SIR WILLIAM OSLER'S
LEONARDO DA VINCI COLLECTION:
FLIGHT, ANATOMY AND ART

ROLANDO F. DEL MAESTRO
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Sir William Osler is one of the most studied medical men of the modern era. Scholars have examined his contributions to a variety of disciplines, chief among them medicine, medical education, and book collecting. In Sir William Osler's Leonardo da Vinci Collection: Flight, Anatomy and Art, Rolando Del Maestro has uncovered an area otherwise overlooked in Osler studies.

Del Maestro's work is novel in its focus on Osler's interest in Leonardo da Vinci, and clever in its weaving together of the lives of two iconic figures who lived 400 years apart, each of whom was well-rounded in his intellectual pursuits. It is likely that many of those who consider themselves to be students of Osler might nonetheless be unaware that "Leonardo" is the first titled sub-section within the pages of the Sir William Osler Collection within the Bibliotheca Osleriana that are devoted to the sixteenth century.

In his exhibition and this accompanying text, Del Maestro draws from deep wells of knowledge about both Leonardo and Osler. He masterfully takes what he knows – and what is generally known – about the two and uses that fundamental understanding to raise new questions about Osler's interest in Leonardo.

That Leonardo is the subject of a sub-section in the Bibliotheca Prima is itself worth examining. As Del Maestro rightly points out, Osler took a deliberate approach to book collecting, he extended this method to the careful arrangement of the library that was destined for the McGill Medical Faculty. Every item in Osler's library was intended to be there. The Sir William Osler Collection within the Osler Library Archives contains considerable documentation of the care with which Osler crafted his eponymous library. Although Osler finished a great portion of his catalogue and accompanying notes prior to his death on 29 December 1919, there remain instances of silence within Osler's record.

Rolando Del Maestro has addressed some of the silences within the archives by examining the existing letters, notes, and memoranda in which Osler laid out his thoughts and plans for what he himself called the Bibliotheca Osleriana, with these, Del Maestro has contextualized Osler's collecting of Leonardo's works on flight, anatomy, and art. He points out that there is little reason to question why Osler purchased editions of Leonardo's works on anatomy, not only is the subject matter clearly relevant to the medical arts, but it also fits with Osler's training as a pathologist and his accumulation of an impressive corpus of works on anatomy. A more curious question that Del Maestro raises is why Osler was interested in Leonardo’s works on flight. Venture within the pages of this study to discover answers to that question and to learn more about Osler's Leonardo collection.

First, I would like to thank my wife, Pam Del Maestro, who critically assessed, edited and was a constant support during the writing of this manuscript. Better yet, she has put up with me and my bibliomania for 45 years. Second, I would like to thank my friend, Cary Robbins, who has been invaluable in assisting with exhibitions and books over many many years.

I would especially like to acknowledge Dr. Mary Hague-Yearl, Head Librarian, Osler Library of the History of Medicine at McGill University who contributed substantially to the conception, editing and completion of this project.

I would also like to thank Lily Szczepiak and Bozena Latincic, Documentation Technicians, at the Osler Library for their assistance. Lily was invaluable in helping to locate items to be researched, displayed and photographed. Pamela and Carman Miller read the manuscript and made excellent suggestions which improved the quality of the work. Professor Nathalie Cook provided valuable information.

I want to especially thank my wife Pam and my children Lana, Adrian and Christian for putting up with the many books that have at times overwhelmed our living quarters over the years.

Although numerous individuals have been involved in the production of this project, I, the author, am responsible for any errors, omissions or misinterpretations and can only beg forgiveness for the lapses that may be present.

Mary Hague-Yearl
Head Librarian
Osler Library of the History of Medicine

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Greg Houston, Digitization Administrator, McGill Libraries did excellent photography for the volume. Helmut Bernhard, from the Montreal Neurological Institute Media Services, and myself have shared an almost twenty year history dealing with the nuances of photographic excellence and I am grateful for his superb advice and outstanding work. Amanda of Amanda Pearce Photography along with Mike Spyr were particularly helpful in the photography of special items from my collection.

Particular thanks also belong to my friend, Mike Fronie, of M&T Printing Group who took a special interest in this project and helped immensely in bringing it to completion. Kali Harbinson, Karlene McCarthy and Karen Bumshead, graphic designers at M&T, are responsible for the beauty of the book.

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Rolando F. Del Maestro
Foreword

In my second undergraduate year at Western University, London, Ontario, Canada I was privileged to take a psychology course taught by a truly amazing teacher, Professor Jaroslav Havelka (1917-2005). Finding a seat in his class was a struggle as many students, not enrolled, would always attend. When all the seats were occupied, the steps covered with sitting learners and the back of the classroom sheltering even more students, the professor would appear carrying only a brown folder which he never opened. While captivating the students with his concepts of the critical role of creativity in the human condition, a very brave student asked him what secrets were lurking in the folder. The professor looked surprised, opened the folder and it was empty. He smiled. The lesson: the world was an open folder and thus each of us was invited to fill it with the energy of our investigative spirit.

As an intern, with difficulty, I organized my schedule so I could attend a night class on the psychology of creativity taught by Dr. Havelka. This course focused on the dynamic creative process key to excellence in the arts, music, literature and science. Wolfgang Amadeus Mozart (1756-1791), Havelka’s particular love, was held up as a symbol of creative expression at the epoch of human achievement. Mozart’s music filled the classroom and we were informed that his musical compositions had no or few corrections. It flowed from a special set of cerebral genes able to captivate the human hand into transforming a piece of paper into the emotional splendor capable of holding the human ear captive. As a challenge, Havelka invited each of us to pick our own champion to battle his Olympian, Mozart, in a personal interview. Passing the course would involve a campaign of personal exploration of what defines the creative process. Searching for my champion I explored the back shelves of second hand book stores. Money was tight then. Languishing on a forgotten corner was a Sir Kenneth Clark (1903-1983) paperback reprint entitled Leonardo da Vinci which was first published in 1939. The last page of Clark’s introduction closed with a rather long sentence which gathered my attention at the time and has continued to intrigue me:

Yet just as Leonardo, in his intellectual pursuit of natural forces, hung on with a kind of inspired tenacity, so in the St. John we feel him pressing closer round the form, penetrating further and further into the mystery, till at last he seems to become a part of it, so that like his contemporaries we no longer think of him as a scientist, a seeker for measurable truth, but as a magician, a man who, from his close familiarity with the processes of nature, has learnt a disturbing secret of creation.

And so I joined the battle using Leonardo da Vinci as my flagbearer. Being consumed with the rigors of an internship at the busy Victoria Hospital in London did not leave much time for creative thought. I passed the course but did not distinguish myself. The professor clearly felt that my academic joust lacked depth. He encouraged more intellectual vigor. I have always felt that my lifelong interest in Leonardo and my pursuit to collect Leonardo da Vinci items was in a way atonement for this poor performance. After starting my neurosurgical practice at Western University I was again privileged to attend one of Professor Havelka’s night classes. He was retired, but volunteering in a palliative care unit, creativity having taken on a very human face. The communication between humans. At the last class he offered his drawings for sale for a few dollars. They involved trees, the beauty of the world, and images of human suffering, the reality. Four still hang in my home. We left his class with a timeless message that the human mind is continually trying to decipher and enhance our world.
Foreword continued

During this time period I was also beginning to collect items and books related to Leonardo and Sir Kenneth Clark would provide another insight. After his death in 1983 his rather large collection of books on Leonardo were sold and I acquired a number of them including a beautifully printed 1817 edition of Leonardo’s Trattato della Pittura (Treatise on Painting).1 Interwoven between many of the pages were Clark’s translations, on blue paper, of specific paragraphs of interest to him. This highlighted to me how some book collectors have an intimate affiliation with certain books in their collection saving within them items which make these books an extension of their persona. Sir William Osler was such a collector.

In 1999, I was asked for input on the development of a Brain Tumor Research Centre to be housed in a new building at the Montreal Neurological Institute and Hospital. Dr. William Feindel (1918-2014), a neurosurgeon and Honorary Osler Librarian at the time, had taken a keen interest in the development of the Centre and in my recruitment to it. Aware of my particular interest in Leonardo da Vinci and the history of medicine, Dr. Feindel, along with Pamela Miller, the Osler Librarian at the time, organized a special exhibition for me of the books that Dr. William Osler had collected related to Leonardo da Vinci in the Osler Library of the History of Medicine. The many of the anatomical and art related books and papers in the Osler Collection were also of significant interest. On opening the pages of many of Osler’s Leonardo items it was immediately evident that Osler and his cataloguers had an intimate relationship with these volumes, attested to by the insertion of extra facsimile anatomical drawings in some volumes, letters from experts in others and even appropriate new journal articles. Osler’s Leonardo da Vinci Collection provides us not only with an appreciation of his specific interest in Leonardo’s studies but also outlines his engagement and that of his cataloguers with this collection. Just as the year 2019 is commemorated at the 100th year since the death of Sir William Osler it is also being celebrated around the world as the 500th year since the death of Leonardo da Vinci. The lives of these two individuals, separated by four centuries, have many common features. Both had a certain restlessness with Osler holding senior medical positions in universities in Canada, United States and England while Leonardo spent his time engaged in the artistic life of Florence, Milan, Rome, many Italian City States and would die in Amboise, France in 1519. Osler would outline the importance of bedside teaching while Leonardo would direct an ‘Academia’ in Milan in which students and assistants co-operated to produce works of art resulting in his influence becoming a dominant feature in Northern Italian art. Each had a love for books, accumulating many identical books in their extensive libraries. The essential role of careful anatomical observation in their search for knowledge in its many forms characterized their lives. They recorded their findings in written form covering many thousands of pages. Osler, a witness to the renaissance in Leonardo studies occurring in the late 19th and early 20th century as Leonardo’s writings became available in English, French and German translations, participated in this revival. On opening the Bibliotheca Osleriana, to page 52 and 53, under the heading of Sixtonty Century. Leonardo items 513 to 525 comprise the major component of Osler’s Leonardo Collection. This component of his collection is focused on Leonardo’s works on flight, anatomy and Leonardo’s life and art. These volumes published between 1850 and 1920 included German, French, Norwegian, English and Russian authors. Listed under other authors such as Galen, Vesalius and William Hunter are a series of five titles involving journal articles and other books, some annotated by Osler.

The Osler Library of the History of Medicine is not only a repository of quintessential books collected by one of the great doctors of his time but a cultural institution at the critical interface between medicine and the humanities. It defines the commitment of McGill to academic excellence. For generations, medical students and students in multiple other disciplines have feasted on its knowledge.

The Osler Library of the History of Medicine is one of the worlds great libraries and carries on a tradition of excellence. Each student visiting the library, surrounded by Dr. Osler’s books and in the presence of his ashes, feels in tune with the rhythm and poetry of medicine and the slow but progressive advancement to eradicate disease and make the world a better place. Between its walls one can appreciate the palpable and consuming interest of the intellect of humanity and its books, delve deeply into the human condition, and understand its needs, textures, and nuances.

The books, articles and photographs in this exhibition are based on William Osler’s Leonardo da Vinci Collection as outlined in the Bibliotheca Osleriana with additional materials supplied from my collection of Leonardo da Vinci items. The exhibition is entitled Sir William Osler’s Leonardo da Vinci Collection: Flight, Anatomy and Art. The objectives of this exhibition are:

1. to outline a short history of Leonardo’s life pertinent to the books in Osler’s collection
2. to explore the similarities in the lives of William Osler and Leonardo da Vinci
3. to document the history of the Leonardo volumes in Osler’s library focused under the topics of flight, anatomy and art along with Osler’s personal engagement with his Leonardo da Vinci Collection.

Come...browse through the fascinating original editions of Leonardo’s books, articles and pamphlets present in Osler’s collection. Look over Osler’s shoulder as he and his cataloguers examined and transformed these volumes, inserting important items, including personal letters and witness new insights. Feel the intimate connection with each volume. Enjoy the very human imagination process that results in the creation and beauty of the book.

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Chapter One

The Life of Leonardo da Vinci
1452-1519
Giorgio Vasari (1511-1574) begins his account of the life of Leonardo da Vinci in the first edition of Le Vite De Più Eccellenti Architetti, Pictori, et Scultori Italiani, Da Cimabue Insino A ’T empi Nostri; Descritte in lingua Tosana, (Figure 1) published in 1550 with these words:

In the natural course of events celestial influences rain down on human beings the greatest of gifts, at times in a way that transcends nature they bestow on a single individual, beauty, grace and ability united with such extravagant abundance that every action he turns his attention to is so divine that it surpasses that of all other men, clearly demonstrating that his genius is a Largita da Dio (Gift from God,) as it is, rather than being an attainment of human art. Everyone acknowledged that this was true of Leonardo da Vinci, an artist whose personal physical beauty could not be exaggerated, who carried out all his actions with infinite grace and who cultivated his genius with such brilliance that whatever problem he studied he solved with ease. He possessed great physical strength combined with dexterity, a mind of regal boldness and magnanimous daring, and the fame of his name was not only esteemed in his lifetime but his reputation endured becoming even greater after his death.1

This biography, appearing 31 years after Leonardo’s death, not only documented the complex components of Leonardo’s life but the immense respect that those that knew him had for him. Leonardo’s fame rested not only on his paintings, drawings, note books, and scholarship, but also on Leonardo’s ‘man’, Vasari’s ‘Gift from God.’ The second edition published in 1568 contained a woodcut portrait of Leonardo which was the first likeness published and served as a model for his appearance for centuries (Figure 2).1

Figure 1. Giorgio Vasari (1511-1574), Title Page of the 1550 Edition of his Le Vite, Woodcut, highlighted with orange chalk, 200 x 125 mm. Private Collection: Dr Rolando Del Maestro

