bologna

1723<sup>26</sup>), in which he describes the operation<sup>27</sup>, mentions the Newgate successful experiments, but also mentions the typical objections to the practice, such as the risk of death<sup>28</sup> and doubts as to its efficacy<sup>29</sup>.

Another publication was Charles Maitland's *Account of Inoculating the Small-Pox* (London 1722), which was translated and published by Sir Thomas Dereham<sup>30</sup> as *Relazione del signor Maitland dell'innestare il vajuolo* (Florence 1725<sup>31</sup>). In this same publication we also find a shorter paper entitled *Metodo sicuro e da me più volte sperimentato con esito sempre felice in Costantinopoli, di trapiantare il vajuolo, o per dir meglio Innestarlo*<sup>32</sup>. This paper is unsigned, but from a letter sent from Dereham to James Jurin we learn that it was written by «[Rinaldo] Duglioli of Padua»<sup>33</sup>. The contents do not reveal any

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Arbuthnot's *Mr. Maitland's Account of Inoculating the Smallpox Vindicated* (1722) – eventually provided sufficient evidence to silence criticism and allow the practice to continue. See Miller, *Smallpox Inoculation in England and America*, cit.

<sup>23</sup> General inoculations of entire communities would also prevent the possibility of an epidemic starting from isolated individuals who had themselves inoculated (May, *Inoculating the Urban Poor*, cit., p. 297).

<sup>24</sup> Some however claim that there were some brief intervals in which interest in and practice of inoculation waned (see Stearns and Pasti, *Remarks upon the introduction of inoculation*, cit.; Fadda, *L'innesto del vaiolo*, cit. See also Miller, *Smallpox Inoculation in England and America*, cit., for a different perspective). Nevertheless there is much evidence to show that inoculation was practiced in England throughout the period (see §3) and, if indeed there were some inactive periods, they appear irrelevant compared to the very little evidence there is of the practice of inoculation in Italy between the 1720s and the 1750s.

<sup>25</sup> The arguments against inoculation in Italy were similar to those advanced in England and other countries, including: the barbaric origins of the practice; the uncertainty of life-long immunity; the fact that the inoculated disease – unlike the naturally contracted disease – did not allow a complete purging of the body from poisonous substances that were believed to be within human blood since birth; that the inoculators' objectives in pushing for the practice were pecuniary; and of course the risks both for the patient and the physician in case of failure. The inoculators, instead, argued in favour of the practice by providing experimental evidence and quantitative data. The promotion of inoculation also led physicians and intellectuals to re-consider the role and organisation of Italian institutions; the spreading of the practice strongly depended on the intervention of the states and a reorganisation of health facilities. For the practice of inoculation in Italy and the debate that started thereof, the most general survey is given by Fadda, *L'innesto del vaiolo*, cit.

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<sup>26</sup> C. Marescotti, *De Variolis tractatus*, C. Pisarri Sancta Inquisitionis Impressoris, Bologna 1723.

<sup>27</sup> Including the Chinese version.

<sup>28</sup> Of course, the use of live pathogenic virus for the operation entailed some risks: firstly, about 2% of those inoculated developed severe smallpox and died – the percentage went down to around 0.3 with the refinement of the practice –; secondly, the inoculated could be themselves the source of new smallpox epidemics; hence why it was generally recommended that the inoculated be isolated during the vesicular period (Weiss and Esparza, *The prevention and eradication of smallpox*, cit., p. 6). Despite the risk of death of one individual in one or more hundreds, inoculation was seen as the lesser evil in comparison to naturally contracted smallpox, whose mortality rate was much higher (1 in 15-20 died) and many of those who survived were left with severe scarring and/or blindness.

<sup>29</sup> See Arieti, *La pratica della vaiolizzazione*, cit., and Manzi, *Vaiolo, vaiolizzazione, vaccinazione*, cit.

<sup>30</sup> Sir Thomas Dereham (1678-1739, FRS 1720) was baronet of West Dereham in Norfolk and a Roman Catholic, who took residence in Florence in 1718 and later in Rome. Dereham held a large amount of correspondence with both Italian scholars and the Society's Fellows. He acted as an intermediary of science between the Italians and the Society forwarding both ways letters, books and papers and promoting projects undertaken by the Society. He moreover acted as translator, translating his correspondence, issues of the Society's *Transactions* into Italian, and of the *Giornale de' Letterati* into English. I am currently working on Thomas Dereham's works and letters for a future publication.

<sup>31</sup> C. Maitland, *Relazione del signor Maitland dell'innestare il vajuolo. Tradotta dall'inglese l'anno 1723* (1722), It. transl. by T. Dereham, Tartini e Franchi, Florence 1725.

<sup>32</sup> *Ibidem*: The translation of the Italian is «A safe method and by me on multiple occasions tried in Constantinople, with an always happy success, to transplant the smallpox, or better, to engraft it».

<sup>33</sup> Thomas Dereham, dated at Florence, to James Jurin, 7 December 1725 (Royal Society, EL/D2/22, also transcribed in A. Rusnock, *The correspondence of James Jurin (1648-1750): Physician and Secretary to the Royal Society*, Rodopi, Amsterdam 1996 p. 320). Rinaldo Duglioli (1664-1739) was a lecturer of medicine at the University of Bologna and later at Padua. Duglioli however spent several years travelling as he was also personal physician to the Venetian ambassadors to Constantinople, The Hague, Passarowitz and Cambray (see L. Frati, *Un medico bolognese in Olanda [Rinaldo Duglioli]*, «Nuova Antologia», 5, 1913, 144, pp. 310-315; M. Battistini, *Il medico bolognese Rinaldo Duglioli nel Belgio ed una sua lettera medica*, «L'Archiginnasio. Bollettino della Biblioteca comunale di Bologna», 28, 1933, pp. 345-349). Duglioli was elected Fellow of

more than what was already reported by Timoni and Pylarini, they simply explain the manner in which the operation should be carried out; however, the title displays Duglioli's favourable opinion on the practice and his belief that it was «safe» as he had several times had the occasion of practicing it with success in Constantinople.

At the end of Duglioli's paper there is also a reference to an article in the seventh volume of the *Giornale de' Letterati Oltramontani*, translated from French and published in Venice in 1722<sup>34</sup>. This article was a summary of Walter Harris's *Descriptio inoculationi variolarum* (London 1721<sup>35</sup>). It reports on the practice of inoculation in Constantinople – mentioning the operation on the two children of the English Ambassador<sup>36</sup> – and compares it with the operations performed by a Thessalian woman<sup>37</sup> on the children of the French ambassador to Aleppo. According to Harris, the «old and superstitious Christian woman» inoculated the children by making incisions in the form of a cross in eight different places (forehead, cheeks, chin, both wrists and feet), but Harris believed that one or two incisions would suffice<sup>38</sup>. The reporting of Harris's dissertation is neutral; other than Harris's own opinions, no thoughts are expressed by the writer on the practice of inoculation.

Finally, another paper appeared in the twenty-fourth volume of the *Giornale de' Letterati d'Italia* (Venice 1715<sup>39</sup>), apparently written by Antonio Vallisneri<sup>40</sup>. In this article, Vallisneri reports and summarises, in Ital-

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the Royal Society when he travelled to England in 1712 (Royal Society, Meeting minutes, 12 June 1712, CMO/2/230).

<sup>34</sup> *Descriptio inoculationi variolarum a Gualtero Harris*, cit.

<sup>35</sup> Walter Harris (1647-1732) was personal physician to Queen Anne. His *Descriptio inoculationi variolarum* was an appendix to his *De peste dissertatio habita* (see Miller, *The adoption of inoculation for smallpox*, cit., p. 74).

<sup>36</sup> It is noticeable that the merit of having the Montagus' children inoculated is here attributed to Lady Mary's husband, Edward, rather than Lady Mary herself.

<sup>37</sup> See Miller, *The adoption of inoculation for smallpox*, cit., p. 63 for more information on the Thessalian woman and her manner of inoculating. This method of inoculating the patient through multiple incisions in various parts of the body (and not just the limbs) is also the one described by Pylarini.

<sup>38</sup> The article also briefly reports on the Chinese practice of inoculating newborns by inserting a pus-soaked piece of fabric in their nostrils.

<sup>39</sup> [A. Vallisneri], *Articolo XI. Nova, et tuta variolas excitandi per transplantationem methodus; nuper inventa et in usum tracta: qua rite peracta, immunia in posterum preservantur ab hujusmodi contagio corpora*, «Giornale de' Letterati d'Italia», vol. 24, Venice 1715, pp. 356-363.

<sup>40</sup> «... della quale operazione [l'innesto] io fui il primo a darne notizia ne' giornali suddetti d'Italia, facendovi sopra alcune riflessioni», letter from Vallisneri to Dereham, 8 November 1725, (Royal Society, LBO/19/29, see my transcription of the full letter in the appendix). Tucci however, attributes the article to Apostolo Zeno who, together with Vallisneri and Scipione Maffei, founded the *Giornale de' Letterati d'Italia* in 1710 (Tucci, *Jacopo Pilarino pioniere dell'innesto*, cit., p. 407).

ian, the contents of Pylarini's Latin treatise. This paper displays a slightly more positive stance towards the practice without however making explicit judgements. Vallisneri, in fact, starts by introducing Pylarini as a medical professional and a man of virtue and principle and, before moving into the account of Pylarini's treatise, states:

*It may appear, at a first glance, a wives' or a superstitious fable; but if it is true that experience, our master, will prove it, with the help of reason, it will not come as something so despicable, neither to scorn, as the Author says in the first letter. Nor should the novelty be removed from such beliefs, that from illiterate people this finding has come; because, the divine mind wants, that at given times, new discoveries always manifest themselves, and that often many remedies, as in all Medicine is seen, have similar, and churlish principles<sup>41</sup>. (my translation)*

Vallisneri thus anticipates what would then become one of the key points against inoculation, namely that the practice came from illiterate people and may therefore be considered as a «superstitious fable» not worthy of the attention of the civilised. Most importantly, he leaves it to experience (i.e. experimentation) and reason to be the judges of the practice, and eventually it might be proven that inoculation is not at all something unreasonable. After the summary of the treatise, Vallisneri adds further information in support of Pylarini's claims:

*Sig. Giovanni Crissoleo, nephew on his mother's side of the famous Maurocordato, assured one of our Professors, that on him and all his house the operation was successfully performed, and does not know of anyone who has ever perished thereafter [...]<sup>42</sup>. (my translation).*

Despite the information that reached Italy<sup>43</sup>, there appear to be very few accounts of inoculation being

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<sup>41</sup> Vallisneri, *Nova, et tuta variolas excitandi per transplantationem methodus*, cit., pp. 356-357. Original Italian: «Pare a prima vista, una favola superstiziosa, o da femmine; ma se è vero che la sperienza maestra ciò dimostri, appoggiata alla ragione, non riuscirà forse cosa cotanto spregevole, nè da farsene beffe, come dice nella prima lettera l'Autore. Nè dee da tal credenza rimuovere la novità, nè che da gente non letterata sia uscito questo ritrovato; conciossiacchè vuole la mente divina, che per età determinate sempre nuovi scoprimenti si manifestino, e che sovente molti rimedj, come in tutta la Medicina si vede, abbiano simili, e rozzi principj».

<sup>42</sup> « Il Sig. Giovanni Crissoleo, nipote dal canto di madre, del famoso Maurocordato, ha assicurato un nostro Professore, essere stata in lui, e in tutta la sua casa felicemente fatta questa operazione, e non sapere, che niuno mai, per questa sia perito...». Vallisneri, *Nova, et tuta variolas excitandi per transplantationem methodus*, cit., pp. 362-363.

<sup>43</sup> The English *Philosophical Transactions* moreover reached various part of the peninsula through the Society's Italian contacts and intermediaries, so there is a possibility that news on the practice published in the

actually practiced in the peninsula at this early stage. The first was that of the physician Morando Morando, who claimed to have successfully inoculated ten children in the province of Modena in 1722<sup>44</sup>. However, the public was not made aware of his experience until 1753, when he wrote about it in his *Della cura del vajolo con la china-china e col bagno tiepido*<sup>45</sup>. A second report of the practice comes again from Antonio Vallisneri, who, in a letter to Thomas Dereham, dated 1725, reports that he was given «two manuscript dissertations on the experience of engrafting the smallpox in Piacenza, in four children, one of which died, but they say it was for the ruinous activity of worms she [the girl who died] had in her stomach, and not the fault of the smallpox»<sup>46</sup>. Vallisneri moreover informed Dereham that the custom of «buying the pox» was not only practiced in Wales but also in Lombardy:

*The children go to the infected and give him a coin saying they want to buy [the smallpox], they touch his hand, from which contact they bring [the infection] on themselves, though they do not undergo the ceremony of rubbing their skin with the blade of the pen-knife, and apply thereon the matter of the smallpox. (Vallisneri to Dereham, 26 December 1726, my translation<sup>47</sup>)*

As Vallisneri explains, this custom did not correspond to the engrafting practice imported from the Ottoman empire, but it added to the evidence that purposely infecting oneself with the disease was common folk practice long before the medical community became interested in inoculation<sup>48</sup>. Finally, Klebs reports more vaguely that some experiments were also

made as early as 1718 in Parma by a Dr. Maggi<sup>49</sup>; and Thomas Dereham, in 1726, claimed that the practice of inoculation had successfully begun in Bologna and Padua (see §4<sup>50</sup>).

The above-mentioned writings and the few accounts of experiments on inoculation are hopefully enough to prove that the Eastern practice did indeed arouse some interest in at least some members of the Italian medical community, especially in the Republic of Venice and in the Duchies of Modena, Parma and Piacenza. However, after the initial interest, in the 1730s and the 1740s there appears to be no more mention of the practice in Italy. The exchange between Dereham and Vallisneri that will be analysed in §4 will hopefully provide some answers and may possibly be considered as representative of the thoughts and attitudes of many members of the Italian medical community in the early 18<sup>th</sup> century. But before moving into this exchange, §3 will introduce a project launched by James Jurin to investigate the practice, which represents the starting point for Vallisneri and Dereham's exchange on inoculation.