Figure 2. Cristoforo Cortolano, (born 1540), Leonardo da Vinci (1560-1568), Woodcut, 170 x 130 mm. In Giorgio Vasari, LE / VITE DE’ PIV ECCELLENTI / Pittori, Scvltori e Architetii, Primo Volume della Tertii Parte, Florenza, Giunti, 1568 p.1. Private Collection: Rolando Del Maestro
Leonardo was born at 10:30 pm on Saturday, April 15, 1452, initially thought to have been in a small hamlet of Anchiano, three kilometers from the Tuscan town of Vinci situated about thirty kilometers west of Florence. (Figure 3) However, recent Florence Archive studies have demonstrated that the da Vinci family, including his grandfather Antonio, his father Ser Piero and his uncle Francesco in 1452 owned a building cluster just below the Vinci Castle. The family did not own property in Anchiano until 1482, 30 years after Leonardo's birth. Local tradition, however, locates his birthplace to an elongated stone cottage in Anchiano, with windows overlooking fields of peaceful olive groves, a beautiful place to begin. This birthplace, indeed, may still be true since it may have been prudent to have Caterina Lippi, Leonardo's mother, a pregnant 15 year old girl, out of sight. From a notice written by his grandfather, Antonio di Ser Piero da Vinci (c.1372-1465) in a family notebook (zibaldone), we learn that Leonardo was baptized the morning after his birth at the Church of Santa Croce inducting him into the Christian community. This baptism in the Church of Santa Croce inducting him into the presence of family members and ten local citizens acknowledged Leonardo's acceptance into the family. It may have been of value to have such a formal baptism since Leonardo was the illegitimate child of Antonio's 25-year-old eldest son, Ser Piero ("Ser" being a title denoting the traditional family occupation of notary or lawyer) and Caterina Lippi, a 15 year old orphan. She was the daughter of a Bartolomeo (Meo) Lippi who had abandoned her and her two year old brother Papo by 1451. Nothing is known about the rest of the family. Within a few months, Leonardo's father, Ser Piero, was married to Albiera di Giovanni Amadori, a 16 year old from an appropriately wealthy family, and eventually he would have four wives and eleven children. Leonardo's childhood must have been both nurturing and complex. For the first four years of his life until his mother married a kiln builder, Antonio di Piero Buti known as "Accattabriga" (a nickname suggesting a difficult personality) he lived with his mother and her family. This is surmised from the fact that his grandfather, Antonio, first registered the four year old Leonardo as a dependent (bocce) living in the da Vinci family home in 1457 and this document named Leonardo as the illegitimate son of Ser Piero and Caterina. Leonardo's father's first marriage was childless and his father did not have another child until Leonardo was twenty-four. It would appear therefore that Leonardo's youth was spent as a happy child in a number of family units. He would have delighted in the love and kindness of caring grandparents, his mother and stepmother, his father and his younger siblings. His uncle, Francesco, appears to have been particularly fond of him bequeathing him and not the other da Vinci cousins a portion of his estate. Growing up as a carefree child in the shadow of Mount Albano, in the green hills around Vinci which overlooked the Arno valley, allowed ample time for exploration of the beautiful countryside. (Figure 4) However, there was not much time for formal schooling and he may have been predominantly self-taught. This may be the best explanation for Leonardo's writing technique. Leonardo was left-handed and it is natural for a left-handed individual to write right to left (mirror-writing). Clearly little effort was expended to correct this writing technique or to teach him the Greek or Latin needed for a "classical" education. Whether his lack of schooling was in any way related to his illegitimacy is not known. Only legitimate sons could follow in the family notary business. Leonardo's childhood intellectual freedom had a number of fruitful consequences. First, and probably most important, is that throughout his life Leonardo depended on his own sensory experiences for definitive knowledge concerning his world. His determination to use his own five senses to explore the universe he inhabited and record his impressions in drawings may have been deeply rooted in a unique trust in these senses acquired during childhood. His incredible desire to truly understand all aspects of the world around him may be linked to his carefree periods of childhood exploration. Second, without a grounding in Greek and Ciceroonian Latin, he may not have acquired the requisite respect for authority that may be a natural consequence in children taught these disciplines. Leonardo would later comment: If indeed I have no power to quote from authors as they have, it is a far bigger and more worthy thing to read by the light of experience which is the instructor of their masters. They strut about puff'd up and pompous, dicted out and adorned not with their own labour but with those of others, and they will not even allow me my own. (CA117 rb). Leonardo was by nature linked more to the visual image and the world of oral communication in the spoken Tuscan Italian in order to acquire knowledge rather than Humanistic books written in Latin or Greek. Leonardo was, however, acutely aware that he was a "omo sansa lettera" (unlettered, a man not schooled in a formal manner) and endeavoured throughout his life to correct this failing.
Leonardo became the protégé of the Signoria of Florence in the latter part of 1469. The family rented the ground floor of a house on the Piazza S. Firenze near the Palazzo Vecchio. Leonardo entered the bottega or workshop of the craftsman and painter Andrea del Verrocchio (c. 1435-1488) about this time. In this creative environment he clearly flourished. Leonardo interacted with fellow students such as Pietro Perugino (c. 1446-1523), Lorenzo di Credi (1459-1537), Domenico Ghirlandaio (1449-94) and many others in the communal working environment that was common in the larger studios of an artistically vibrant Florence. Applying his twin aptitudes for art and science, Leonardo mastered the skills of the craftsman, the perspective essential for painting, the modelling of sculpture and the multiple methods of innovation needed to satisfy and maintain customers in a highly competitive market.

As Verrocchio’s student, Leonardo painted an angel and some of the background for the master’s “Naples of Christ” (c. 1475). Leonardo’s angel touched by a graceful, dancing light seems to enliven the painting with a beauty that his master clearly recognized. Vasari comments that Verrocchio: “would sometimes after dark, cloathed, that a child should know more than he.”

Vasari also states that, in Verrocchio’s workshop, Leonardo was possessed of a divine and marvellous intellect, and being an excellent geometrician, he not only worked in sculpture, doing out of clay some heads of smiling women, of which casts, or statues are still taken and children’s heads also executed like a master.

These techniques would be employed later by Leonardo in his anatomical investigations of the brain and the cerebral ventricles. There were, however, other components to Leonardo’s character. Vasari relates a story of how a peasant had asked Ser Piero for a painted shield and Leonardo was asked to paint something upon it. Leonardo began to think about what he should paint on it, and resolved to do the Head of Medusa to terrify all beholders.

To a room in which he alone had access, Leonardo took lizards, bats, magpies, sparrows, owls, locusts, bats and other animals of the kind, out of which he composed a horrible and terrible monster, of poisonous breath, issuing from a dark and broken rock, belching poison from its open throat, with its eyes and smoke from its nostrils, of truly terrible and horrible aspect. He was so engrossed with the work that he did not notice the terrible stench of the dead animals, being absorbed in his love for art. His father and the peasant no longer asked for the work, and when it was finished Leonardo told his father to send for it when he pleased, as he had done his face. According to Vasari: “I had the money and also I can do in painting whatever may be done, as in the other sciences and arts.”

In 1472, Leonardo de’ Ser Piero da Vinci Adeptus at the age of twenty was inscribed on the roll of the Guild of St. Luke as a painter. This company was included in the Guild of Physicians and Apothecaries which was based at the Hospital of Santa Maria Nuova. Not only did Leonardo use the bank at the hospital to keep his savings, but later performed his most productive anatomical dissections on patients who died on the premises.

The major competition to Verrocchio’s workshop was the two brothers, Antonio (1429/1431-1498) and Pollaiuolo (1443-1496). In their workshop, detailed studies were carried out to resolve the anatomical basis of human muscular movement. These investigations resulted in a number of paintings and sculptured works executed by the brothers which had a profound influence upon Leonardo’s concepts of human movement. His interactions with this workshop may have introduced him to methods of anatomical dissection and display for drawing. They opened an essential doorway into the complexities of not only surface anatomy which is useful to the painter or sculptor, but the mysteries of the human body as a functional microcosm of the larger macrocosm, the universe. In 1476, Leonardo left Verrocchio’s workshop and set up his own independent business in a house near the Badia in Florence. From this house, he could hear the roar of the lions kept behind the Palazzo Vecchio and took the opportunity to dissect them on their demise. During the remaining years until his first departure from Florence in 1481, Leonardo based himself with a wide array of projects. Although carrying out scientific investigations, he focused his work on one invention. Leonardo mined the fertile ground of a number of newly published books. He copied and substantially modified many weapons depicted in Roberto Valturio’s (1405-1475) De Re Militari. He worked with mirrors, light and sources of power. Machines of all descriptions were created – the tank and the giant crossbow being only two.

Leonardo left for Milan between 1481 and 1483 after years of progressive difficulties in Florence. Although the reasons for his departure are not known, his novel and creative approach to problem solving and his difficulty with Latin and authority may have made it difficult to be accepted into the Tuscan academic community. In a draft of a letter to Milan’s ruler, Ludovico Sforza known as Ludovico il Moro (1452-1508), he outlines nine items concerning his military abilities. The tenth item reads: “In time of peace I believe I can give perfect satisfaction and to equal of my other in architecture and the composition of buildings public and private, and in guiding water from one place to another.”

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Leonardo da Vinci’s early years in Milan were occupied with self-improvement. He used his earliest notebook, the *Codex Trivulziano*, to improve his Italian vocabulary, his understanding of Latin and to further explore concepts of light, vision and perspective. By 1489, Leonardo’s concept of vision led him into a series of explorations of the anatomy of the brain and optic nerves with an emphasis on the location of the “*sensum communis*”, the centre associated with the conscious experience of one’s world, the Soul. During a visit to Pavia in the summer of 1490, Leonardo travelled with Francesco di Giorgio Martini (1439-1502). His travelling companion’s great work, *Treatise on Architecture* greatly influenced Leonardo. One unique hand-written manuscript copy of this treatise, the *Ashburnham Codex 361*, was owned and annotated by Leonardo da Vinci and it is the only book known to survive from his large library. A portion of Leonardo’s notebook, the *Madrid Codex II*, is an abridged version of Francesco’s work. Leonardo also became acquainted with the great library of Pavia during this visit, staying on six months relishing in the shelves stocked with rare books and manuscripts. This interactive experience with di Giorgio Martini and his time in the library galvanized Leonardo’s search for new knowledge especially as it related to the function of the eye and perspective.

Leonardo’s need for financial stability necessitated the application of his talents to a number of diverse projects. He designed festival machinery and apparel, commenced the statue to Francesco Sforza and painted a number of Ludovico Sforza’s mistresses. He commenced the painting of his first version of *Madonna of the Rocks* (1483-6). He laboured on the *Last Supper* (1495-97). This activity eventually bore fruit since he obtained a somewhat stable monetary stipend from Ludovico Sforza allowing him more time for intellectual pursuits. In Milan, Leonardo met a number of individuals who increased his learning opportunities. Luca Pacioli (1447-1517) in 1494 published *Summa de Arithmetica*, an Italian compilation of information about mathematics abstracted from many different writers. Leonardo was thus able to read in Italian many of the formulations of both contemporary and past mathematicians. Leonardo collaborated with Pacioli on a book project completing the drawings for the geometrical figures for his *Divina proportione* (1498). In this book, Pacioli comments that Leonardo has carried out

*inestimable work on local motion, percussion, weight and all kinds of force that is accidental weight and

having already with all diligence finished his praiseworthy book on painting and human movement.*

The monograph ‘ACADEMIA LEONARDI VIN’ is present on the first of six original engravings related to Leonardo and his drawings carried out in Milan. This has suggested that Leonardo was involved in an ‘Academia’ (a functioning school) while in Milan. Albrecht Dürer (1471-1528) produced a series of woodcut copies of these engravings which further propagated both the images and the idea of a school (Figure 6). These engravings may have functioned as tickets to attend scientific disputations held under Leonardo’s direction or possibly prizes for individuals who distinguished themselves in the debates. It is interesting that a series of complex designs involving knots, the *fantasia dei vinci*, would be the emblem for Leonardo’s ‘Academia.’

French armies invaded Milan in 1499 ousting Ludovico from power. The great clay model of the horse that Leonardo had laboured over was ravaged by French bowmen, reducing it to rubble. Leonardo left Milan in haste.

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**Figure 6. Albrecht Dürer, (1471-1528), The First Knot (1505-1507). The artist’s device in the center was added at a later date. Woodcut, 270 x 210 mm. Private Collection: Dr. Rolando Del Maestro**
Leonardo travelled through Mantua and Venice returning to Florence in 1500. This provided him with an opportunity to renew his friendship with Luca Pacioli and a commission to paint a Virgin and Child with St. Anna and St. John the Baptist (c. 1505). During 1502-1503, Leonardo accompanied Cesare Borgia (1475-1507) as a military engineer on his campaigns through central Italy and met Niccolo Machiavelli (1469-1527). The defeat of Cesare Borgia coincided with the death of Cesare's father, Pope Alexander VI (1431-1503), in 1503. Leonardo, relieved of his work with Borgia devised an unsuccessful plan to divert the Arno River away from Pisa. In 1504, he left Florence on a mission to Pisa where he wrote down the books in his library he was to store in the nearby Monastery of Santa Maria Novella. Leonardo's return to Florence was preoccupied with the painting of the Mona Lisa (c. 1505-1513), the most well-known painting ever created, shown here in the first published engraving of this Leonardo's creation, printed in 1651 (Figure 7).

The death of his father, Ser Piero da Vinci, on July 9, 1504, initiated a series of court battles over his father's estate that continued for years. During 1503, Leonardo and Michelangelo were engaged by the Florentine Republic to paint two separate battle scenes in the Council Chamber of the Palazzo Vecchio. In 1505, Leonardo left Florence after the technique he used to dry his painting of the Battle of Anghiari resulted in its ruination. The remains of this painting attracted many admirers and Peter Paul Rubens (1577-1640) who made a copy of the central battle scene which was engraved by Gérard Edelinck (1640-1707) gives only a glimmer of how the composition was to enthral generations of onlookers (Figure 8). These years in Florence were some of the least stressful in his life giving him time to explore the surrounding hills and further indulge in one of his passions: l'ovolo degli uccelli (the flight of birds). Continuing these studies, first started in Milan, he refined his observational skills on bird flight in hopes of improving his flying machine. The resulting small codex of 18 folios now named the Codice Sul Volo Degli Uccelli crystallized his thinking.13

Figure 7. René Lochon, (1636–1675), Portrait of Mona Lisa, 1651, Engraving, 90 x 162 mm, from Traité de la peinture, ed. R. Trichet Du Fresne, Paris, Langlois. Private Collection: Dr. Rolando Del Maestro

Figure 8. Gérard Edelinck, (1640-1707), The Battle of Anghiari, after Rubens (1577-1640), after Leonardo da Vinci (1452-1519) c. 1657-1660, Engraving, state i, 449 x 660 mm. Inscribed by hand, Leonardo da Vinci pinx, Le Combat de 4 Cavalier, Gérard Edelinck Sculp. Private Collection: Dr. Rolando Del Maestro
In 1506, Leonardo received an invitation ("order") from the French King Louis XII (1462-1515) to travel to Milan. Charles d'Amboise (1473-1511), the French Viceroy, treated Leonardo with great kindness. While in Milan, he engaged the pupil, Giovanni Francesco Melzi (1491/1493-c.1570), who would be his constant companion until his death. Leonardo needed to return to Florence again to deal with his brother's litigation. During this time he happened to be in the hospital of Santa Maria Nuova talking to an old man. Leonardo thus began some of his most impressive anatomical studies. Leonardo comments:

The old man, a few hours before his death, told me that he had lived a hundred years and that he felt nothing wrong with his body other than weakness. And thus while sitting upon a bed in the hospital of Santa Maria Nuova in Florence, without any movement or other sign of any mishap he passed out of this life. And I made an anatomy of him in order to see the cause of so sweet a death. Thus I found to be a fainting away through lack of blood to the artery which nourishes the heart, and other parts below it, which I found very dry, thin and withered. This anatomy I described very diligently, and with great ease owing to the absence of fat and humours which greatly hinder the recognition of the parts (K/P 69v).

Early studies on the position of the sens comune, the Soul, carried out in Milan in the late 1480’s (Figure 9) now evolved into an extensive exploration of the mysteries of the human body (Figure 10). At times in Florence and at other times in Milan, Leonardo filled some 120 ‘books’ with drawings. These anatomical drawings make up the large corpus of works held in the Queen’s Collection at Windsor Castle. Leonardo met the highly skilled anatomist, Marcantonio della Torre (1481-1511), in about 1510. If only Marcantonio had survived the plague of 1511, this collaboration may have been particularly fruitful related to a collaborative project on the anatomy of man. War again thundered through the north of Italy resulting in Leonardo’s departure for Rome on September 24, 1513.

Figure 9. Leonardo da Vinci, (1452-1519), Detail of The Skull and Nerves at the Base of the Skull, c.1489, black chalk underdrawing, pen and ink, 290 x 197 mm, Teodoro Sabachnikoff, Dell’Anatomia, 1901, Fogli B, 41r (K/P 42r). Private Collection: Dr. Rolando Del Maestro

Figure 10. Leonardo da Vinci, (1452-1519), Muscles of the Shoulder Region, c.1509-1510, pen and brown ink (two shades) with wash modelling over traces of black chalk, 292 x 198 mm, Teodoro Sabachnikoff, Dell’Anatomia, 1898, Fogli A, 4r (K/P 137r)
6

THE LAST SEVEN YEARS: ROME 1513-16 AND FRANCE: 1516-19

While in Rome, Leonardo performed a number of different chemical experiments for his patron, Duke Giuliano de’ Medici (1479-1516), the brother of the new Pope, Leo X (1475-1521). He renewed his anatomical studies and was involved in the production of lenses and mirrors. This period appeared to be a particularly unhappy time for Leonardo, further compounded by religious objections.

Leonardo writes:

The Pope has found out that I have coined the term ‘conceptus’ and that ‘Gemmarius the mirror maker’ has hindered me in anatomy, blaming me before the Pope and likewise the hospital (CA182 vc).

Leonardo was visited by many dignitaries and that ‘Giovanni the mirror maker’ has hindered me in anatomy, blaming me before the Pope and likewise the hospital (CA182 vc).

Leonardo, having met the French King Francis I (1494-1547) in Bologna in 1515, entered the King’s service. Leonardo led his band of servants and the forever loyal Melzi across the Alps. They found themselves overlooking the towers of Amboise along the Loire River in an unhappy time for Leonardo, having met the French King Francis I (1494-1547) in Bologna in 1515, entered the King’s service.

On the 10th of October, 1517, Monsignor and the rest of us went to see, in one of the outlying parts of the Amboise, Masse Leonardo Vinci the Florentine, a grey-beard of more than seventy years, the most eminent and learned painter of our time, who showed to his Eminence the Grey-beard of more than seventy years, the most eminent and learned painter of our time, who showed to his Eminence the

Vasari writes this comment on Leonardo on his death bed:

The King’s comments as reported by Benvenuto Cellini (1475-1521) were that:

he did not believe that there had ever been another man born into the world who had known so much as Leonardo, and this not only in matters concerning Sculpture, Painting and Architecture, but because in every science and every art Leonardo was always surrounded by students and friends and the fruits of his labour. Leonardo spoke often with King Francis and in this drawing Leonardo can be seen conversing with the King concerning one of the pictures he had brought with him to France, Mona Lisa (Figure 11).

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Leonardo passed from this world. Leonardo passed from this world.

Anonymous 19th Century Artist. Inscribed ‘La Gioconda / A Amboise Francois I’ (Mona Lisa) at Amboise Francis I, pencil, 243 x 303 mm. Private Collection: Dr. Rolando Del Maestro.

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demolished by government order and the gravestones and tombs were used to repair the château. A gardener, distressed by the exposed bones among the rubble, buried what he could find in a corner of the courtyard. In 1863, the poet, Arsène Houssaye (1815-1896), L’inspecteur général, along with a number of co-workers excavated the site and found a partial skeleton that he felt were the remains of Leonardo and an incomplete inscription EO DIS VINC (EO: Leonardo Vincius).

Franz Verhas (1827-1897), a Belgian painter, writer and historian was working at the archaeological site in the summer of 1865. Houssaye comments:

Aujourd’hui, 27 juin 1865, les ouvriers ont mis a jour une tombe en pierre, dont M. Verhas a pris le dessin.

Today, the 27th of June, 1865, the workers uncovered a stone tomb, of which Mr. Verhas carried out a drawing.

This suggests that Verhas was the artist whose drawings were published related to these findings. He also wrote a letter (Figure 13), at the bequest of the Mayor of Amboise and on notepaper of the Ministère d’État, Beaux-Arts to the Milan Academy which reads:

Sir,
The Mayor of Amboise readily informs you that the search done at the castle by Arsène Houssaye, General Inspector of Fine Arts, by order of the Emperor, led to the finding of the tomb of Leonardo da Vinci, and that a grandiose monument will be erected at the Chateau d’Amboise, in memory of this illustrious painter. I have been assured that the Milan Academy will be invited to the inauguration of this monument, which will be held under the presidency of the Superintendent of Fine Arts in the presence of the contemporary summit. Sir, with expression of my most distinguished feelings.

Franz Verhas
Painter of History
Present at excavations

P.S. We will publish in the Monitor the historical report of Mr. Arsène Houssaye.

There was to be no “monument grandiose.” The remains were subsequently reinterred in the chapel of Saint-Hubert in 1874. The author would like to believe that Leonardo’s remains, haphazardly strewn among the church courtyard, disintegrated peacefully into the dusts of time -- thus enriching us all.
References


7) Ibid., 1967, p. 11.


10) Ibid., p. 33.


18) Ibid. p. 307 outlines some of the work being done.

19) Letter from Franz Verhas (1827-97) to Ministère d’État related to the finding of the tomb of Leonardo da Vinci. No date but probably summer of 1865.
Chapter Two


Figure 14. Jack F.W. Brydone, William Osler Conducting a Clinic at the Royal Victoria Hospital, Montreal, Canada. Among the spectators are Dr. C.G. Sutherland, John Child Colby, Ralph Edward Powell, Dr. Walter Herbert Drury, and Dr. Maude Abbott, 1905, black and white photograph, 165 x 117 mm. Image Number: CUS_046-014_P. Photo courtesy of Osler Library of the History of Medicine, McGill University
Creativity: A Restlessness

Osler was born in 1849 into a loving family in Bond Head, Ontario, Canada. This quiet launch did not immediately envision a life’s framework in which Canada was to play in the initial and final chapter of his life. Osler’s mother, a very religious and pious women, hoped that Osler would follow his father into the ministry. At age 18, Osler announced he would indeed follow this path. Osler’s education involved time at Trinity College School in Weston and then he entered Trinity College in Toronto in 1867. James Bovell (1817-1880) and Reverend William Johnson (1816-1880), critical to this time in Osler’s life, would encourage a life in medicine. This new career began at the University of Toronto in 1868 but Osler soon transferred to McGill University in Montreal receiving his medical degree (MDCM) in 1872.Leonardo’s beginnings would be decidedly different. Leonardo’s birthplace is still being contested between Vinci and a small hamlet, Anchiano. Having visited both sites a number of times it seems more reasonable to believe that Leonardo’s father, Ser Piero, from a well-known family of notaries, and his relatives should want to take steps to hide Leonardo’s pregnant mother, a 15 year old orphan, from the eyes and gossip of the town of Vinci. Leonardo’s mother, Caterina, must have been an important part of his initial years but by four he was in the house of his grandparents Leonardo, like Osler, was to be brought up in a loving family. However, Leonardo unlike Osler, was to have a very limited education. Leonardo clearly showed aptitude for drawing and this resulted in his father arranging for him to be apprenticed to Andrea del Verrocchio. He would spend his early education in Florence at the side of this master. There he would participate in all the essential artist activities that would characterize his life (Figure 6). Osler entered the McGill medical establishment, (1874-1884) as a faculty member where he would take a particular interest in teaching which characterized his life (Figure 14) and he matured into the gentleman that he would always remain (Figure 15). He would then move to the University of Pennsylvania (1884-1889) where he would further hone his medical skills. Osler was then off to Johns Hopkins (1889-1905) and on to Oxford as the Regius Professor of Medicine (1905-1919). His books and ashes would make the journey back to Montreal and be housed in the Osler Library of the History of Medicine at McGill University. Leonardo would spend his artistic life engaged in the whirlwind of the Renaissance departing Florence between 1481 and 1483 for Milan and only leaving when his employer Ludovico il Moro's forces were vanquished by the French in 1499. Time would be spent in Florence again (1500-1506/08), then Milan (1506/08-1513), Rome (1513-16) and finally dying in Amboise, France in 1519. Unlike Osler, Leonardo’s ashes would not make any cross Atlantic journey and may still be blowing in the wind.

Osler’s travels were directed by opportunities for change and further advancement, while Leonardo’s by the need for employment, war and the wishes of kings, popes and despots. However, this incessant movement allowed each to experience the world with new eyes, open fresh horizons and develop unique opportunities and relationships. This restlessness appeared to be essential to their lives and not only formed their idea of the world but contributed significantly to the world around them.
Osler would outline the importance of the human body as the essential learning instrument. The critical role of the body in teaching (Figure 14) and the indispensable learning opportunities provided by the autopsy room would outline his medical life. (Figure 16).

Leonardo would delve deeply into the secrets illuminating the subtle surface of human skin, the shine of the human eye and the grace of human movement. While in Milan he would start a lifelong obsession with the exploration of the human body and his search for the senso comune, the Soul. In these drawings, Leonardo shows the skull base and nerves from the orbits coursing towards the cavernous sinuses (Figure 17). Clearly a great deal of care was used to outline the multiple nerves. Describing the technique to prepare the anatomical specimens on this sheet Leonardo writes:

Ease away the brain substance from the borders of the dura mater which is interposed between the basilar bone and the brain substance. Then note all the places where the dura mater penetrates the basilar bone with nerves enmeshed in it together with the pia mater. And you will acquire such knowledge with certainty when you diligently raise the pia mater little by little (K/P 55r).

In Milan he would direct an ‘Academia’ in which co-workers, students and assistants would produce works of art significantly influencing Italian art.

Figure 16. Samuel McClintock Hamil, (1864-1948), William Osler at the Blockley Mortuary, Philadelphia General Hospital, 1886 or 1889, black and white photograph, 94 x 117 mm. Image Number: CLS_044-001AC3_P. Photo courtesy of Osler Library of the History of Medicine, McGill University

Figure 17. Leonardo da Vinci, (1452-1519). Detail of Views of Olfactory and Optic Nerves, c.1508, pen and ink, 290 x 197 mm, Teodoro Sabachnikoff, Dell’Anatomia, 1901, Fogli B. 35r (K/P 55r). Private Collection: Dr. Rolando Del Maestro
O
er and Leonardo had a love for
books, accumulating some identical
books in their extensive libraries. The
essential role of careful anatomical observa-
tion in their search for knowledge, in its many
forms, characterized their lives. They recorded
their findings in the written word, covering
many thousands of pages. Osler would publish
extensively and his textbook _The Principls
and Practice of Medicine_ initially printed in 1892
would be republished and updated for over 40
years and translated into multiple languages.6
Osler's collecting, understanding of books
and publishing is a window into his method
of seeing the world as a collection of knowl-
dge that was constantly changing. Osler
kept a very extensive correspondence with
multiple experts in all fields of interest (Figure
18). Throughout his life Osler continued to
use his extensive library as a source of both
knowledge and inspiration for his academic
output (Figure 19).3 In 1911-1912 at the age of
62, Osler began to consider the possibility of
creating a History of Medicine Library which
would also contain critical books associated
with the history of science. The vision was for
a separate collection that would be located in
a Faculty of Medicine and would be a distinct
library with a relationship to both the Medical
Library and the University Library.3 A deed
was drafted and the beneficiary was to be the
Faculty of Medicine at McGill University. The
donation would eventually number almost
8,000 books and many other items (Chapter 3.
Section 1).

Leonardo outlined his library holdings in two
extensive lists present in his manuscripts. In
1494 he listed forty items (CA 210 r) and 31
reappear in his 1504 Codex. This Leonardo
Medici Codice II, on folio 2 verso and 3 recto,
outlines in mirror script, one hundred and
sixteen items.7 This list does not contain the
many books to which Leonardo had access.
The scientific knowledge that Leonardo
acquired was rooted in the careful assessment
of the anatomical, medical, surgical and dietary
volumes present in his library.7
One unique hand-written manuscript copy of
Francesco di Giorgio Martini’s (1439-1501)
_Treatise on Architecture_ owned and annotated
by Leonardo is the only book known to have
survived from his large library. It is known as
_Ashburnham Codex 361_ and is in the Biblioteca
Mediccia Laurentiana in Florence.7 Obviously
time was not kind to the volumes in Leonardo’s
library.

Leonardo was constantly writing and drawing.
A bronze statue, by Albert-Ernest Carrier-Bel-
leuse (1824-1887) a sculptor whose name is
associated with Auguste Rodin (1840-1917)
who worked as his assistant from1864-1870,
entitled LÉONARD DE VINCI, captures many
Leonardo characteristics commented upon
by his contemporaries and authors. These
include his contemplative personality, looks,
style of dress and love of books (Figure 20).
It is estimated that Leonardo covered over
11,000 pages of paper with his drawings and
notebooks and about 6500 pages of these have
survived.9 Substantial amounts of Leonardo’s
oeuvre have been lost. Leonardo used multi-
ple notebooks (libretti) to collect information,
outline his thoughts and draw conclusions.
One of these _libretti_, Leonardo’s _Codice Sal Velo
del Uccello_ (Bib. Osl. 514, Codex of the Flight
of Birds) will be one focus of this exhibition.
In these small volumes he outlined the books
he had purchased, books he was reading, had
borrowed and were being translated by friends.
Leonardo organized many of his notes into
sections and commented that he was preparing
books for publication. Leonardo, in 1489 at
the age of 37, listed some of the subjects to be
published in his _Anatomia_. He writes:
Represent how catarrh is caused. Tears, Sneezing.
Leonardo was so heretical a cast of mind that he conformed with no religion whatsoever accounting it, perchance, much better to be a philosopher than a Christian. The term in the Inquisition such a comment would have had a disquieting effect on any publisher interested in putting works by Leonardo into print. Vasari, after meeting with Melzi, would take out this comment for the second edition of Le Vite published in 1568. It seems reasonable to speculate that Vasari, possibly having learned from Melzi that Leonardo did have a certain spirituality and that this statement in the first edition may have prevented Leonardo’s works from being printed, removed it from the forthcoming edition. Leonardo’s only book to be published under his name, his Trattato di Piantura, was to be printed in Paris in both French and Italian in 1651. For translation of Leonardo’s Treatise see pp. 874-887. Also see Rolando F. Del Maestro, The Literary Works of Leonardo da Vinci, Vol. II, Los Angeles University of California Press, 1977. 90. For an extensive list of all the issues to be assessed in Leonardo’s anatomical work see pp. 89-97.


3. Peter F. McNally, Glenn Brown, Nicolas Savard, Osler and Francis. Creating the Bibliotéca Odontiana, in Sir William Osler, The Man and his Books, eds. W. Feindel, E. Maloney and P. Miller, Montreal, Osler Library of Medicine, 2013, pp. 22-51. This article outlines the thinking behind the Osler library donation, the catalogues and a careful analysis of the various books it contains.


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Chapter Three

Each library accumulated by an individual is a living organism with three specific characteristics.

First, it is a personal reflection on its owner always evolving and renewing itself. Indeed it becomes part of the collector's persona. It develops and grows based on the interest of that personal librarian within each individual that decides to begin the long and sometimes unstoppable movement to collect, store, appropriately shelve and preserve the treasures collected.

Second, collecting has limitations. These limitations are based on what is available at auction, from booksellers and sales during the course of the collecting. In The Collecting of a Library, Osler identified his three main sources for obtaining books which included bidding at auctions, the many antiquarian bookshops he frequented and obtaining them from dealer catalogues.1, 2 A fourth and important source was books and articles given to him, often with dedications from the authors (Chapter 3. Section 15, 16 and 17). The internet has now made it easy to assess what items are available, in what country, at what price and who is selling the volume. However, it was not always so. Good contacts with booksellers and auction houses were certainly important in the collecting carried out by Sir William Osler.