### 3. JAMES JURIN'S INOCULATION PROJECT AND HIS RELATIONS WITH ITALY

*The Practice of inoculating the Small Pox being now extended into many Parts of the Kingdom, and it being highly requisite that the Publick should be faithfully inform'd of the Success of that Method, whether Good or Bad; It is desir'd, that all Physicians, Surgeons, Apothecaries, and others therein concern'd, will be pleas'd to transmit to Dr. Jurin, Secretary to the Royal Society, a particular Account, specifying the Name and Age of every Person by them inoculated, the Place where it was done, the Manner of the Operation, whether it took Effect or no, what Sort of Distemper it produced, on what Day from Inoculation the Eruption appear'd; and, lastly, whether the Patient died or recover'd. They are desired to comprehend in their Accounts all Persons inoculated by them, from the Beginning of this Practice among us to the End of the present Year, and to send them some Time in January or Febru-*

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journal would have come to the knowledge of few Italian intellectuals in other parts of the peninsula as well. Dereham's translations of the *Philosophical Transactions*, for instance, were published in Naples between 1729 and 1734.

<sup>44</sup> Manzi, Vaiolo, vaiolizzazione, vaccinazione, cit., p. 15.

<sup>45</sup> M. Morando, *Della cura del vajolo con la china-china e col bagno tiepido*, Stamperia di Niccola Bellelli, Ancona 1753, p. 13.

<sup>46</sup> Letter from Vallisneri to Dereham, 8 November 1725 (Royal Society, LBO/19/29) (my translation).

<sup>47</sup> «Andando i Fanciulli dall'infetto, cui danno un quattrino, dicendo, che gli comprano, toccandoli la mano, dal quale contatto si attaccano, benchè non facciano la cerimonia di strofinare la pelle colla costola del Temperino, e di applicarvi sopra la marcia del Vaioulo» (Royal Society LBO/18/164, also published in T. Dereham, *Lettere di uomini eruditi di vari Paesi intorno le Transazioni filosofiche, e diverse altre Materie, e Notizie Scientifiche scritte al Sig. Cavaliere Tommaso Dereham, in Saggio delle Transazioni filosofiche della Società Regia dall'Anno 1720 fino a tutto l'Anno 1730. Tradotte dall'idioma inglese dal Cavaliere Tommaso Dereham Baronetto della Gran Bretagna, e Membro della Società suddetta*, vol. V, Moscheni, e Compagni, Napoli 1734, pp. 245-258: 247). This letter is generally mistakenly mentioned in the literature as having been sent to Sir Hans Sloane instead of Dereham.

<sup>48</sup> See Boylston, *The origins of inoculation*, cit.

<sup>49</sup> Klebs, *Die Variolation im achtzehnten Jahrhundert*, cit., p. 58.

<sup>50</sup> It is also not to exclude that inoculations were being practiced already at this time amongst the English community of Livorno, as the French La Condamine, who travelled through Italy in 1755, reported that this practice was well established in the city «having the English merchants brought it thither long since» (La Condamine, *Seconda Memoria sull'innesto del vaiolo*, cited in Fadda *L'innesto del vaiolo*, cit., p. 53; my translation). The possibility that inoculations were being practiced among the English communities, would moreover help explain Dereham's initial enthusiasm about the positive reception of the practice in Italy – when he says: «the inoculation has begun here with pretty good success» –, which was then however somewhat disappointed after he consulted with scholars from the Venetian Republic and from Bologna (see §§ 3 and 4).

ary next. (James Jurin's advertisement in the *Philosophical Transactions*, 1723<sup>51</sup>)

James Jurin (1684-1750) was an English physician, well-known in his lifetime both in England and abroad for his efforts to establish smallpox inoculation in England, as well as for his support of Newtonian ideas<sup>52</sup>. He earned his living through his medical practices in London and Tunbridge Wells and as a physician, and later Governor, at Guy's Hospital. Jurin was also a member of the Royal College of Physicians (1719) and of the Royal Society of London (1717). He became president of the former in 1750 and served as secretary to the latter from 1721 to 1727. As a secretary to the Royal Society, Jurin was also in charge of editing the *Phil. Trans.* and of the Society's correspondence. Indeed, Jurin improved the Society's correspondence network and relied on expatriate Englishmen, diplomats and travelling intellectuals to maintain and increase his foreign contacts.

Exploiting the institutional support and prestige of the Royal Society, Jurin launched a project to judge the safety and efficacy of inoculation. He extended his call to physicians in England and abroad through the *Phil. Trans.* and his correspondents. The advertisement quoted at the beginning of this section and published in the *Philosophical Transactions* in 1723<sup>53</sup>, is addressed primarily to British physicians «in many parts of the Kingdom», but by publishing it in the *Phil. Trans.* Jurin made his advertisement accessible to the international medical community as well and he further made sure of it by discussing his projects with his correspondents abroad, such as Cotton Mather in North America and Sir Thomas Dereham in Italy.

As early as 1722, basing on the London bills of mortality and the accounts he had received from the Colonies, Jurin made some comparative calculations of the mortality figures from inoculated and naturally-contracted smallpox, arguing that 1 in 49 died after inoculation against the 1 in 7 that died of natural smallpox<sup>54</sup>. The comparison of mortality figures was

factual evidence in favour of inoculation, and further and improved calculations would have helped establish the practice. Hence, Jurin decided to collect accounts of inoculations performed in Britain and – in his *An account of the success of inoculating the small-pox in Great Britain*, published on a yearly basis between 1724 and 1727 – he provided annual mortality figures from inoculation and natural smallpox<sup>55</sup>. Over sixty individuals from England, Wales, and Ireland sent Jurin their accounts, which were either lists of people they inoculated or detailed descriptions of inoculations<sup>56</sup>. The death rate from inoculation in 1725 was 1 in 48 (2.1%), which decreased to 1 in 105 (1%) by 1727<sup>57</sup>. Jurin based his annual figures on the accounts he received and, despite being in favour of inoculation, he always maintained an impartial stance stating that «Matter of Fact and Experience» would ultimately decide the fate of the practice<sup>58</sup>.

Jurin's project was not only one of the first major attempts to judge the validity of medical treatment through quantitative data, but it was also an early instance of an attempt to co-ordinate medical research. Further, it provides a good example of how the *Phil. Trans.* could be used as a means to promote a particular medical agenda<sup>59</sup>. While this project was specifically aimed at the British Isles, Jurin tended to involve his foreign correspondents in his activities and, between 1725 and 1727, he exchanged information on the development of the practice in England and in Italy with Sir Thomas Dereham.

Early in the 1720s, Dereham, who lived in Florence at the time, enthusiastically accepted to become a correspondent for the Royal Society and exchanged numerous letters with Jurin sending him Italian news, papers, and books and receiving the same in turn. By 1725 Dereham must have been fully informed on the practice of inoculation in England and published his own translation of Maitland's account on the practice<sup>60</sup>. Dereham also informed Jurin that:

<sup>51</sup> J. Jurin, *Advertisement*, «Philosophical Transactions of the Royal Society of London», 32, 1723, p. i.