How much one is willing to pay at any given time for any given volume is a struggle for anyone interested in important books. Judgements are continually in flux. How important is it to the collection? Will one ever see this volume again? Experience teaches that at times individual items, once easy to acquire, disappear into private libraries and institutions never to be available again on the market. Experience also teaches patience. An overpriced item may reappear on the market at a more manageable price.

Thirdly, all collectors are selective. Just because an ancient or current author is suddenly popular and having an impact on a particular field does not mean that such an author would appear in a collection. This is quite apparent in the Osler Collection by the lack of volumes associated with Sigmund Freud (1856-1936), a contemporary of Osler's, but represented only by one volume, a 1913 English translation of Freud's The Interpretation of Dreams (Bibl. Osl. 2680).

Osler's collection evolved over his lifetime and eventually involved the donation of almost 8,000 books and items to the Faculty of Medicine at McGill.3 The Leonardo da Vinci volumes in the Osler Collection make up only about 1/500th of books cataloged, a very small window into Osler's collecting habits, but an interesting window none the less, which the present work attempts to explore. John Farquhar Fulton (1899-1960), a doctor and bibliophile, took a series of four pictures of Osler's Library at 13 Nothams Gardens, Oxford, before it was removed to McGill University. From

Serious collectors want to obtain every volume in perfect condition, signed by the author, and also an important association copy which will fit easily into a space on the shelf waiting for just that volume. This is a dream but collectors always dream. Compromises are continuous in the lives of any collector, at times taking on an almost evolutionary type of behavior as better volumes displace inferior ones. Soon after a volume or series of volumes have been obtained the mind flows freely to other issues. Are there specific letters, manuscripts, drawings or illustrations which can fill out the tapestry of knowledge contained in that volume? Soon these items find their way, some attached and others interwoven within the pages of books. Osler was such a collector as will be outlined in this volume. At times forgotten, these insets are a revelation to anyone opening one of Osler's books. Not only do these lost hidden treasures nestled within its pages provide new insights into Osler's personality but also a further understanding of the cataloguer's appreciation of the role of this book in the Osler Collection.4

Living Libraries: Personal, Unique, and Always Evolving

E
the views available it is difficult to appreciate in which book cases Osler's Leonardo Collection was housed. However, since many of the volumes were large folios, one may assume that there were probably nested together in one of the bottom shelves to better distribute their weight. One possible location was the second shelf on the right in a hallway of Norham Gardens possibly showing the Bibl. Osl. 516 volumes of Feuillets inédits and the Bibl. Osl. 517 Quaderni d’Anatomia volumes described in Sections 12 and 13.

In the late 19th and early 20th century a remarkable renaissance in Leonardo studies burgeoned as his writings were transcribed and translated into Italian, French, German and English. Osler, always an important participant in the winds of medical history was a keen observer in this revival. The major component of Osler's Leonardo Collection is outlined in the Bibliotheca Osleriana, on page 52 and 53, under the heading of Sixteenth Century, Leonardo items 513 to 525. Listed in the index under names such as, Galen, Vesalius and William Hunter are a series of titles including journal articles and other books. Osler's collection focused on Leonardo's works on flight, anatomy, Leonardo's life and art. These items published between 1830 and 1920 included Russian, Italian, German, French, Norwegian, Swedish, English, Swiss, American and Canadian authors, contributors and publishers. Indeed, even an author involved in body-snatching is included, a true cornucopia of intellectual energy. The first exhibits are focused on Sir William Osler's wills and W.W. Francis' Showman's Patter to provide an important introduction to the exhibition.


3. Between 1985 and 1992, to safeguard the many interwoven insets, letters and other items not attached to the individual Osler volumes, these items were transferred to itemized acid free folders and were used extensively by the author to reconstruct the original state of each Osler item described.

The documents shown here include a handwritten copy of the Will of William Osler along with a typed copy signed by Osler and the two witnesses, A.G. Gibson and Archibald Malloch. Both are dated the 9th day of December 1919. The signed will was prepared twenty days before Osler’s death on December 29th and outlined a number of important issues. These wills state:

1. I hereby revoke all previous Wills.

This was important since Osler had conceived the concept of creating a library of important medical and scientific books by 1910-1911 and had drafted a DEED OF GIFT OF LIBRARY TO MEDICAL FACULTY MCGILL UNIVERSITY, which is shown here. This earlier will, dated 1 October, 1911 was signed by Osler and witnessed. The 1911 version provides more insights into the reasons for Osler’s donation to the Faculty of Medicine at McGill stating:

In recognition of the many kindnesses shown to me as a student and professor at my old school I have for many years collected for its library.

2. I leave to the Medical Faculty, McGill College, Montreal my Medical and Scientific Library as catalogued.

This made it very clear that the volumes in William Osler’s library related to his medical and scientific collection of about 8,000 volumes were to go to the Medical Faculty, McGill College.

The earlier will, signed 1911 included much more explicit information concerning the categories of books to be included in the Bibliotheca Osleriana and outlined two Osler conditions for donating the volumes which were:

1. That the books be kept together.
2. That members of the profession should have free access to them for the purposes of study.

3. The remainder of my Estate, real and personal, I leave to my wife, GRACE REVERE OSLER. At her death, or at any time as she may wish, I desire No. 13 Norham Gardens to be given to The Dean, The Canons and Governing Body of Christ Church, as the residence of the Regius Professor of Medicine.

4. And I hereby appoint said GRACE REVERE OSLER as my sole Executrix.

Grace Osler, as the sole Executrix of her husband’s will, would play an important role in the donation and the cataloguing of the library along with publication of the Bibliotheca Osleriana by continuing to encourage and support the cataloguers in their roles. These cataloguers signed their names in the Bibliotheca Osleriana as W.W. Francis, Librarian, Osler Library, R.H. Hill, Bodleian Library, and Archibald Malloch, Librarian, New York Academy of Medicine and were primarily responsible for the structure and completion of the library.

Related to the other volumes and materials in the Osler Library, which were not books on medical and scientific subjects, a Memorandum exists, dated July 30th 1919, which was the basis of the distribution of these other items from the collection and also to be able to give a certain sum, the interest of which will keep the books in repair.

These wills and Memorandum clearly document some of Osler’s thinking concerning the distribution of his volumes and the reason for these choices.
WILL OF WILLIAM OLLER.

1. I hereby revoke all previous Wills.
2. I leave to the Medical Faculty, McGill College, Montreal, my Medical and Scientific Library as catalogued.
3. The remainder of my Estate, real and personal, I leave to my wife, GRACE REVERE OLLER. At her death, or at any such time as she may wish, I desire No. 13, Notman Gardens to be given to The Dean, The Canons and Governing Body of Christ Church, as the residence of the Regius
   Professor of Medicine.
4. And I hereby appoint said GRACE REVERE OLLER my sole
   Executrix. (Signed) William Oller

In the presence of (Witnesses) 1. Dr. Ferguson, of Medicine, Oxford.
   Occupation: ....
   2. Dr. Welsh, of Medicine, ....
   Occupation: ....

Dated this 9th day of December, 1918.

This is the Instrument as written on file of the Supreme Court of Justice.

GRACE REVERE OLLER

EXECUTRIX.

DEPARTMENT OF MEDICINE, QUEEN'S UNIVERSITY.

IN RE: "WILL OF WILLIAM OLLER, M.D."

IN RE: "WILL OF WILLIAM OLLER, M.D."

In recognition of the many kindnesses shown to me as a student and professor at my old school I have for many years collected for its library. By this deed of gift I hereby hand over to McGill University for its medical faculty the following:

I. The Manuscripts.
II. The Incomplete.
III. The Medical works included in the Bibliotheca, Prime, Secunda, Bibliotheca, Historia, Bibliotheca, Histoica, the whole to be known as the Bibliotheca Cœlestis.

I hope before sending out the books to have a well-prepared catalogue and also to be able to give a certain sum, the interest of which will keep the books in repair.

The only conditions I make are—

I. That the books be kept together.
II. That members of the profession should have free
   access to them for purposes of study.

(Signed) William Oller

(Signed, sealed, and
   delivered in the presence
   of the above mentioned
   William Oller)

HARRODS.

1. All the books and MSS to go to the McGill Library.
   2. The books and MSS to be divided by Mr. Mill and Mr. Fraser and given away by them.
   3. By sale books and MSS to remain in the library.
   4. By sale books and MSS to remain in the library.
   5. By sale books and MSS to remain in the library.
   6. The books and MSS to remain in the library.
   7. By sale books and MSS to remain in the library.

Dated June 30, 1918.

(Signed) William Oller
WILLIAM WILLOUGHBY FRANCIS (1878-1959)

This volume, dictated by Dr. Francis from 1950 to 1957 and typed by Miss Cécile Desbarats, was intended to outline Francis’ intimate knowledge of the books in the Osler Collection and the ‘patter’ that he would provide to the many visitors touring the Osler Library. The Introduction to this book as shown outlines Francis’ multiple roles related to the Osler Collection and as the first Osler Librarian. Francis, in the typed pages of this book, foreshadows much of the information which the reader will find expanded in the following pages. On pages 74 and 75 Francis outlined his ‘patter’ related to the Leonardo da Vinci books in the Osler Collection. In this Leonardo’s ‘patter’ he provides (on page 74) a synopsis of the discovery of the anatomical drawings by Dr. William Hunter (Chapter 3. Section 8), their removal to Spain and information about the role of Leonardo’s student (Chapter 1. Section 3 and 4). Francis was well aware of the issue concerning the role of Leonardo and Vesalius in the debate on anatomical priority (Chapter 3. Section 17) commenting on Leonardo’s drawings that:

“If they had been known Leonardo would have been the father of modern anatomy and not Vesalius.”

The role and unfortunate death of Marcantonio della Torre also play an important role in the Francis narrative as well as Leonardo being self-taught, his left handiness and the reasons for his mirror writing (see Chapter on Life of Leonardo da Vinci).

Francis’ note in the Showman’s Patter is also enlightening related to his thinking at the time of the Cold War concerning Leonardo and his volume on the Flight of Birds:

514 is a reproduction of the remarkable notebook of Leonardo da Vinci on the Flight of Birds. It is very fortunate that he had no internal combustion engine or the atomic bomb would have been dropped on us probably a century or more ago. He made flying machines, submarines and tanks - a universal genius.

The author has tried to locate the tapes dictated by Francis for his Showman’s Patter. An unsuccessful search thus far. Clearly listening to Francis guiding each of us through Osler’s Leonardo da Vinci Collection with his direct knowledge of Osler’s building of the collection and Osler’s interest in it would significantly enhance our appreciation for these volumes.

The fifteen tall volumes, nos. 515 to 517, on SC.3, are three incomplete editions of the reproductions of the anatomical drawings of Leonardo da Vinci, reproduced in facsimile a little before and after 1900, but though incomplete, they include, I think, all his anatomical drawings that have survived. The originals, now in the Royal Library at Windsor Castle, were not discovered until late in the 17th century by William Hunter at Kensington Palace. They are supposed to have gone to Spain after Leonardo's death with his pupil to whom he left them. They were probably picked up there by Charles I's collectors, and by the time they reached England the unhappy King was interested in more dangerous things than art.

Some of these drawings are really the first accurate representations of dissections of the human body. If they had been known Leonardo would have been the father of modern anatomy and not Vesalius. The originals are on separate sheets and have been grouped together for the purpose of these editions, according to the organs or parts of the body which they represent. They are covered with Leonardo's notes in his extraordinary mirror writing. He was left-handed and self-taught. Probably any left-handed child who teaches himself to write will reverse our ordinary writing. Not only that, but his language and spelling are absolutely his own. Even when transcribed in print his words have to be translated for modern Italian readers because he writes in his own dialect and with his own very peculiar spelling, doubling consonants and joining the article to the noun, etc.

The second volume on the shelf, 515, ill, has some excellent drawings of the heart. Many drawings are more or less diagrammatic showing that he was more interested in the mechanics of the muscular movements than in the actual arrangement of the parts. He worked at these dissections with Della Torre, who had intended to bring out a treatise on anatomy, but on the death of this anatomist Leonardo got interested in other things. A good account of Leonardo as an anatomist was published by the late Professor McKerrich of Toronto, no. 5418, on shelf sc. u.s.

SC.4, no. 514 is a reproduction of the remarkable notebook of Leonardo da Vinci on the Flight of Birds. It was very fortunate that he had no internal combustion engine or the atom bomb would have been dropped on us probably a century or more ago. He made flying machines, submarines and tanks — a universal genius.

No. 515, the first anatomical drawing of Leonardo's to be reproduced, was done by lithograph in Germany in 1880. Its erotic nature is masked under a moral Latin title. It illustrates the fallacy of facsimiles before the days of photography. What is obviously the man's right leg is given a left foot and the girl's left leg a right foot. As far as I have read, I was the first to notice this absurdity. The mistake is not Leonardo's. In the original he merely indicated the soles of the feet; it was the lithographer who added the toes. Compare the faithful, photographic facsimile in no. 515, vol. 1, folio 7 verso. A transcription and translation of L. 8, i.e. in no. 517, vol. 2, p. 8 (folio 5 verso).
Leonardo da Vinci and Flight

Leonardo da Vinci was inspired with the idea of human flight. One might say consumed with the prospect. Gerolamo Cardano (1501-1576), an Italian physician, mathematician and astrologer, would record Leonardo's frustration with his initial attempts at flight in his book entitled \textit{De sublite} published in 1550 writing:

\textit{Vincius titulant e fostra, hic Pictor fruit egregious. da Vinci tried unsuccessfully and was frustrat-}

ed he was a most distinguished painter. \footnote{1}

This comment may relate to Leonardo's notes on the construction and the precise location of testing a flying machine, ‘The Great Kite’ while he was in Milan in 1492-93 outlined in the Codex Atlanticus, folio 361v-b. The site located was the roof of the Corte Vecchia, a building next to the Duomo di Milano (Milan Cathedral), where Leonardo had his studio. Leonardo writes:

\textit{And if you should stand upon the roof at the side of the tower, the next at work upon the tribuno [central spire of the cathedral] will not see you.} \footnote{1}

Leonardo's plan is clearly outlined:

\textit{Close up with boards the large room above, and make the world leap and fly, and this may be placed on the roof above, which would be more suitable in all respects than any other place in Italy.} \footnote{1}

It is clear from these comments that Leonardo felt it was important to have a component of secrecy associated with this experiment and launching from a high initial location was essential for success. It can be conjectured that this initial flying machine may have been some sort of apparatus consistent with his previous notes and drawings of flying machines. In none of Leonardo's remaining notes is there any documentation as to whether this test was successful but Cardano's comment would suggest that indeed this test was carried out and was not what Leonardo had hoped. It would be consistent with Leonardo's method of carrying out novel projects that he would have recorded this and other such events even though unsuccessful. It is possible that these pages may not have survived the ravages of time.