<sup>52</sup> See Rusnock, *The correspondence of James Jurin*, cit., pp. 8-27.

<sup>53</sup> The advertisement was also inserted at the end of the 1724 volume of J. Jurin, *An account of the success of inoculating the small-pox in Great Britain with a comparison between the miscarriages of that practice, and the mortality of the natural small-pox*, J. Peele, London 1724-1727. Jurin sent this account to Dereham in Italy, suggesting that Dereham could have translated it in Italian.

<sup>54</sup> See J. Jurin, *A letter to the learned Dr. Caleb Cotesworth, F.R.S. of the College of Physicians, London, and Physician to St. Thomas's Hospital; containing a comparison between the danger of the natural small pox, and of that given by inoculation*, «Philosophical Transactions of the Royal Society of London», 32, 1722, pp. 213-227.

<sup>55</sup> Another issue of the pamphlet for the years 1728 and 1729 was published by the Swiss physician John Gasper Scheuchzer (Rusnock, *The correspondence of James Jurin*, cit., p. 54).

<sup>56</sup> Rusnock, *The correspondence of James Jurin*, cit., p. 24. Further accounts also came from New England and a few from Hanover. The inoculations reported to Jurin totalled nearly a thousand individuals (Stearns and Pasti, *Remarks upon the introduction of inoculation*, cit., p. 121).

<sup>57</sup> Huth, *Quantitative evidence for judgments on the efficacy of inoculation*, cit.

<sup>58</sup> Jurin, *An account of the success of inoculating the small-pox*, cit., p. 2.

<sup>59</sup> See Huth, *Quantitative evidence for judgments on the efficacy of inoculation*, cit., and N. Moxham, *Job's boils and washballs*, 2013, <http://blogs.royalsociety.org/history-of-science/2013/06/13/jobs-boils/> (6/2021).

<sup>60</sup> Maitland, *Relazione del signor Maitland dell'innestare il vajuolo*, cit.



*The inoculation of the small pox has begun here with pretty good success, since I have caused to be published a translation I have made of Mr. Maitland's Essay, to which I have added a method of Dr. Duglioli of Padua, who has practiced it in Constantinople, so that I reckon the French will be y<sup>e</sup> last to enter into so safe & useful a practise. (Dereham to Jurin, 7 December 1725<sup>61</sup>)*

The above extract shows not only Dereham's positive opinion on the practice but also his belief that it was receiving favourable reception in Italy and had already been experimented to a certain extent. Jurin then sent Dereham his *Accounts of the Success of Inoculating the Small-Pox* for the years 1724 and 1725 humbly suggesting that:

*If you think any of them worth translating into Italian, they are at your service. My Friends flatter me, that they have a good deal contributed to the Success of that practice here: if they are not mistaken, possibly y<sup>e</sup> Papers may be of some use in Italy. (Jurin to Dereham, 14 February 1726<sup>62</sup>)*

Dereham however this time replied to Jurin's suggestion with a somewhat disillusioned stance, forced to admit that the initial eagerness of the Italians to attempt inoculation appears to have waned since:

*These learned Phisitians are fully persuaded how useful the practice is, butt as of late there has been no influence of the small pox, they have had no occasion to try, butt do not doubt the thing will take, & would have had a greater progress had the French Nation come into it, whereas they very readily follow all there fashions [...] (Dereham to Jurin, 31 March 1726<sup>63</sup>)*

Dereham thus blamed the lack of experimentation of inoculation on two causes: 1) that there were, at the time, no violent epidemics of smallpox, which would have encouraged the practice; and 2) that the lack of interest of the French influenced the Italians' interest in the practice<sup>64</sup>. Dereham then returns to his usual positivity, adding that he was planning on going to Bolo-

gna and Padova to collect news of their recent activities and would have endeavoured to promote and encourage experimentation of «the practice which they have very successfully begun».

However, in another letter dated 28 September 1726, Dereham told Jurin that he would have translated his *Accounts on Inoculation*<sup>65</sup> but had to inform him that after the initial trials, no further attempts of the practice had been made in Italy:

*Butt as to the progress of Inoculation in these parts I have not been informed yet of any other experiments butt that at Piacenza in three girls that proved very successful as I informed you some time ago, for Indeed all the Physitians, & Surgeons with whom I have been at any time, & in many Cities of Italy conversant upon this Subject have owned that it must be a very safe practice, butt none of them dare undertake it, tho much inclined to it, for fear of hazarding there credit... (Dereham to Jurin, 28 September 1726<sup>66</sup>)*

This key piece of Dereham's letter provides a further explanation as to why inoculation did not spread in Italy; namely because the Italian physicians feared the negative consequences in case of failure, even when they believed in the safety and efficacy of the practice. Dereham here generalises his statement attributing it to the Italian medical community at large. Indeed, Dereham may have certainly discussed inoculation with other physicians as well<sup>67</sup>, but his words seem to echo the information he received on inoculation in Italy from Antonio Vallisneri, with whom Dereham was discussing inoculation in the same period (see §4).

Finally, Dereham confirmed one of the original reasons he provided for the failure of the practice to spread in the peninsula – i.e. the relative mildness of smallpox in Italy<sup>68</sup> – this time adding some relevant details as to the Italian forms of treatment:

<sup>61</sup> Royal Society, EL/D2/22, also transcribed in Rusnock, *The correspondence of James Jurin*, cit., p. 320.

<sup>62</sup> In Rusnock, *The correspondence of James Jurin*, cit., p. 325.

<sup>63</sup> EL/D2/23, also transcribed in Rusnock, *The correspondence of James Jurin*, cit., p. 333.

<sup>64</sup> Indeed, Dereham's prediction turned out to be truthful in that, by the time smallpox inoculation started being seriously considered and practiced in Italy, not only were there frequent violent epidemics in various Italian states, but also the whole debate took off especially after the publication of *Memoria dell'inoculazione del vaiolo* (1754) by the French Charles Marie de La Condamine. On the role of La Condamine see Fadda *L'innesto del vaiolo*, cit., pp. 53-63; and for figures on the mortality rates from smallpox in the Republic of Venice see Tucci, *Innesto del vaiolo*, cit.

<sup>65</sup> It appears indeed that Dereham undertook the task since, in a following letter (18 July 1727, Royal Society EL/2D/28), he informed Jurin that the translation of his *Accounts* was going well. Dereham also translated Jurin's *Letter to the learned Dr. Caleb Cotesworth*, cit., which is preserved in the Corsiniana Library in Rome with the following title: *Lettera all'eruditissimo Sig. Cotesworth ... contenente un paragone fra la mortalità del vaiuolo e quello dato per via dell'innesto, di Giacomo Jurin ... cui si aggiunge una relazione del successo dell'innesto del vaiuolo nella Nuova Inghilterra ... Tradotto a richiesta dell'autore dall'Inglese nel Toscano idioma dal Cav. Tommaso Dereham, anno 1727* (Fadda, *L'innesto del vaiolo*, cit., p. 50). Later Jurin also sent Dereham the *Account of the Success of Inoculating the Small pox* for the year 1726.

<sup>66</sup> Royal Society EL/2D/26; Rusnock, *The correspondence of James Jurin*, cit., pp. 339-340.

<sup>67</sup> See for instance the example of Duglioli's paper in §2, which he may have received from Duglioli himself, or via other correspondents.

<sup>68</sup> There were two strains of the smallpox virus; the most virulent form was *Variola major*, with a mean case fatality rate of 25-30%; while the milder form, *Variola minor* had a fatality rate of approximately 15%

*The Small pox is generally here very kind, & not destructive amongst the gentry, for by a cooling diet, & keeping the room by the means of a Thermometer in a temperate degree of heat, scarce any of them fail of being cured of it butt amongst the common people many die only by neglect, for they go bare legg'd, & bare footed all the year round, have no glass, nor Shutters to there windows, which makes them catch cold in the nights that are by much cooler than the days, & besides the children are alwaies in day time upon the doors, or in the streets exposed to the air wherefore many are swept away by the disease that actually rages in these parts; so that unless there should be one year a very destructive influence amongst the gentry to fright them I don't believe they will be prevailed upon to practice it [inoculation], & the common people would die of the inoculated as well as the confluent small pox, thro there misery and bad accommodations. (Dereham to Jurin, 28 September 1726)*

Hence, while the upper classes managed to survive the disease, the poor actually terribly suffered from it and many died. Indeed, Dereham claimed that the disease «raged» among them but, for inoculation to spread, it was first necessary to convince the gentry, and that would have been possible only in the case of a very violent epidemic that would have not allowed the wealthy to be cured through the common forms of treatment<sup>69</sup>.

#### 4. ANTONIO VALLISNERI ON SMALLPOX INOCULATION

Antonio Vallisneri (1661-1730) was Professor of Medicine at the University of Padua and member of the Royal Society of London (1703). He was one of the leading Italian scholars of his time in the fields of the medi-

(Weiss and Esparza, *The prevention and eradication of smallpox*, cit., p. 4). The early accounts of smallpox inoculation from the Ottoman Empire generally state that the pus was to be taken from the pustules of a person who suffered from the milder form of the disease and that the pus was to be extracted on the 12<sup>th</sup>-13<sup>th</sup> day from the appearance of the pustules: «they make the choice of some Boy or young Lad, of a sound healthy Temperament, that is seized with the common Small-pox (of the distinct, not Flux sort) on the twelfth or thirteenth day from the beginning of his Sickness» (Woodward and Timoni, *An Account of the Procuring the Small Pox*, cit., p. 73); «the best sort of matter (fermentum) should be chosen. This person [the Greek woman inoculator] would not inoculate with matter taken indifferently from any subject, but when the Small-pox prevailed epidemically, she fixed upon some young boy, who appeared to be in a sound constitution in other respects, and in whom the pustules were distinct and of a good sort...» (Pylarini translated in Hutton *et al.*, *A New and Safe Method of Communicating the Small-Pox*, cit., p. 209).

<sup>69</sup> Edwards, after providing figures for smallpox deaths in various European countries in the 18<sup>th</sup> century, noticeably states: «We can hardly believe our eyes when we read the figures, and yet we are informed by learned opponents of vaccination that small-pox was formerly 'a mild disease'. Let no man ever say so again» (Edwards, *A concise history of smallpox and vaccination*, cit., p. 17).

cal and natural sciences and a worthy member of the Republic of Letters with his European-wide network of correspondence<sup>70</sup>.

Between 1725 and 1727, Vallisneri exchanged a series of letters on inoculation with Thomas Dereham. This exchange has been briefly analysed by Fadda<sup>71</sup>. However, Fadda relied mostly on Vallisneri's letters published by Dereham in his 1734 translation of the *Philosophical Transactions*<sup>72</sup>, but Dereham did not include in this publication all of the letters he received from Vallisneri on the matter, and neither were his own replies. Hence, the following section will illustrate the exchange adding further relevant information from a series of unpublished letters.

On 16 October 1725, Dereham sent Vallisneri a copy of his translated *Relazione del signor Maitland dell'innestare il vajuolo* suggesting that the operation which was so beneficial in England could be «no less useful if it were practiced in these parts» and if someone had the courage to attempt to pave the way for its use. He continues: «here [in Tuscany] some Professors appear resolute, that with the confirmation of happy trials from several parts, [the practice] could spread»<sup>73</sup>.

Vallisneri replied to Dereham on the 8<sup>th</sup> of November informing him that he would have read Maitland's *Account* with interest and claiming that he was the first to have given news about Pylarini's treatise in the *Giornale de' Letterati d'Italia*<sup>74</sup> making his own reflections on the subject (see full letter in the appendix). He further adds that the above-mentioned Giovanni Criscoleo, a former pupil of his, was very well informed on the practice and, had he not been killed by the hussars during the war, he would have published an account of his own with more precise information on the practice of inoculation in the Ottoman Empire. Finally, after reporting about the four children inoculated in Piacenza, Vallisneri reports that the physicians who attempted the practice informs Dereham to repeat the experience, and that he too had «a great desire to replicate it». However, he complains that «in Padua it is hardly possible, because the Paduans

<sup>70</sup> D. Generali, Vallisneri, Antonio, in *Il contributo italiano alla storia del pensiero - Scienze. Enciclopedia Treccani*, 2013, [https://www.treccani.it/enciclopedia/antonio-vallisneri\\_%28II-Contributo-italiano-alla-storia-del-Pensiero:-Scienze%29/](https://www.treccani.it/enciclopedia/antonio-vallisneri_%28II-Contributo-italiano-alla-storia-del-Pensiero:-Scienze%29/) (6/2021). For a bibliography on Vallisneri and his correspondence see also [www.vallisneri.it](http://www.vallisneri.it) (6/2021).

<sup>71</sup> Fadda, *L'innesto del vaiolo*, cit., pp. 49-51.

<sup>72</sup> Dereham, *Lettere di uomini eruditi di vari Paesi intorno le Transazioni filosofiche*, cit.

<sup>73</sup> Dereham to Vallisneri, Florence, 16 October 1725, Biblioteca dell'Accademia dei Concordi of Rovigo, Conc. 333/45, n. 5. The letters exchanged between Dereham and Vallisneri are all in Italian; any quotes from the correspondence reported hereafter in English are my own translations.

<sup>74</sup> Vallisneri, *Nova, et tuta variolas excitandi per transplantationem methodus*, cit.

[are] of ancient doctrines and mind, and not so keen on embracing novelty». This first letter of Vallisneri's immediately shows his interest towards the practice which was however restrained by the limits of his own society.