Possibly as a result of this and other unsuccessful attempts at flight, along with having more leisure time, having bought two small lots of farming property, with fruit trees, olive groves outside the walls of Fiesole during his second time in Florence from 1503 to 1506, Leonardo evolved a new strategy. \footnote{2} He began a careful study of the flight of birds. The plan for his book on flight was drawn up:

I would divide the treatise on birds into four books, of which the first would be on wing flapping flight, the second would be on flight without flapping, held aloft by the wind, the third would be on common flight, such as shared by birds, hats, fish, animals, insects, the last would be on mechanical movement. \footnote{3}

The fruit of this labor would be a small libretto of 18 folios which would be known as the \textit{Codex Sul Volo Degli Uccelli} (Codex of the Flight of Birds). This \textit{Codex} contains three dates in Leonardo's hand, in March and April of 1505 confirming that this volume was written during this time period. Leonardo's small cartoon-like figure of his flying machine can be seen in the upper corner of Folio 5 recto of this \textit{Codex}. On the inside of the back cover Leonardo states:

\textit{The first great bird will make the first flight, being launched from the peak of Mount Cecero (today called Mount Cecerin) and will fill the universe with amazement and all the reports of its great fame will confer eternal glory upon the places where it was conceived.} \footnote{3}

There is no documentation on the results of this flight experiment in Leonardo's existent notes. One hopes that it did not result in injury. The history of these 18 folios involves much of the vicissitudes of all of Leonardo's manuscripts with a few fascinating and unique differences which will be outlined in this volume. Since the cataloguers of the Biblioteca Osleriana used the year of publication as an important criterion, the author has taken some liberties in rearranging this timeline to fit a narrative more attuned with modern considerations of the impact of each volume. The development and fate of Leonardo's \textit{Codex Sul Volo Degli Uccelli} culminating in the first publication of this fascinating volume will be explored in the following pages.

\footnote{1} Augusto Mariantoni, \textit{Leonardo da Vinci, The Codex on the flight of Birds,} London, Johnson Reprint Corporation, 1982, pp. 7-9 for a list of translations of Leonardo notes on his efforts on flight.


At the death, in France, of Leonardo on May 2, 1519, his favorite student and heir Giovanni Francesco Melzi was bequeathed the majority of Leonardo’s drawings, manuscripts, books and paintings in a will drawn up by Giovanni Guglielmo Boureau dated April 23rd, 1519. It reads:

The aforementioned Testator gives and bequeaths to nobleman Messer Francesco da Melzo of Milan in remuneration for services and favors done for him in the past, each and all books the Testator has presently, and other instruments and portraits (Instrumenti et Portracti) pertaining to his art as a painter.

Melzi had joined Leonardo as his pupil ca.1506/1508 and was his constant companion after this time. He imbibed Leonardo’s teaching and his style of drawing and painting. Melzi carefully reproduced many of Leonardo’s drawings, such of those of visi mostruosi (grotesque faces) with an ability that makes them difficult to differentiate from Leonardo’s original drawings which unfortunately has been cut in half. Indeed many of Leonardo’s drawings are only known through the lens of Melzi’s pen, pencil and chalk and were frequently copied (Figure 3.1). The Melzi family had two properties in Italy, a house in Milan and a Castello in Vaprio d’Adda overlooking the Adda River, a few kilometers to the east of Milan. Melzi returned to Italy sometime before 1523 bringing the majority, if not all of Leonardo inherited treasures to his villa in Vaprio d’Adda. There they were seen by multiple individuals but Melzi both protected them and prevented their dispersion. He even foiled Alfonso 1 of Ferrara’s (1476-1534) attempt through Alberto Bendidio to obtain Leonardo’s works and manuscripts. Melzi would spend his remaining life in his home carefully guarding his Leonardo treasures and embarked on deciphering and transcribing Leonardo’s right to left writings. He put together his distillation of Leonardo’s notes on painting as a Leonardo Tractate on Painting in a copy, ready for the printer, now held in the Vatican and known as Codex Urbinas Latinus 1270. The reason that Leonardo’s Tractate was not published at this time may be related to Vasari’s comment that Leonardo perchance, much better to be a philosopher than a Christian (Chapter 2. Page 38). A sadness to the world of art.

He would also begin to assemble Leonardo’s figures and notes on movement and these would be eventually printed as the Cooper Engravings and some of Leonardo’s ideas would be incorporated into The Codex Huygens.

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GIOVANNI AMBROGIO MAZENTA (1565-1635)

Le Memorie di LEONARDO DA VINCI di Don Dr. Rolando Del Maestro

At Giovanni Francesco Melzi’s death in c. 1570, his third son Orazio Melzi, a Doctor of Law and heir, inherited the Leonardo drawings and manuscripts in his collection. The Milanese painter, Giovanni Paolo Lomazzo (1538-1600) visited Francesco Melzi just before his death in 1570 and writing twenty years later in 1590 comments in his Idea del Tempio della Pittura that ‘buon parte’ of the Leonardo items were already dispersed.

But of all these works none was printed, existing only in his manuscripts which to a great part have come into the hands of Pompeo Leoni, a sculptor of the Catholic King of Spain, who had them from a relative of Francesco Melzi, and some also came into the hands of Signor Guido Mazenta, distinguished scholar who treasured them lovingly.

Giovanni Ambrogio Mazenta writing in 1631-1635 would outline the events surrounding the dispersal of Leonardo’s notebooks in his memoirs entitled Le Memorie reproduced and transcribed in 1919. Lelio Gavardi a fellow law student, relayed how he had tried Orazio’s employment and now Mazenta’s notebook Manuscript B. Gavardi, after leaving his attic he would like. This episode resulted in an avalanche of art collectors and others, called jescatori (fishermen) by Mazenta, bearing down on Vaprio d’Adda to obtain Leonardo items. On page 17 of this volume Mazenta used this very appropriate name for these raiders, jescatori who: caught drawings, models, plastic works, Anatomies with other precious relics of Leonardo’s study.

The most successful and cunning of the jescatori, was Pompeo Leoni (c. 1553-1608), a sculptor, pupil of Michelangelo (1475-1564) and son of Leone Leoni (1509-1550), who was the favorite sculptor of King Philip II of Spain (1527-1598). Pompeo Leoni convinced Orazio that he would garner great honors for his drawings (Figure 4.1). Through inheritance this volume passed to Cardinal Federico Borromeo (1564-1631) was donated by Borromeo to the Biblioteca Ambrosiana which he had founded in 1569. The last three remaining in the Mazenta family were eventually obtained by Leoni who took them to Spain where they were disseminated. These pages, along with the majority of Leonardo’s manuscripts and drawings in Leonis possession, were mounted without any chronological sequence into two large volumes. The Codex Atlanticus, containing predominately mechanical studies, still a treasure of the Biblioteca Ambrosiana and the Windsor volume which held the majority of Leonardo’s anatomical drawings are presently preserved in the Queen’s Collection at Windsor Castle in England (Chapter 3. Section 8). Leoni clearly owned the Codice Sul Volo Degli Uccelli since he annotated it with “K 18” which indicated that at this time it contained eighteen leaves which it has today. It resided for a time in Spain since it has annotations in Spanish but the volume provided to Cardinal Federico Borromeo (1564-1631) was donated by Borromeo to the Biblioteca Ambrosiana which he had founded in 1569. The last three remaining in the Mazenta family were eventually obtained by Leoni who took them to Spain where they were disseminated. These pages, along with the majority of Leonardo’s manuscripts and drawings in Leonis possession, were mounted without any chronological sequence into two large volumes. The Codex Atlanticus, containing predominately mechanical studies, still a treasure of the Biblioteca Ambrosiana and the Windsor volume which held the majority of Leonardo’s anatomical drawings are presently preserved in the Queen’s Collection at Windsor Castle in England (Chapter 3. Section 8). Leoni clearly owned the Codice Sul Volo Degli Uccelli since he annotated it with “K 18” which indicated that at this time it contained eighteen leaves which it has today. It resided for a time in Spain since it has annotations in Spanish but the Codex would soon be bound for Italy again.


Figure 4.1 Giovanni Ambrogio Figino (c. 1540-1608), Standing Figure, c. 1580, pen and brown ink, heightened with white chalk, 190 x 90 mm. Private Collection: Dr. Rolando Del Maestro
SAVING LEONARDO FOR ITALY: ANOTHER DEED

COUNT GALEAZZO ARCONATI (1592-1648)
Instrument of Donation: Deed of Donation of Leonardo da Vinci Volumes to the Biblioteca Ambrosiana, Milano, January 21, 1637
Title page with seven additional pages, 305 x 210 mm
private collection: Dr. Rolando Del Maestro
With the death of Pompeo Leoni on October 9, 1608, his Leonardo volumes passed to his son Michel Angelo who died intestate in Milan on June 2, 1611. The husband of Leoni's daughter, Victoria, Polidoro Calchi would sell the Codex Atlanticus to Count Galeazzo Arconati for 300 scudi. It is generally believed that the Codex Sal Volo Dgli Uccelli came to Arconati's Collection with the Codex Atlanticus. The reason for this belief is that the Codex Sal Volo Dgli Uccelli was a part of the volumes Arconati donated to the Ambrosian Library in a deed of donation in 1637.

Thomas Howard, the 2nd Earl of Arundel (1585-1642), also an avid collector of Leonardo's items comments that the Libreria Ambrosiana is very well worth seeing. Cardinal Federico Borromeo having spent much money upon it...fit for all that would either study or learn to design.1 and also laments:
Cavaliere Galeazzo Arconato hath made a glorious inscription to value his own gift to that library of many books of the designe of Leonardo that he gave, all but one being little ones, & that being a huge one in folio of 400 leaves, all full of scratches of Indians & such like, but whereas he wrote that our King had offered so much for them, the truth is one that had treated to buy them of the said Cavaliere had entreated the King that his name might be used to the Duke of Feria who was then Governour to make the bargaine as in his name it was more efficacious, but the party since seeing them sees his owne folly.2 Howard mentions some critical information concerning the manuscripts of Leonardo which Arconati had donated to the Biblioteca Ambrosiana in 1637. The deed of this gift, dated January 21, 1637 outlines the donation involving twelve books and manuscripts, including Il Codice Atlantic, along with Leonardo's manuscripts A, B, E, F, G, H, L, M and the Codice Sul Volo Dgli Uccelli. It is generally believed that the Codex Sal Volo Dgli Uccelli came to Arconati's Collection with the Codex Atlanticus. The reason for this belief is that the Codex Sal Volo Dgli Uccelli was a part of the volumes Arconati donated to the Ambrosian Library in a deed of donation in 1637.

The third is a book in quarto size bound in parchment covers [later Paris Manuscript B] and at the end of that book is another little volume with diverse illustrations of mathematics and birds, of eight pages sewn inside the same parchment cover.3 It can be speculated that Count Arconati donated these Leonardo items to the Biblioteca Ambrosiana so that individuals like the Earl of Arundel would not be able to acquire them but also for a much higher purpose. On the first page of the deed it is commented that:
Sig. Galeaz Arconato dona alla Libreria Ambrosiana, jocedi suu su confundere perpetuum e publico beneficio. (Signor Galeazzo Arconati has donated these items to the Ambrosian Library so they can be a perpetual benefit to mankind.) The Leonardo volumes donated by Count Arconati would indeed be useful to mankind for the next century housed in the Ambrosiana until the arrival of Napoleon Bonaparte (1769-1821) troops in Milan in 1796.

6 THE THIEVES: NAPOLÉON AND LIBRI

COINT GUGLIELMO LIBRI (1802/1803-1869)


234 x 145 mm. Private Collection
Dr. Rolando Del Maestro

The entry of Napoléon’s army into Milan in 1796 appears to have outlined only a fraction of the thousands of seized riches to be transported back to France. Napoléon and his armies were relentless in their pillage of art treasures from both Piedmont and Lombardy not only as war tribute but supposedly for their protection. This was considered not only the spoils of war but appropriate behavior since Napoléon had declared that:

“All men of genius, all men who have attained distinction in the Republic of Letters are French, whatever be the nation which has given them birth.”

By this definition Leonardo’s manuscripts certainly fit this new designation and therefore were shipped off from the Biblioteca Ambrosiana to Paris in two crates on November 25, 1796. During their travels these two crates were separated. The one containing the Codex Atlanticus reached the Bibliothèque nationale in France. While Leonardo’s manuscripts were in Paris, Giovanni Battista Venturi (1746–1822), a professor at the University of Modena, carried out the first scientific study of Leonardo’s volumes in France. These investigations would help with the reconstruction of the Codice Sul Volo Degli Uccelli (Chapter 3, Section 7). On Napoléon’s defeat at Waterloo in 1815, Lord Wellington (1769–1852) ordered all stolen properties returned. Austria’s Baron of Ostenfels was in charge of the restoration of the manuscripts from Italy and unfortunately performed very poorly. He was actually aware that not all of Leonardo’s volumes were being returned since on October 5, 1815 he signed a document noting that some Leonardo items had been returned to Italy:

except for nine volumes written by the hand of Leonardo kept in the Institut de France.

However, the Baron did not act on this knowledge. Others, including the under-librarian of the Institut de France (Fallot), were also fully aware that the Leonardo volumes had not been returned to Italy certainlly suggesting that required library silence in the reading room was also used to maintain the Leonardo volumes in France. The Codex Atlanticus and some other manuscripts were returned to Milan in 1815 but the volumes in the Institut de France would never return.

Count Guglielmo Libri, (1802/1803-1869), a supposed “librarian” was to play the next critical role in the vicissitudes inflicted on the Codice Sul Volo Degli Uccelli during its initial years in the Institut de France. A professor of mathematics at Pisa since the age of 21, he would lead a precarious double life throughout his career. Libri, while continuing to distinguish himself in the field of mathematics and historical subjects along with befriending and corresponding with multiple colleagues (Figure 6.1), was also one of the most successful book thieves in the history of the world. Libri would eventually return to Italy and die near Fiesole, aptly called the “librarian” after个项目, later was to haphazardly resew thirteen pages of the Codex back together. Libri then tried to sell the remaining five individual sheets, folios 1, 2, 10, 17 and 18 as Leonardo originals.

In 1868 Count Gaacomo di Lugo acquired this thirteen folio Codice commenting:

In December 1867, having gone to Florence, some of my friends showed me codices, manuscripts and paper and pointed work belonging to Pro. G. Libri… Among the manuscripts acquired by Libri was an autograph by Leonardo of 13 papers, as well as two thick papers [the cover] with writing and drawing on the inside, in the form of a quarter. It had been given the title Trattato on the flight of birds (Trattato sopra il volo di uccelli), because on many of the pieces that composed it were portrayed birds flying in various ways, frameworks for making artificial wings.

After Count Gaacomo’s death in 1889 his heirs sold the Codice to Teodoro di Sabachnikoff, a Russian prince and art patron, for 30,000 francs in April 1892. The thirteen page Codice Sul Volo Degli Uccelli and the missing five folios of the Codex were just beginning another chapter of their long journey.

Libri would eventually return to Italy and die both disgraced and destitute near Fiesole, aptly called the “librarian” after his primary studies on the flight of birds and completed his Codice Sul Volo Degli Uccelli.

Fallus in 1849 which was complete fabrication. He was sentenced in absentia by the Paris Cour d’Appel to ten years in prison on June 22, 1850, but would never serve a day.

In the 1840’s Libri stole the Codice Sul Volo Degli Uccelli along with portions of other Leonardo volumes from the Institut de France. He disassembled the Codici’s eighteen folios and later would haphazardly resew thirteen pages of the Codex back together. Libri then tried to sell the remaining five individual sheets, folios 1, 2, 10, 17 and 18 as Leonardo originals.

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2) Edoardo Zanon, Il libro del CODICE DEL Volo Leonardo da Vinci. Milan, Leonardo3 srl, 2009. p. 33. This volume also provides an excellent outline of the vicissitudes of this manuscript.