Dereham was glad to hear about Vallisneri's interest and indirectly invited him to be a promoter of the practice in Padua and Venice:

*I received with great pleasure your notice of the experience initiated in Piacenza. Though the operation of the inoculation of the small pox has partly had a bad appearance for the incident of the death of one of the persons for worms, I hope that this will not hinder this noble under-taking, and I highly trust your great reputation and abilities that in Padua and Venice be introduced and welcomed such a useful practice for the human kind, and in this country there are many Professors, that await the influence [of a person of credit] to provide the evidence. (Dereham to Vallisneri, 1 December 1725<sup>75</sup>)*

Dereham thus appears to suggest that the practice could take off if a person of credit, such as Vallisneri himself, promoted further trials. This was already slightly hinted in Dereham's previous letter, without however suggesting that Vallisneri be that influential person who could change the Italian mentality. Here instead Dereham is explicitly placing his trust in Vallisneri's repute and influence hoping that he may help promote the practice in the peninsula.

At this point no further news on the practice is found in their letters – some of which must not have survived to this day – until 26 December 1726, when Vallisneri, who had received news on Jurin's publications on inoculation, wrote to Dereham:

*The Translation of Mr. Jurin's letter on the Inoculation of the Small pox will be useful, as I am persuaded, that many more die when epidemics rage, particularly of the confluent Smallpox where no inoculation was carried out [beforehand], rather than when it follows inoculation [i.e. inoculated smallpox], in that in the first case [the disease becomes a] scourge, and most of the infected die, while in the second case, the affair goes differently. (Vallisneri to Dereham, 26 December 1726<sup>76</sup>)*

<sup>75</sup> Biblioteca Labronica, Autografoteca Bastogi, Cass. 40 ins. 1104. Original Italian: «Molto gradito mi è stato l'avviso dell'esperienza principia in Piacenza. L'operazione dell'Innesto del vaiolo, che sebbene abbia avuta in parte cattiva apparenza per l'accidente della morte di una delle persone di vermini, spero che ciò non sia per far desistere dalla magnanima impresa, e confido molto nel di Lei gran credito, e abilità perchè sia in Padova, e Venezia introdotta, ed accolta una pratica tanto utile al genere umano, ed in questo paese ci sono molti Professori, che aspettano l'influenza per farne altresì la prova».

<sup>76</sup> «Utile sarà la traduzione della lettera del Sig. Jurin intorno all'innestamento del vaiuolo, essendo io persuaso che molti più ne moiano, quando corrono le epidemie, particolarmente de' vaiuoli confluenti, dove

Despite confirming his favourable opinion towards the practice, Vallisneri also confirmed his initial complaint stating that «Nevertheless, in these Countries they are unable to lend themselves to the trial [of inoculation], and the Physicians do not dare, because if only one died, it would be the fault of the Physician»<sup>77</sup>. Vallisneri's words appear to be very similar to those reported by Dereham to the Royal Society a couple of months earlier – «the Physitians, & Surgeons [...] have owned that it must be a very safe practice, butt none of them dare undertake it, tho much inclined to it, for fear of hazarding there credit» (see §3) – which suggests that either Vallisneri had already stated his opinions about the Italian physicians to Dereham or that Dereham had received the same kind of opinion from other correspondents.

In this same letter Vallisneri also reported about the Lombard practice of buying the pox (see end of §2). Dereham replied only to this part of Vallisneri's paragraph on inoculation, on the 4th of January 1727, stating that the Lombard practice and its similarities with the Welsh practice were curious indeed and that it showed that «nature had from time immemorial given us those teachings that now the [medical] art has put in practice with greater safety», but concludes with a mild complaint: «and, nonetheless, we do not want to adopt it»<sup>78</sup>.

Vallisneri agreed with Dereham explaining that «this city is a strong enemy of novelty» and finally accounted for his struggling to take the matter in his own hands by stating that «I have had difficulty and still have in trying to introduce the good doctrines of the century, because they are abhorred by these old men, still immersed in their ancient rancidity [...]» and, for this reason «we need not discuss inoculation»<sup>79</sup>. He fur-

non è seguito alcuno innestamento, che quando segue l'innestamento imperocché nel primo caso vi fanno flagelli e quasi tutti gli attaccati moiono, che nel secondo caso non va così la faccenda» Royal Society LBO/18/164, also published by Dereham in his Italian translation of *the Philosophical Transactions* (Dereham, *Lettere di uomini eruditi di vari Paesi intorno le Transazioni filosofiche*, cit., p. 247).

<sup>77</sup> «In questi paesi nulladimeno non sanno indursi alla prova e i medici non ardiscono, imperocché se uno solo morisse sarebbe la colpa del medico» (Vallisneri to Dereham, 26 December 1726).

<sup>78</sup> Biblioteca Labronica, Autografoteca Bastogi, Cass. 40 ins. 1104. Original Italian: «Curioso al certo è il costume di Lombardia corrispondente a quello della Provincia di Galles di comprare il vaiolo, e solo variante nel rituale, e si vede che la natura da tempo immemorabile ha dato quegli insegnamenti che ora l'arte ha messo in opra con più sicurezza, e niente dimeno non si vuole adottare».

<sup>79</sup> Vallisneri to Dereham, 16 January 1727, Royal Society LBO/18/168, also Dereham, *Lettere di uomini eruditi*, cit., p. 250. Original Italian: «Qui adesso regna il vaiuolo, e di buona indole sinora, ma non occorre parlare d'innestamento, essendo questa una città troppo nimica delle cose nuove. Ho stentato e stento a introdurre le buone dottrine del secolo, perchè aborrisce da questi vecchioni, ancora immersi negli antichi rancidumi, e in pratica non volevano, ed alcuni non vogliono nemeno

ther added, like Dereham had reported to Jurin, that smallpox was widespread in Italy, but that it was of the mild sort.

After this last letter of Vallisneri's, no more mention of inoculation appears in the surviving exchanges with Dereham; they continued their friendly correspondence on natural philosophical matters but dropped the subject of inoculation completely. The reason for this sudden interruption is not given; however, the letters show that Dereham attempted at least twice to involve Vallisneri in the promotion of the practice, and Vallisneri repeatedly explained the difficulties of spreading novelties in Italy. Further, from Vallisneri's final «we need not discuss inoculation», Dereham may have taken a hint that it was time to abandon his hopes on inoculation.

As to Vallisneri's position on inoculation, he had stated himself that he believed the practice to be useful and that he had a great desire to replicate the experiments<sup>80</sup>. He also provided information supporting Pylarini's treatise in the *Giornale de Letterati*<sup>81</sup> and specified to Dereham that he was *the first* to give news about the treatise in Italy – thus possibly wanting to establish a role for himself in the debate that may have arisen from the novel practice. However, it is also true that he does not appear to have made further particular efforts to promote inoculation in Italy. Fadda and Basile have described Vallisneri's behaviour as being cautious and possibly partly limiting his opinions for fear of disagreeing with the Royal Society<sup>82</sup>. This suggestion has been made on the basis of another exchange that Vallisneri had with the physician from Rimini Giovanni Bianchi (1693-1775). In his letters to Bianchi, which Fadda believes to possibly be more truthful than the ones sent to Dereham, Vallisneri expressed his reservations on both the experiments performed in Piacenza and on his intentions of practicing inoculation in Italy. Indeed he stated that «one child out of four dying was too great a number» and even though the practice seemed to work in Constantinople, England and coastal areas, he was not sure that it could have been as successful in mainland Italy<sup>83</sup>. In a successive letter he further stated that:

ammettere la chinachina, quantunque faccia loro vedere continuamente miracoli».

<sup>80</sup> Fadda, *L'innesto del Vaiolo*, cit., does not seem to be aware of the existence of Vallisneri's letter of the 8<sup>th</sup> of November 1725, in which Vallisneri expressed his interest in the practice and his desire to replicate the experiments of Piacenza.

<sup>81</sup> Vallisneri, *Nova, et tuta variolas excitandi per transplantationem methodus*, cit.

<sup>82</sup> Fadda, *L'innesto del Vaiolo*, cit., pp. 50-51; B. Basile, *L'innesto del vaiolo. Un dibattito scientifico e culturale nell'Italia del Settecento* by B. Fadda, «Italianistica: Rivista di Letteratura Italiana», 13, 1984, 1/2, pp. 259-262: 260.

<sup>83</sup> «che di quattro una sola fanciulla era morta, non per il vaiuolo, ma

*You did well Sir [Bianchi] to escape the Neapolitan small pox, that I shall never endeavour to inoculate, because, if ever the patient died, be I not accused of murder or carelessness. Let the operation be performed by the Greeks, the Turks, the English and those who are willing to risk lives. Negotiantur animas, et experimenta per mortes agunt, said Pliny. (Vallisneri to Bianchi, 14 February 1726<sup>84</sup>)*

This strong statement is however followed by what appears to be an acknowledgement to the necessity of experimentation, without which «one cannot step forward with certainty»<sup>85</sup>. Further, in replying to Vallisneri's first letter on the Piacenza experiments, Bianchi wrote:

*I have made a mistake if I told you in my other letter, Sir, that you have made the experiments on the inoculation of the Small pox [on the four children in Piacenza]. I was told that you wanted to experiment but now I see that you do not have this intention either, and I gladly agree with you... (Bianchi to Vallisneri, 5 February 1726<sup>86</sup>)*

Bianchi's letter shows that he was not keen on practicing inoculation – and later in the century he explicitly expressed his stance against the practice<sup>87</sup> –; hence, while we could consider that Vallisneri's opinions to Dereham were cautious, the same could also be considered of Vallisneri's letters to Bianchi, as he may possibly have known or suspected that Bianchi was not in favour of the practice.

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per un'affezione verminosa che in quell tempo si mosse. Intanto morì, *et multa mota nocent, quae non mota non nocerent*, come ci avvisò Ippocrate, ed in quattro soli esserne morta una è troppo. Può essere che in Inghilterra, in Constantinopoli e ne' luoghi marittimi riesca, ma non so se in terra ferma possa essere di così felice riuscita» (Vallisneri to Bianchi, 17 January 1726, Biblioteca Civica Gambalunga Fondo Gambetti - Lettere autografe al Dott. Giovanni Bianchi - Antonio Vallisneri, lett. 11. Also transcribed in [www.vallisneri.it](http://www.vallisneri.it) and partially reproduced by Fadda, *L'innesto del Vaiolo*, cit., pp. 49-50).

<sup>84</sup> «Ha fatto egregiamente V.S. Ill.ma a fuggire l'influsso del vaiuolo napoletano, ch'io non procurerò mai d'innestare, perché, se mai morisse il paziente, non sia incolpato d'omicida e di poco cauto. Lasciamo fare l'operazione a' greci, a' turchi, agl'inglesi e a chi si sente volontà di azzardare la vita. *Negotiantur animas, et experimenta per mortes agunt*, diceva Plinio» (Biblioteca Civica Gambalunga, Fondo Gambetti - Lettere autografe al Dott. Giovanni Bianchi - Antonio Vallisneri, lett. 13; Also transcribed in [www.vallisneri.it](http://www.vallisneri.it) and partially reproduced by Fadda, *L'innesto del Vaiolo*, cit., p. 50).

<sup>85</sup> Original Italian: «Ma al tempo d'oggi vogliono essere esperienze, essendosi l'uomo (benché tardi) accorto che senza di questa non si può fare con sicurezza un passo avanti».

<sup>86</sup> «Io mi sono malamente espresso se dissi a V.ll.ma nell'altra mia che il Sig. [?] avesse detto che ella avesse fare delle sperienze sull'innesto del Vaiuolo. Egli m'aveva detto che elle le volesse tentare; ma ora per quanto m'avveggo ella non ha ne meno quest'intenzione, ed io m'accordo volentieri con lei...» (Rovigo, Biblioteca dell'Accademia dei Concordi, Conc. 327/36, n. 6).

<sup>87</sup> On Bianchi's stance see Fadda, *L'innesto del Vaiolo*, cit.

On the other hand, an aspect that suggests that Vallisneri might have written his letters to Dereham in earnest is that, even on discussing other matters, Vallisneri frequently complained about the society he lived in; not just for the difficulties of introducing novelties in Italy, but also for the absence of patrons and protectors<sup>88</sup> – a role played for instance by the Royalty in England for the experimentation of inoculation. Hence, both the opinions expressed to Dereham and Bianchi may have been true; Vallisneri may have had an interest in experimenting inoculation but had at the same time no intention of doing it himself not so much because he did not believe in the practice, but rather for fear of his own society.

## 5. CONCLUSIONS

The above reported exchanges have provided some reasons as to why inoculation did not take off in Italy when the first news about the practice reached the peninsula in 1715. Though these exchanges took place between a very limited number of individuals, both Dereham and Vallisneri report opinions that they attribute to the northern-Italian medical community at large. According to them, the reasons for not experimenting inoculation in Italy were the following: 1) that smallpox was widespread but also mild in Italy, and at least the upper classes were able to be cured of the disease through simple forms of treatment; 2) that the Italian physicians – even if convinced of the efficacy and safety of the procedure – did not have the courage to perform inoculations for fear of ruining their reputation in case of failure; and 3) that Italian physicians were possibly influenced by and feared their peers' negative opinion on inoculation.

Another interesting aspect that emerges when considering the above exchanges as part of the Italian relations with the Royal Society is that after Dereham and Vallisneri's exchange, no more attempts to cooperate in the field of inoculation appear to have been made by the Royal Society's Fellows or by the Italians<sup>89</sup>. This interruption of their exchange of information on the practice is noticeable when we consider that the Italians were always very eager to collaborate with the Royal Society<sup>90</sup>. For instance, James Jurin had launched another

project for the collection of meteorological diaries at about the same time of the inoculation project; however, while Jurin received hardly any response on the practice of inoculation, he received meteorological observations from all parts of Italy. Further, Dereham, who was generally considered by the Italians as a representative of the Royal Society of London, after a few attempts to encourage the Italians to experiment with inoculation, eventually appears to have abandoned his hopes. The letters he received from Vallisneri and possibly other Italians may have convinced him – and the Royal Society as a consequence – that Italy was not yet ready for the practice.

Finally, it is hoped that the present paper has shown that more research on the early reception of inoculation in Italy needs to be carried out. Eighteenth-century journals and letters have revealed new knowledge – such as Duglioli's report on the practice – and there may be more to uncover.