5) Edoardo Zanon, p. 55

Illustration: Edoardo Zanon, p. 55.
Figure 6.1 Count Guglielmo Libri, (1802/1803-1869) Letter, to a friend, no date, 207 x 133 disputing the addressee’s hypothesis that feudalism could date as far back as Charlemagne.
Private Collection: Dr. Rolando Del Maestro
A RUSSIAN PRINCE, LEONARDO AND FLIGHT

A. TEODORO DI SABACHNIKOFF

B. EDWARD McCURDY (1871-1957)

The seventeen years separating Bibl. Osl. 514 and Bibl. Osl. 523, 1893 and 1910, would see remarkable changes in the way the world viewed the prospect of human flight. Indeed flight was possible and would change our concept of travel forever. Leonardo’s notes on flight, recorded in the 1895 volume outlined here, were known to Otto Lilienthal (1848-1896) a German engineer who was involved in the first controlled flight utilizing a “glider”. Teodoro Sabachnikoff’s Codice sul Volo degli Uccelli was available in a number of American Libraries and an important review of this volume was published in 1895 in the Aeronautical Review. It is interesting to speculate if the “glide” experiments of Otto Lilienthal which resulted in his death in 1896 along with the heavily publicized first human motorized flight of Wilbur (1867-1912) and Orville (1871-1948) Wright in 1903 may have galvanized Osler’s interest in the topic. Did these events result in him acquiring Sabachnikoff’s Codice sul Volo degli Uccelli?

On opening any of the volumes in the Bibliotheca Osleriana one finds attached a cut out from the cataloguers’ identification information as derived from the Biblioteca Osleriana. In this volume there is pasted a small newspaper clipping of a letter To the Editor of the Times concerning Fifteenth Century Tanks. Osler himself probably attached this clipping to the inside cover of this volume as a reminder of the many other inventions Leonardo was associated with. One also appreciates that on the inside cover of some books in the Osler Collection the cataloguers have pasted in letters and various other documents. (Chapter 1 p. 124). The McCurdy paper titled Leonardo da Vinci and the Science of Flight published in 1910 was pasted on the page immediately across from the clipping. This article by one of the foremost American scholars outlines many of the writings of Leonardo on flight integrated into the knowledge of the early twentieth century. An interesting juxtaposition of the old and the new. Whether Osler fastened this detached article himself or this McCurdy article, free in the volume, was later inserted at this site by one of the cataloguers is unknown but these insertions would be commonplace when exploring Osler’s Leonardo volumes.

Sabachnikoff, a Russian Prince, living in Paris, was a careful scholar of the Italian Renaissance and had obtained the Codice from Count Giacomo di Lugo (Chapter 3. Section 6). The volume outlined here was remarkable in a number of ways. A facsimile of the thirteen-page Leonardo Codex was inserted as page [51] to [52] and the original manuscript was beautifully reproduced in its original size (180 x 135 mm). This facsimile also replicates the tint, texture and color of original paper. This was the first time any of Leonardo’s manuscripts was reproduced using such an elaborate technique. The introductory chapters by Sabachnikoff and Giovanni Piumati (1850-1915) are bilingual, Italian and French. Piumati, the greatest student of Leonardo’s writings of his age, was also responsible for the literal and critical transcriptions from pages [51] to [156] while Carlo Ravaisson-Mollien translated the notes into French. A remarkable tour de force by a dedicated group of intellectuals that would set the stage for all future studies related to Leonardo’s codices and manuscripts. Sabachnikoff’s Codice, when initially prepared for printing, however, still lacked folios 1, 2, 10, 17 and 18. This was to change.

Charles Fairfax Murray (1849-1919) an English painter, book collector and benefactor, protege of John Ruskin (1819-1900) and studio assistant to Edward Burne-Jones (1833-1898) was now to play a predominate role. He had obtained folio 18 of the Codex which had moved through the hands of the bookellers M. Thilaudeau and Breadalbane. Learning that Sabachnikoff, at his own initiative and expense, was about to publish the Codex he sold folio 18 to him. It was then added to Sabachnikoff’s Codice sul Volo degli Uccelli as an appendix since the book was already being printed. After the publication, Sabachnikoff in a most honourable gesture, gave the volume to Queen Margherita of Savoia-Genova (1851-1926) the wife of Umberto I di Savoia-Carignano (1844-1900). She then donated the Codex, now containing fourteen folios, to the Royal Library of Turin. The recovery of the remaining missing pages was due to Seymour de Ricci and his extensive collection of sale catalogues and books. In his book, Atlanti Post published in 1913, de Ricci outlined how he had been able to follow and locate the missing folios that Libri had stolen and tried to sell. Messrs S. Leigh Sotheby & John Wilkinson held ten sales of Libri’s books between1849-1865. In the June 1864 London catalogue of Libri auction sales, four master drawings, (folios 1, 2, 10 and 17) are listed. These were four of the five Leonardo manuscripts was reproduced using such an elaborate technique. The introductory chapters by Sabachnikoff and Giovanni Piumati (1850-1915) are bilingual, Italian and French. Piumati, the greatest student of Leonardo’s writings of his age, was also responsible for the literal and critical transcriptions from pages [51] to [156] while Carlo Ravaisson-Mollien translated the notes into French. A remarkable tour de force by a dedicated group of intellectuals that would set the stage for all future studies related to Leonardo’s codices and manuscripts. Sabachnikoff’s Codice, when initially prepared for printing, however, still lacked folios 1, 2, 10, 17 and 18. This was to change.

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folios that Libri had excised from the Codex. It appears they were rebought by Libri. These four folios appeared again at another Libri auction sale at Christie’s, London, on February 7, 1895. Fairfax Murray acquired three of these folios from the art dealer Colnaghi. The book dealer, Quaritch, sold the remaining one to an American collector who ceded this folio to Fairfax Murray. All four missing folios were then owned by Fairfax Murray. He donated folio 17 to the King of Italy, Victor Emmanuel III (1869-1947), in 1919, after his death in 1919, the remaining three folios were sold in 1920 by Sotheby, Wilkinson and Hodge. These were acquired by Enrico Fatio of Geneva and in turn donated them to Victor Emmanuel who placed them in the Royal Library of Turin. The Codex was again complete four hundred years after leaving the hands of Leonardo. The missing sheets, folio 1, 2, 10 and 17, would be published independently in a volume entitled I Fogli Mancanti al Codice di Leonardo da Vinci which was published in 1926. The first printing of the complete Codex was published in Mondo di Leonardo da Vinci, Novara, Instituto geografico De Agostini in 1940.

To give the reader an appreciation of the beauty of the Codex the complete and reconstructed Codex sul Volo degli Uccelli is displayed. This involved including the 13 folios reproduced from the Sabachnikoff facsimile along with folio 18, the folio added as an appendix to the Sabachnikoff volume. Folios 12, 10 and 17 are derived from the I Fogli Mancanti al Codex di Leonardo da Vinci which was published in 1926. The first printing of the complete Codex was published in Mondo di Leonardo da Vinci, Novara, Instituto geografico De Agostini in 1940.

The Macrocosm, Microcosm and Anatomical Dissection

Four hundred years elapsed between the anatomical and pathological dissections of Leonardo da Vinci and William Osler. For Leonardo there was a clear relationship between the macrocosm of the world and microcosm of the human body since he states in the Codex Leicester:

This earth has a spirit of growth, and its flesh is the soil, its bones are the successive strata of the rocks which form the mountains, its cartilage is the tufa stone, its blood the springs of the waters. The lake of the blood that lies within the heart is its ocean. Its breathing is by the increase of the blood in its pulses and even so in the earth is the ebb and flow of the sea...

Leonardo’s concepts related both for the benefits and difficulties of anatomical dissection are outlined in these Leonardo’s comments:

You who say it is better to witness a dissection first hand than to see these drawings I have made would be right were it possible to see all such things in a single cadaver. In a single dissection, try as you may, you will neither see nor attain any knowledge except of a few parts. To acquire true and complete knowledge, I have dissected more than ten human bodies, cutting away every part and removing in minute particles all the flesh that surrounds each part without causing it to bleed, except for the invisible bleeding of the capillary vessels. A single human body was insufficient to last for the long time it took me [the body would have rotted]. It was necessary to proceed by steps with as many bodies as I needed to give me full knowledge. This process I repeated twice in order to observe the differences from one body to the other.

There are differences in the approaches taken by Leonardo and Osler related to their anatomical studies. Osler’s pathological studies carried out while in Montreal (1874-1884) and the University of Pennsylvania in Philadelphia (1884-1889) were focused on understanding the underlying causes of human disease. Leonardo did carry out some dissections to discern the cause of death of certain individuals (see Life of Leonardo page 22), his primary interest was in carrying out these studies for a book on anatomy that both he and other researchers were interested in producing. Although this was not to materialize, Leonardo’s anatomical drawings for this proposed volume, as seen in the many volumes in the Osler Collection outlined here, still captivate the viewer with the beauty and reality of the human body.

Between 1582 and 1590, Pompeo Leoni managed to obtain the majority of Leonardo's manuscripts and drawings. He mounted the disassembled pages and many of Leonardo's drawings in his possession into two large volumes. The Codex Atlanticus and a second volume containing the majority of Leonardo's anatomical drawings now known as the Windsor Volume (Chapter 3. Section 4). The book of Leonardo drawings in the Windsor Collection was probably auctioned after Leoni's death in Spain. Dame Jane Roberts has extensively explored how Leoni's Leonardo drawings in the Windsor Collection reached England. Her conclusions are:

from the above evidence it appears that between 1618 and 1626 the Leoni volume was brought from Spain to England. 

and it is not known who brought the drawings to England: Charles I (1600-1649), George Villiers the Duke of Buckingham (1592-1628) or Thomas Howard the Earl of Arundel (1586-1646).

The rediscovery of these Leonardo drawings in the King George III (1738-1820) Collection in a locked old chest in Kensington Place by the King’s librarian, Mr. Dalton in 1778 is commented on by the surgeon and anatomist, Dr. William Hunter, on page 39 in the book outlined here but published after his death in 1784. Hunter goes on to write that he would like to engrave these studies. This was not to be since Hunter was to die in 1783, although he encouraged John Chamberlaine (1745-1812), the curator to his Majesty's Collection to do so. Chamberlaine published a stippled engraving after Leonardo's portrait as the frontispiece in the original 1796 edition of his book entitled Imitations of Original Designs by Leonardo da Vinci (Chapter 1. Page 10). The 1812 reissue contained sixteen plates after other drawings considered to be by Leonardo and seven ‘apomnatory plates’ (anatomical studies, all with publication lines dated 1795 or 1796) from the King’s Collection. This information written by William Oder [W.O.] outlined below is provided by the cataloguers of the Bibliotheca Osleriana and attached to the inside cover of the volume to demonstrate that Oder read and made careful notes on this volume in his library.

P. 57 a supra, an early and admirable account of Leonardo's position as an anatomist, and reference to the Windsor drawings which he hoped to engrave and publish. It is in this lecture that Hunter makes somewhat disparaging remarks about Harvey “So much had been discovered by others, that little more was left for him to do, than to dress it up into a system!” (p.47). It is cruel to think that Hunter’s generous proposal to found a school of anatomy in London, in which his museum would be housed, was never accepted. What a difference it might have made in medical education in the metropolis! 

This rediscovery of these drawings would be critical to the understanding and dissemination of Leonardo’s anatomical studies.


Sixteenth Century

Leonardo

VINCI (Leonardo da) 1452-1519.


359. Opera, ed. J. B. Stammus ab Hofheimen (1493-1541).
EROTIC LEONARDO AND THE CATALOGUERS

LEONARDO DA VINCI (1452-1519)


These Leonardo drawings had been unknown for over 100 years, locked in a chest in England, but clearly worthy of reproduction as commented on by Dr. Hunter (Chapter 3, Section 8). In the latter part of the eighteenth and nineteenth century these drawings began to be reproduced. This volume provides an excellent example of the interaction of Osler and his cataloguers with the Leonardo volumes in his collection. Immediately on opening this volume attached to the right-hand page is a pasted in copy of Leonardo’s drawing of The Muscles of the Face and Arm, and the Nerves and Veins of the Hand (RL 19012v also catalogued as K/P 142v) reproduced from Fogli A 13v (Chapter 3, Section 10).

On turning the page on the right one comes across another copy of Leonardo’s anatomy of The Muscles of the Trunk and Thigh, (RL 19014v also catalogued as K/P 148v) reproduced from Fogli A 15v.

How these two copies of Leonardo anatomical drawings relate to the plate in this volume is unclear except they are anatomical images and one outlines male muscular anatomy.

On turning the page the title page is shown. Turning the page again, one encounters the first Latin page of this volume which quotes Johann Friedrich Blumenbach (1752-1840) the Professor of Medicine and Natural History at the University of Göttingen from his Introduction into History Medical Letters (1786). Included is information on Leonardo’s interest in completing an anatomical volume with Marcantonio della Torre and Marcantonio’s death from the plague. The information outlined on the next pages in German give the history of the rediscovery of Leonardo’s anatomical drawings.

In the first years of King George III reign these drawings were found in a closed chest at Kensington for which there had apparently been no key.

On further turning of the page to the plate one sees attached to the opposite right empty page a small note by Francis in which he outlines the exact location of Leonardo’s original in facsimile in Bibl. Osl. 517 vol iii, and Bibl. Osl. 516 along with an outline of an article with further information certainly suggesting that Francis took an active interest in the figure in this Leonardo volume.

This volume contains one large anatomical table containing the “coitus figure” along with three smaller drawings. These erotic “coitus figura” engravings must have had some special appeal to be included in a publication with only one plate. The plate in this Osler volume was a poor reproduction of Leonardo’s seventh engraving in Chamberlaine opus Imitations of Original Designs by Leonardo da Vinci which was updated with Leonardo’s anatomical plates in 1812 (Chapter 3, Section 8). In Leonardo’s original drawing Leonardo had made comments in his typical right to left backward script. No attempt was made to carefully reproduce Leonardo’s writing replacing them only with nonsense markings.

One can speculate as to why such a book would have been purchased by Osler but the unusual material in it may have had some interest. Francis also took an active interest in the figure. This however was just one of the anatomical studies collected by Osler related to Leonardo.
TABULA ANATOMICA
LEONARDI DA VINCI
SUMMI QUONDAM PICTORIS
E BIBLIOTHECA
AUGUSTISSIMI MAGNAE BRITANNIAE
HANNOVERAEQUE REGIS
DEPROMTA,
VENEREBUM OBSERVAM E LEGIBUS NATURAE DOMINIBUS
SOLAM OONVENIRE,
OSSTOGENS.
LUNAEBURGI, MDCCXXX.
SUMTIBUS HEROLDI ET VOLKSTADTII
TEM CPUROSENSIS ET IMPERII
MEDIATISSIMI.
THE RUSSIAN PRINCE AND LEONARDO: TRANSLATING ANATOMY

TEODORO di SABACHNIKOFF

After the rediscovery of the 600 Leonardo anatomical drawings at Kensington Place under the supervision of the Prince Consort, an inventory was made. Numbers were applied to each Leonardo drawing now known as the Royal Library (RL), numbers which are still used today. The RL numbers refer to initially unmounted sheets of Leonardo's anatomical drawings and were numbered from RL 19000 to RL 19152. The Leonardo drawings in the Windsor Collection were published as separate volumes in 1898, as Dell’Anatomia, Fogli A, in 1901 as Dell’Anatomia, Fogli B and a further series of six volumes from 1911-1916. The 1898 and 1901 volumes were sponsored and published by Sabachnikoff and a third series by the Anatomical Institute of the University of Christiania in Oslo. Fogli A shown here was therefore the first of this series of Leonardo drawings to be published, appearing in 1898. Sabachnikoff had initially planned to publish all the Leonardo drawings at Windsor Castle with the transcriptions of Leonardo’s notes and their translation into Italian and French. This however would not be realized (Chapter 3).

For the two volumes Sabachnikoff published he continued to use Giovanni Piumati for the transcriptions into Italian and for this volume the French translation was done by Mathias Durval. This work includes 34 full-page facsimiles with transparent overlays showing the drawing outlines. This allowed a specific and comprehensive arrangement allowing each reader to follow all the transcription information and relate it to the actual Leonardo comments on the drawing. In his introduction, Mathias Durval, the Professor of Anatomy at the Ecole Nationale des Beaux Arts and the Faculty of Medicine, outlined Leonardo’s approach to the depiction of anatomy which involved showing anatomical features from multiple angles and the body from various views.

This volume holds a special place in the Osler Collection since on opening the cover it is filled with more attached pages and letters than any other book in the group as shown in the next two pages. Inserted in this volume is a letter from the Honorable John William Fortescue (1859-1953), the Royal Librarian and Archivist at Windsor Castle from 1905-1926. In this role he was the steward responsible for the care of all the Leonardo drawings in the Windsor Collection (Chapter 3. Section 13).

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THE RUSSIAN PRINCE AGAIN

TEODORO di SABACHNIKOFF


The majority of Leonardo's anatomical drawings contain multiple images and extensive notes filling the spaces on the page. When Pompeo put together the volume containing the anatomical studies in his possession he did not attempt to organize them into specific topics. He does not appear to have had the skills to transcribe or translate Leonardo's right to left writing and may have used size and quality of the images to determine their position in the large volume of Leonardo's drawings he created. Sabachnikoff's plan was to attempt to rectify these deficiencies by reorganizing the facsimile plates into particular subjects so the reader would be able to see Leonardo's own attempt at organization along with his actual words.

Dell’Anatomia, Fogli B was the second in the series that Sabachnikoff published. This volume which was also financially supported by Sabachnikoff, reproduced a further 79 facsimiles and was published in 1901. The Osler Collection does not have a copy of this 1901 volume but Osler and the cataloguers must have known of this Sabachnikoff issue. The forty-two plates reproduced a total of 79 drawings, Fogli B, 42 recto (RL 19059), has a date of 1489 suggesting that some drawings were carried out when Leonardo was initially in Milan. However, many of the plates reproduce drawings which were created much later when Leonardo was back in Florence. These studies reproduced Leonardo drawings of the vascular system with numerous plates of branching blood vessels. Other areas covered included images of the nerves and brain which focused on how the nervous system was involved in the function of the organ systems displayed. Leonardo's many drawings associated with the search for the soul, the *sensu comune*, are outlined. Leonardo's respiratory studies were also included as were plates outlining his drawings on comparative anatomy. Since Sabachnikoff had envisioned publishing all Leonardo drawings at Windsor, columns of listings of additional studies to be included in these further volumes were outlined as a sort of advertisement for these additional works. Unfortunately for Leonardo scholarship this was not to be realized.

It is interesting to speculate why Osler or his cataloguers would not attempt to obtain the second volume of this series. This volume was published in an edition of 400 and therefore not rare. The author, Rolando Del Maestro has corrected this deficit by providing a copy of this volume for the Osler Library of the History of Medicine.

Sabachnikoff's long-term intention was to continue publishing all of the Leonardo drawings in the Windsor Castle Collection, with the appropriate transcriptions and translations, over a number of years. To accomplish this goal Sabachnikoff paid to have all the Windsor Leonardo drawings photographed. Edoardo Rouvèyre, his publisher for the Codice sul Volo degli Uccelli volume and Dell'Anatomia Fogli A and B, was certainly well aware of this publication strategy. Sabachnikoff, having confidence in his previous co-worker, Edoardo Rouvèyre, left all the negatives for the Windsor Leonardo drawings in Rouvèyre's possession. While Sabachnikoff was travelling in Russia, Rouvèyre issued these negatives, only as facsimile images, filling twenty-two volumes. He did so without Sabachnikoff's permission, and one may assume employing Sabachnikoff's previously prepared classification system for the release of the remaining drawings, but with no text transcriptions and translations. An elaborate prospectus was also issued. However, the edition, now known as the Feuillets, was limited to only one hundred copies. In essence, just images from negatives were published in a very small edition to encourage quick sale. He, however, had been very careful to obtain a 'permission' from the Ministère de l'Instruction publique et des Beaux Arts allowing him to publish these negatives. This was surely done to ward off the issue of piracy. Indeed, he published this comment:

Publication honorée de la Souscription du Ministère de l'Instruction publique et des Beaux Arts on the different title-pages of all twenty-two volumes. Thus Rouvèyre joined a long list of cunning individuals involved with the thievery of Leonardo manuscripts and drawings. Unlike some of the others he managed only to delay but not to eliminate Leonardo's intellectual heritage (Chapter 3. Section 4, 5 and 6).

On returning to Paris, Sabachnikoff was devastated to find all his Leonardo negatives published without his consent. His life's work in ruins, defeated and depressed, he carried out no further Leonardo projects and soon died. This episode of thievery and the subsequent death of Sabachnikoff caused a very significant delay in the progress of all Leonardo studies. Two thirds of Leonardo drawings at Windsor, 400 drawings, would now wait over a decade to be transcribed and translated in concert with the appropriate drawings by Norwegian scholars (Chapter 3. Section 13). A loss to all Leonardo scholarship in the intervening years.

The Osher collection contains only eight of the twenty-two available volumes of this series. Is there a reason for the presence of only these specific eight Rouvèyre volumes? The very elaborate prospectus for these twenty-two volumes was inserted into the first volume of this series that Osher owned carefully outlining each of the twenty-two possible volumes available. The volumes in the Osher Collection i, ii, iii, iv, vi, xi, xii all are related to Leonardo's anatomical drawings suggesting that Osher may have decided only to buy the volumes containing anatomical prints. A substantial correspondence between Francis, the Osher Librarian and a book seller about purchasing the missing volumes was inserted into these volumes. A decision must have been made not to proceed with this purchase suggesting that Francis did not believe that purchasing further Feuillets volumes would enhance the Osher Library Collection. This is supported by a letter to Mr. Theodore S. Bober, dated 2/1 Feb. 1946, from Francis in which comparing the Feuillets to the Quaderni d’Anatomia (Chapter 3. Section 13) he comments:

The reproductions in the Quaderni are very much better, clearer, and the color (where there is any in the original) is preserved; also the notes are transcribed and translated into English and German.
OSLO ADDS TO THE LEONARDO RENAISSANCE

Bibl. Osl. 517. Quaderni d’Anatomia. I-VI
Christiania, 1911-16.

Taking up the project left incomplete by Sabauchnikoff, the Leonardo anatomical drawings not published in Dell’ Anatomia, Fogli A and B were published in six independent volumes I-VI under the sponsorship of the Anatomical Institute of the University of Christiania in Oslo. A remarkable international project accomplished by a truly devoted team lead by Norwegian scholars who had obtained permission from George V of the United Kingdom (1865-1936) before the start of World War I to complete the project. The translations were published in English and German with Italian titles. The production was indeed elegant with careful detail to the textures and tints of the paper used along with an attempt to outline the various drawing techniques used by Leonardo: pencil, ink and crayon all integrated into each sheet. The facsimiles of the Leonardo drawings had transparent overlays marked with Roman numerals to identify the various paragraphs of Leonardo’s written text. Alphabet characters were used for both drawing identification and to document various parts of drawings involving the figures. An index provided the subjects of each individual folio.

Each year from 1911 to 1916 one volume was published, for a total of six, despite all the issues associated with the Great War. Supported by the Director of the Anatomical Institute of the University of Christiania, Professor K. Schreiner and the three major contributors C. L. Vangensten, A Fonahn and H. Hopstock the project reached completion. These six very large folios included:

i) Respirazione. Cuore. Visceri addominali. (13 folios)
ii) Cuore. Anatomia e fisiologia. (24 folios)
iii) Organi della generazione. Embrione. (12 folios)
iv) Sangue. Cuore. Fonetica. Vare alter materie. (21 folios)
v) Vasi. Muscoli. Cervello e nervi. Anatomia topografica e comparata. (26 folios)

Attached in volume one is a reproduction of Leonardo’s study of the Holy Family, in Osler’s time known as the Burlington House Cartoon and now known as The Virgin and Child with Saint Anne and Saint John the Baptist. The date of its creation is still debated with some of the dates suggested being c.1499-1500 and c.1506-1508. Count Arconati who owned and donated many of Leonardo’s manuscripts to the Biblioteca Ambrosiana (Chapter 3. Section 5) also owned this drawing in the 17th century. After passing through a number of hands, by 1791, it belonged to the Royal Academy in London. Osler was surely aware of this drawing and may have seen it since it hung in Burlington House (thus its name) a property owned by the Royal Academy. The relationship that this study has to anatomical drawings found in these volumes is unclear but demonstrates Osler’s or his cataloguer’s larger appreciation and involvement for Leonardo’s oeuvre. In 1962 the Royal Academy put the cartoon on sale for £800,000. The fear that an overseas buyer would purchase the drawing resulted in the National Gallery putting this Leonardo masterpiece on exhibition. Over a quarter of a million people saw it over four months. Many of these eager visitors made donations helping to keep it in the United Kingdom. Leonardo would have been pleased by such an outpouring of support.

These three publications (Chapter 3. Section 10, 11 and 13) would form the basis of all Leonardo’s anatomical scholarship until the studies of Kenneth Clark in 1935 which was revised in a second edition by Clark and Carlo Pedretti in 1968.
MAURITZ HOLL (1852- ) and
KARL F. J. SUDHOFF (1853-1938)

Bibl. Osl. 518. Eine dem Leonardo da Vinci zu-
Inserted: an extr. (dated 1910) by Sudhoff, Die Florentiner Skelettzeichnung u. d. Frage d. Beeinflussung Vesal’s durch Leonardo. (See also Nos. 596 and 599.)

Karl Fredrich Jacob Sudhoff was born in Frankfurt am Main, the son of a Protestant minister and received his medical training in a number of German universities. Although practising medicine for some years in Bergen, near Frankfurt his real interest was in the History of Medicine. He was predominately self-taught but made substantial contributions to many areas of Medicine. He was offered the Chair in the History of Medicine in Leipzig, the first History of Medicine Chair in Germany.

Along with his co-author, Mauritz Holl, they explore in these articles a skeleton drawing attributed to Leonardo in the Uffizi Gallery in Florence capitalizing upon Sudhoff’s wide knowledge of anatomy during the Renaissance. Leonardo’s drawings were well known at this time having been reproduced in a number of volumes produced under the direction of Sabachnikoff (Chapter 3. Sections 10 and 11).

HALFDAN HOPSTOCK (1866-1925)

A. Bibl. Osl. 519. A. Anatomen Leonardo...80. Christiania, 1919.

Halfdan Hopstock was a Norwegian physician with a particular interest in the history of anatomy and Leonardo da Vinci. He initially graduated with an art degree in 1885 and then completed his medical training at the Royal Frederick University in 1892. After interning in Kristiansand he returned to the Anatomical Institute of the University of Christiania in Oslo. In 1895, he was engaged for three years as a prosecutor and a conservator at the Anatomical Institute. His lectures were focused on human anatomy and he was actively engaged in carrying out autopsies and human dissection. He was the secretary for the Faculty of Medicine from 1898 and also functioned as the librarian for the Norwegian Medical Society. In these roles he published widely in a Norwegian magazine related to medical sciences. Hopstock was appointed head of the Anatomical Institute and taught students in dentistry, medicine and the Red Cross. In 1919 Hopstock published an article entitled Anatomen Leonardo in Norwegian in a magazine for medical science. This article and its translation entitled Leonardo ai Anatomist from the Norwegian by E. A. Fleming are in the Osler Collection.

His most important role related to the history of Leonardo studies was his intimate involvement with the Anatomical Institute of the University of Christiania resulting in the publication of Leonardo da Vinci’s Quaderni d’Anatomia, in six large folio volumes from 1911-1916. He was one of the three co-authors who transcried and translated the remaining anatomical drawings not published in Folgi A and B by Sabachnikoff (Chapter 3. Section 10 and 11).
Arnold Carl Klebs was born in Berne, Switzerland, the son of Edwin Klebs, a well-known Swiss bacteriologist. His father had an extensive cadre of friends in the arts and sciences as well as knowing numerous historians in the beehive of activity in Berne during the latter part of the 19th century. Klebs' upbringing therefore included extensive exposure to the humanities including medical and scientific issues along with artists of the time. After graduating in medicine from the University of Basel, he specialized in the study and treatment of tuberculosis. In 1896, he relocated to the United States to continue his medical practice. Klebs was well acquainted with Osler and worked with him in 1896 in Baltimore at Johns Hopkins University. He was a contemporary of William H. Welch (1850-1934) and was appointed the director and tuberculosis specialist in both Citronelle, Alabama and Chicago, Illinois. He was also appointed as one of the first directors of the National Tuberculosis Institute because of his extensive experience in the field of tuberculosis. Klebs, on returning to Switzerland in 1910, settled on Lake Geneva. His villa contained his extensive library, containing 3000 volumes related to tuberculosis. He had a particular interest in incunabula, early published volumes printed before 1501, as did both Osler and Harvey Cushing (1869-1939). Klebs was a very accomplished medical historian, bibliographer and an authority on 15th century scientific and medical literature. The three friends, Cushing, Klebs and John F. Fulton (1899-1960) would donate their extensive libraries to Yale University and these donations would become the basis for the Harvey Cushing/John Hay Whitney Medical Library. This donation to Yale University is said to have been significantly influenced by Osler's example of donating his library to the Faculty of Medicine at McGill (Chapter 3, Section 1).

The Bibl. Osl. 522 volume outlined here was given to Sir William Osler and signed "Sir William Osler with respectful compliments of Arnold Klebs." The article outlines Leonardo's research with a particular reference to the vascular system.

A CANADIAN AND AMERICAN HISTORIANS COME TO THE DEFENSE OF VESALIUS

JAMES PLAYFAIR McMURRICH (1859-1939)

WILLIAM H. WASHBURN (1854- )

FIELDING HUDSON GARRISON (1870-1935)

James Playfair McMurrich was a Canadian zoologist and academic with a particular interest in the history of science. Born in Toronto he received his M.A. from the University of Toronto in 1881 and his PhD from Johns Hopkins University in 1885. Although this was a few years before Osler joined the Johns Hopkins Faculty, being Canadian, he was well acquainted with William Osler. McMurrich clearly outlined the ongoing debate in the first paragraph of his 1906 article Leonardo da Vinci thus:

Within the last four years, however, attempts have been made to dethrone Vesalius from his grand position, to expose him as a gigantic plagiarist, and to establish in his place the great Florentine artist, Leonardo da Vinci. In 1902 E. Jackschath, a veterinarian of Tilsit, a town in East Prussia now in Russia and known as Sovetsk, opened up a controversy which was considered of great importance in the history of medicine, namely claiming that Andreas Vesalius (1514-1564) was a plagiarist. 1

McMurrich and subsequently a whole cadre of historians took up the challenge arguing indeed that Leonardo was a great anatomist but that Vesalius had worked independently. It was common knowledge in the time of Vesalius that Leonardo drawings were kept in the Melzi Castello in Vaprio d’Adda. This was only a short distance from Padua where Vesalius was carrying out his studies. Melzi, well known from many accounts, allowed many artists and others to view Leonardo’s works, including the anatomical studies at his Castello (Chapter 3. Section 3). It was also understood that many of Leonardo’s students were also still artistically active working in several northern Italian cities. This was at the same time as Vesalius’s artist, Jan van Calcar (1499-1549) was engaged in doing preparatory drawings for Vesalius. Indeed many of Leonardo’s students and followers had copied Leonardo’s anatomical drawings and these were widely available in Northern Italy. The argument seemed to have some validity.