## APPENDIX

*Letter from Antonio Vallisneri to Thomas Dereham, Verona, 8 November 1725.*  
*Royal Society EL. V 55*

Ill.<sup>mo</sup> Sig<sup>r</sup> Mio Sig<sup>r</sup> Prone Col.<sup>mo</sup>

Sono 22 giorni che mi parti da Milano, per portarmi alla mia residenza di Padova, ma le continue piogge, i torrenti rapidissimi e gonfi, e particolarmente il Po, che con le guardie sugli argini, minacciava ruine, gli orridi fanghi, e le valli del Mantovano m'hanno fatto trattenere ora in un luogo, ora nell'altro, e quando mi credeva fuor a d'ogn'intoppo giunto in Verona, qui bisogna fermarsi, per le strade del Vicentino, e particolarmente del Padovano, in gran parte coperte d'acque per i vicini fiumi traboccati, onde sono quattro giorni che qui dimoro. Non ho altra consolazione, se non che sono d'alloggio in casa del celebratissimo Sig<sup>r</sup> March<sup>e</sup>. Scipione Maffei, che ride e gode di q<sup>ta</sup> mia tardanza, perché stia con lui. Qui rispondo alla sua pregiatissima, che ritrovai in Modena, datami dal nostro Sig<sup>r</sup> Muratori, e in primo luogo veggo il desiderio che ha il Sig<sup>r</sup> Jurin della notizia delle cose mie, del che gli sono molto obbligato, la quale però si potrebbe avere anche da' Giornali d'Italia, che si stampano in Venezia, incominciando dal primo sino a questo ultimo uscito 36; non essendovi forse tomo in cui o non sia

<sup>88</sup> P. Findlen, *Founding a scientific academy: Gender, patronage and knowledge in early-eighteenth-century Milan*, «Republics of Letters: A Journal for the Study of Knowledge, Politics, and the Arts», 1, 2009, 1, pp. 1-43: 32 and 37.

<sup>89</sup> At least until the debate sparked off in Italy, at which point some Italians, such as Francesco Grisellini, sent their writings to the Royal Society.

<sup>90</sup> This observation is based on my research on the Society's relations with Italy in the early and late modern periods, see p. 1, n. 1.

qualche estratto delle mie opere, o qualche mia osservazione, o riflessione.

La mia lettera di risposta a V.S. Ill.<sup>ma</sup>, a Roma inviata conteneva appunto che il Sig<sup>r</sup> March<sup>e</sup> Gio[vanni] Poleni, mio riverito compare e carissimo amico, avea intrapreso le osservazioni meteorologiche, mentre era quasi impossibile ch'io potessi farle, per essere spesso chiamato a consulti, o a cure di Nobili nelle circonvicine città, che infinitamente mi disturbano e levano dallo Studio.

Leggerò con attenzione l'Opuscolo da V.S. Ill.<sup>ma</sup> tratto sopra l'innesto del vajolo, della quale operazione io fui il primo a darne notizia ne' Giornali suddetti d'Italia, facendovi sopra alcune riflessioni, con l'occasione che mandai a' giornalisti, miei colleghi, l'estratto del libricciuolo del Pillarino, che sopra la suddetta operazione stampò in Venezia. Anzi allora era mio scolare il Sig<sup>r</sup> Gio[vanni] Crisoscoleo di Costantinopoli (nipote del famoso Maurocordato, ch'era stato anch'esso scolare di Padova, e che stampò anche un libro *de respiratione*) il quale Sig<sup>r</sup> Crisoscoleo era informatissimo di tale innestamento del vajuolo, e più volte m'avea fatto parola, e se stava in Padova voleva stampare un altro libretto sopra tale operazione, dicendo che quello del Pillarino non conteneva in tutto la verità, ma in quel tempo il Turco mosse guerra a veneziani, e dovette partire per certi fini politici. Intanto si portò da suo cugino, ch'era il Principe di Valachia, dove poco dopo l'Imperadore fece sorprendere il detto Principe, e farlo prigioniero, come vasallo del Turco, e volendo in quello scompiglio fuggire il povero Crisoscoleo, fu ucciso dagli Ussari, ed io allora perdei un grande amico e un degnissimo Corrispondente. Narra quest'ultimo fatto il Sig<sup>r</sup> Anton del Chiaro nella sua *istoria della Valachia*, mentre colà in quel tempo trovavasi maestro di lingua Toscana de' figli del Principe, e che per miracolo si salvò in quell battibuglio, e venne a Venezia.

Con l'occasione, che sono passato per Piacenza, il Sig<sup>r</sup>. March<sup>e</sup> Ubertino Landi, cavaliere dottissimo, mi ha date due dissertazioni manoscritte, cioè una proposta e risposta di due medici, trattanti dell'esperienza fatta d'innestare il vajuolo in Piacenza in 4<sup>o</sup> giovani, una delle quali morì, ma dicono per mossa strabocchevole di vermini, o lombrichi, che avea nel ventre, non per cagion del vajuolo. Mi dissero voler replicare l'esperienza, ed io pure avrei una gran volontà di rifarla; ma in Padova è difficilissimo, per essere i padovani di dottrina e genio antico, e non così facili ad abbracciare le novità.

Utilissimo e degno d'eterna lode sarà il compendio che V.S. Ill.<sup>ma</sup> ha fatto delle Transazioni della Regia Società, il perché, essendo in idioma agl'Italiani non noto, non si sanno tante degne osservazioni, esperimenti e dottrine, che in quelle si contengono.

In Modena stampano alcune mie lettere dissertatorie intorno all'uso ed all'abuso del bere caldo e freddo, come anche delle bagnature calde e fredde, fatte a istanza del S<sup>r</sup>. Davini, coll'occasione che ristampano il suo elegantissimo trattato *de potu vini calidi*; stampate le quali mi prenderò l'onore d'invarglene un esemplare per lei, e un altro per il Sig<sup>r</sup> Jurin.

Si stampano pure in Venezia varie risposte al temerario e ignorante Gualtieri Fiorentino, che senza ch'io lo conosca, né che abbia mai attaccato lui, unito a un frate, e a qualchedun'altro (come mi hanno scritto), ha stampato un libricciuolo senza la dovuta creanza e modestia contra la mia lezione accademica intorno l'origine delle fontane, le quali risposte, con la giunta di nuove sperienze, ed osservazioni, e ragioni non proveranno, ma dimostreranno la verità del mio sistema. Il tutto pure le manderò. Il Sig.<sup>r</sup> Muratori, giusto estimatore della di lei virtù, m'impose di riverirla divotamente, come faccio, e facendole divotissimo inchino mi protesto sempre con eterno amore, e rispetto

Di V.S. Ill.<sup>ma</sup>, riverita pure dal no[stro] Sig<sup>r</sup> March<sup>e</sup> Maffei.

Div.<sup>mo</sup> Obb.<sup>mo</sup> Serv<sup>e</sup>.

Ant<sup>o</sup>. Vallisneri

Adì ii. Sono in Padova, dopo di aver superato acque incredibili, fanghi, strade rotte e cento intoppi. Tutto ho vinto con pazienza, coraggio, e denari, che tutto vincono, e di nuovo la riverisco.