In later years as the arguments grew more difficult, researchers such as Fielding Hudson Garrison joined the ranks of those that did not support the view that Vesalius was a plagiarist. Garrison was an accomplished medical historian and librarian of medicine. His An Introduction to the History of Medicine (1913) is a landmark text in this field. 2 Writers, such as William Washburn, would also support the growing consensus that Vesalius had not plagiarized Leonardo works.


Galen, Vesalius, da Vinci—Anatomists *

William H. Washburn, M.D.

BULLETIN OF
The Society of Medical History of Chicago
Vol. 15
January, 1916
No. 1-4

Inasmuch as the subject-matter of the discussion involves the status of both Galen and da Vinci as anatomists, it has seemed to me that a review of the situation and a presentation of such facts as have been accessible to me in the available literature would be both profitable and interesting, as renewing our knowledge and refreshing our memories concerning these men.

Aristotle is said to have dissected animals of several varieties, but Erasistratus and Herophilus under the Ptolemies were the first to dissect human bodies; this was very soon after the death of Alexander. Herophilus described the diaphragm, the choroid plexus, the cisterna cerebrospinalis and the torcular Herophili. Ptolemy Philadephus and Ptolemy Euphrates were patrons of science. Philadelphia is the principal authorized and permitted the dissection of human bodies. Therefore, for very many years, human anatomy was studied industriously and became, in fact, one of the most popular studies pursued by the general and lay public.

Later on dissection of human bodies was prohibited and anatomic science languished.

Galen was born about this time in the city of Pergamos in about the year 130 A.D. He enjoyed both from birth and education every natural and acquired advantage. His father was a man of rank and influence and the education of the young man was conducted upon the most liberal and judicious plan. He devoted himself to the study of philosophy as expounded by the various schools then existing; the stoics, the academicians, the peripatetics, the epicureans. He claimed to have adopted from each of these whatever parts appealed to him as most important, but wholly rejected the tenets of the epicureans who in his time had corrupted the teachings of Epicurus into a sensual

140 141

IN DEFENSE OF VESALIUS* 

Pulfrich H. Garrison, M.D.

Washingtom, D.C.

In 1902, E. Jaccobshah, a veterinarian of Tibet, opened up a controversy of great importance in the history of medicine, namely, as to the authenticity and provenance of the Fabrica of Vesalius. The merits of this controversy up to the year 1906 have been very clearly set forth in English by Prof. J. Playfair McMurchie and only a brief reference to this phase of it, by way of orientation, is necessary. Jacobshah claims, in short, that the Fabrica is a gigantic plagiarism from the anatomical drawings of Leonardo da Vinci, if not from the hypothetical "anatomic tablulae" of "Ivrea anatomiae" which Marc Antonio della Torre, on the authority of Jacob and others, is supposed to have written in collaboration with the great Florentine. While Jacobshah is to be credited with stimulating a closer and more intensive study of Leonardo's drawings, his paper is singularly inaccurate and inept, and nearly every fact which he twits and turns to the discredit of Vesalius is taken from Roth's life of Vesalius himself. We may begin with his most telling point, what would seem at first sight his most palpable hit. In the fifth and sixth full-length figured figures, or "muscles-mens" of the Fabrica, there are delineated certain muscles (sacrum and rectus abdominis), described by Galen as human but found only in the dog and the ape. Misled by a loose statement of Roth's, Jacobshah assumes, from the context, that Vesalius, in blind ignorance, merely inserted these muscles to fill up empty space, and was consequently dealing with presumably stolen material which he did not understand. Joel of Grau has very conclusively shown, from the actual context of the Fabrica, that Vesalius, a comparative anatomist from boyhood up, deliberately inserted these canine and simian muscles in order to show up the errors of Galen. The other points made by Jacobshah, such as the extreme youth of Vesalius in relation to the wealth of learning in his great work, the mysterious symbols in his illustrations, which he is supposed to have derived from Leonardo's

* Read before the Society of Medical History of Chicago, April 17, 1913.

Leonardo's Life and Art

The third group of Leonardo volumes in the Osler Collection was related to Leonardo's life and art. This examination was made possible because of the work of Giuseppe Bossi (1777-1815) along with the translation and transcription of Leonardo's notebooks and drawings in the 19th and early 20th centuries. Bossi was an Italian painter and writer on the works of Leonardo. In 1810 he published *Del Cenacolo di Leonardo da Vinci* and in 1811 *Delle Opinioni di Leonardo intorno alla simmetria de corps umano* (images shown here), which revolutionized the academic study of Leonardo art. Writers could now quote directly from Leonardo’s words and this opened a number of new avenues for exploration by both lay authors and academics.

Osler’s cataloguers decided to include Merejkowski’s volume entitled *Le Roman de Léonard de Vinci* published after Osler’s death in 1920 before Osvald Sirén’s more extensive account of Leonardo’s life and art in the Bibliotheca Osleriana. This may have been related to the worldwide impact that the publication of Merejkowski’s *The Romance of Leonardo da Vinci* was having on academic perceptions of Leonardo. Merejkowski’s volume, a clearly fictional account, appeared to distill the essence of Leonardo’s life and art by adding imagined chapters of Leonardo’s life not available from the present evidence. His elegant and very easy to understand style of writing linked to his ability to deal with newer concepts of poetic expression also contributed to the impact of his narrative.

Osvald Sirén, on the other hand, used Leonardo’s own words to further understand his art and method of creation. His volume, written in English, included almost one hundred photographs of Leonardo’s drawings and paintings set among detailed discussions of their conception and completion. Sirén would finish his volume with these words:

*He (Leonardo) stood in a way above the ordinary antithesis of love and hatred,—he loved because he knew and understood. Nothing was hateful to him, because he recognized that hatred meant only the lack of deeper knowledge, for “love is the daughter of knowledge, and love is deeper in measure as knowledge is more assured…” “Love conquers all things.”*

At the time of Robert Knox’s writing, in 1852, Knox did not have the advantage of the other future authors who focused on utilizing their easy access to Leonardo’s words. Knox took the same approach to Leonardo’s accomplishments as many of the authors before him focusing on information only acquired from Vasari’s account.

All three of these authors, along with many other writers of the age, would broaden the understanding of Leonardo both as a person, as an artist and as Vasari’s “Largita da Dio (Gift from God)”.

The search to comprehend his genius continues…
THE VULTURE’S TAIL: ANOTHER RUSSIAN

DIMITRI SERGEIEVICH MEREJKOWSKI
(1866-1941)

This small French volume 160 x 110 mm in size is somewhat difficult to place in the Osler collection although it was cataloged as such. This elegant but small volume was a reprint published in French in 1920, the year after Osler’s death. It is certainly possible that Osler, knowing that this volume was about to be published, had ordered it, and it was delivered only after his death.

Merejkowski was born in St. Petersburg in 1866 and would play a key role in the Silver Age of Russian Poetry in the latter part of the 19th and early part of the 20th century. An important poet, novelist, literary figure and critic he is regarded as the co-founder of the Symbolist movement.¹

His novel entitled the Death of the Gods, which was published in 1895 (Sereny Vostok, Nos. 1-6) opened the Christ & Antichrist trilogy and is regarded as the first Russian symbolist novel. For almost three years the second novel in the series Resurrection of Gods. Leonardo da Vinci, (The Romance of Leonardo da Vinci – in English and French) remained unpublished. It was published in a periodical called Mir Bozhy in 1900 under the title The Renaissance. This volume was translated into many languages and its impact continues today. Five years later the third volume in the series Julian the Apostate was published in France.

The importance of the The Romance of Leonardo da Vinci volume lies both in its global appeal but also the German edition of 1906 would have a significant influence on Sigmund Freud (1856-1939) who would depend on it heavily for his work entitled Leonardo da Vinci and a Memory of His Childhood initially published in 1910 with the title page shown here. Osler did not have copies of these volumes in his library and only one book, a 1918 English translation of Freud’s The Interpretation of Dreams (Bibl. Osl. 2680) is in the Bibliotheca Osleriana suggesting that Osler was not enthusiastic about the writings of Freud.

Freud invented psychobiography utilizing this volume since it contained a Leonardo comment added later to a sheet involving his studies on flight in which Leonardo writes:

It seems that I was always destined to be deeply concerned with flight as a bird (small hawk) for I recall as one of my earliest memories that while in my cradle a vulture came down to me, opened my mouth with its tail and struck me many times with its tail within my lips.²

As might be imagined this Leonardo reminiscence as interpreted by Freud has had a significant impact on our thinking on Leonardo’s sexuality and the interpretation of his art. Merejkowski’s volume Romance of Leonardo da Vinci thus plays a critical component in this interpretation.

¹. Anna Siljak, Sigmund Freud, Sublimation, and the Russian Silver Age. Modern Intellectual History, 15:2018 pp. 443-470. This article provides the most comprehensive outline of the influence of Merejkowski on Freud’s interpretation of Leonardo.

Osvald Sirén was another of the Scandinavian scholars who took a particular interest in Leonardo da Vinci’s life and art. He was born in Helsinki, Finland but would spend much of his academic career in Stockholm. He held the J.A. Berg Professorship of the History and Theory of Art at the University of Stockholm from 1908 to 1923 lecturing widely on a number of topics including the history of art and art theory. As the keeper of painting and sculpture at the Nationalmuseum in Stockholm he had a wide experience with the art and painters of the Renaissance in Italy. Interestingly, during the latter part of his life, he would redirect his interests into photography and Chinese art where he was to make significant contributions.

This deep appreciation for the art of Leonardo and the availability of the transcriptions and translations of Leonardo’s writings along with access to hundreds of Leonardo drawings allowed Sirén and a number of other authors in the early part of the 20th century to begin a wide-ranging interpretation of Leonardo’s life and its impact on his philosophy and art.
Robert Knox was a Scottish physician who specialized in anatomy, zoology, and ethnology. He lectured on anatomy but is predominantly remembered for his involvement with body-snatching and the Burke and Hare murders. Problems associated with obtaining cadavers for dissection before the passage of the Anatomy Act in 1832 resulted in a significant issue of supply for medical instruction.

Body-snatching became so prevalent that relatives and friends would watch over the grave of a recently deceased individual to prevent their loved one becoming a cadaver in one of the medical schools. In 1827 William Hare and his accomplice William Burke set about murdering homeless and intoxicated individuals for a sum to deliver to Knox’s dissecting rooms at Surgeons’ Square. After being caught in 1828 Hare turned on Burke who was subsequently hanged, dissected and displayed. As might be imagined this episode along with disagreements with professional colleagues resulted in significant hardships to Knox’s career.

In his youth Knox was attracted to the ideas of French naturalist, Étienne Geoffroy Saint-Hilaire (1772-1844), with whom he had studied and who established the principle of “unity of composition”. This was one of the many individuals that Knox profiled in this volume. This book was an important work in English literature since it outlined the role of renaissance artists along with more recent anatomists and intellectuals.

Epilogue: The Phoenix after the Fire

The Renewed Osler Library of the History of Medicine

Enrichment, Engagement and the Energy of Knowledge

The Osler Family and Leonardo were both the victims of sadness, war and fire. William and Grace Osler had two sons, one would die shortly after birth and the second, Edward Revere Osler (1895-1917), a second lieutenant in the British Royal Field Artillery, at 21 would be mortally wounded during the 3rd Battle of Ypres, also known as the Battle of Passchendaele. Some sadness cannot be measured. Leonardo’s life would also be altered by sadness, war and fire but this was in no way comparable to that borne by the Osler family.

On April 15th 1907 a fire destroyed a substantial component of the McGill Medical Building in Montreal. Along with the damage to the structure, many pathological specimens that Osler had prepared while in Montreal, were consumed by the blaze.1 Fire would again reach out in an attempt to destroy another Osler legacy, the Osler Library of the History of Medicine at McGill. On July 13th, 2018, a hundred and eleven years after the first sea of flames, an unfortunate fire raged on the roof of the Osler Library at the McIntyre Medical Building. The Sir William Osler Collection was spared but a number of other books sustained smoke and water damage. All of the Osler library volumes, items and furniture had to be temporarily moved to other sites secondary to repairs which unfortunately precluded many future events at the Library.

The fire, although sobering, provided the Osler Library with an unprecedented opportunity for Enrichment, Engagement and to continue to fuel the Energy of Knowledge for the study of the History of Medicine. The goal of the Renewed Osler Library is to continue to be a leading library in the world focusing on the History of Medicine. The library will continue to provide an unsurpassed experience to all those entering its doors either in person or virtually as it fulfills its mandate to create, expand and disseminate knowledge.

The future Renewed Osler Library will revolve around three concepts:

- **Enrichment** will focus on making the Osler Library more meaningful, substantial and rewarding. An important component of enrichment is protecting and preserving the Osler Collection through improved security and an increased dedication to building, repairing and restoring the collection. The library renovations will provide an opportunity to expand and refurbish research and teaching facilities and to increase community outreach. The priority Enrichment Projects include: Collections, Book Repairs and Maintenance.

- **Engagement** will involve the Osler Library being fully committed to its user community by making the most effective use of William Osler’s legacy and the materials in the Osler Library to inspire current and future generations. The priority Engagement Projects include: development of classroom shared space and enhanced exhibition space.

- **Energy of Knowledge** will encompass capitalizing upon a heightened commitment to generate intellectual energy and to advance understanding of all aspects of medical history. The priority Energy of Knowledge Projects include the development of a Medical Student Summer Research Program in the History of Medicine and continuing to enhance the Research Scholar Travel Awards Program.

Like the Phoenix, the mythological bird of Egyptian legend, consumed by fire after living 500 years, who rose again from the ashes, resplendent and renewed... the Renewed Osler Library will rise again... enriching, engaging and energizing knowledge creation for the 21st century.

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Facsimiles, Transcriptions, Translations and Catalogues

Abbreviated titles and quotation references along with useful volumes on Leonardo writings.

MSS
A-M

CA

C.A.
Catalogue

C & P

Forster I, II, III, IV

K/P

Madrid I, II

Urb.
Treatise on Painting

Select Bibliography


Michael Blass, William Osler, A Life in Medicine, Toronto, University of Toronto Press, 1999.


William Osler, The Principles and Practice of Medicine, New York, Appleton, 1892.


Eduardo Zanon, Il Libro del Codice del Volo, Milano, Leonardo3s/s, 2009.


Giorgio Vasari, Le Vite De Piu eccellenti Architetti, Pittori, scoltori Italiani, 8 vols. Firenze, Cavetti, 1568.

A Special Numbered and Signed Limited Edition of 200 Copies in Hard Cover was also produced.

This is copy number