



# THE OSLER LIBRARY NEWSLETTER

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## IN THIS ISSUE

Medicine is never “an island”. Particularly in the Renaissance and early modern periods, medical ideas and practices like anatomy were closely and vitally connected to other domains such as philosophy, natural science, painting, and architecture.

The Osler Library’s rich collection of early modern medical books has thus proven to be a treasure-trove for McGill architecture professor Alberto Pérez-Gómez, the author of the *Newsletter’s* lead article. Professor Pérez-Gómez is an internationally-recognized expert in architectural history and theory.

For a number of years, he has been using some of the Osler Library’s books in his graduate seminars; now, these books will be featured in an exhibition, of which he is Guest Curator, which will open at the Canadian Centre for Architecture this May.

In this essay, Prof. Pérez-Gómez explains the themes and ideas behind this unusual exhibition, and the special role that the Osler books will play.✱

## ANATOMY AND ARCHITECTURE: THE OSLER COLLECTION AT THE CCA

**D**uring the summer of 2001, twelve precious volumes from the collections of the Osler Library of the History of Medicine will be on display at the Canadian Centre for Architecture, as part of the exhibition *Architecture and the Cloud of Numbers: Between the Body and the World*.

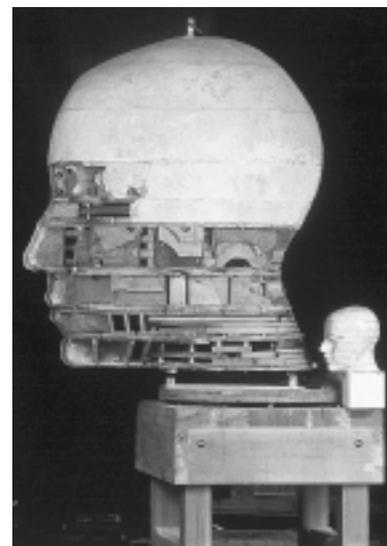
In recent years, new research has questioned age-old assumptions about disciplinary boundaries and a simplistic, progressive understanding of the history of medicine. At the time of its inception in the European Renaissance, anatomy, still understood through Galenic concepts, was part of a complex web of social and ritual practices. The development of its syntax of representation for the human body, understood then as a microcosm analogous to the order of the universe, was closely associated to artistic practices, and in particular to the development of architectural modes of representation.

Guest Curators Drs. Alberto Pérez-Gómez and Louise Pelletier (Architecture, McGill), in collaboration with CCA In-House Curator Gerald Beasley, were given the task of exhibiting the work of British Columbia sculptor Geoffrey Smedley while developing its architectural themes. Smedley has long been inspired by the enigma of Piero della Francesca’s *oeuvre*. His desire to elucidate the principal concerns which inform the theory and pictorial practice of the great Renaissance artist/mathematician, led Smedley to the creation of works that combine scholarship in disciplines

such as the history of science and philosophy, with consummate craftsmanship. Smedley became particularly interested in Piero’s fine drawings of the human head constructed with orthogonal planes, lines and numbers for his book on perspective, *De prospectiva pingendi*.

Realizing the difficulties of defining Piero’s legacy in simplistic terms, Smedley took up Piero’s challenge by *making*, constructing (in a wholly architectonic sense) poetic sculptural objects that probe Piero’s interests. The sculptor’s architectural/anatomical process, reading the fully “modern” potential of Piero’s drawings, will be demonstrated in “process sections” that illustrate the construction of *The Numbers*, a large, eight-feet high, three-dimensional reconstruction of Piero’s head, which will be the center-piece of this exhibition. Smedley’s work is guided by a careful historical reading of the

by  
Alberto  
Pérez-Gómez



Geoffrey  
Smedley  
*The Numbers*  
(work-in-  
progress)  
Alloy, steel,  
cedar, and  
ultracal

Andreas Vesalius, *De hominis corporis fabrica libri septem* (Basel, 1543). View of the brain. Osler Library of the History of Medicine, McGill University. Photo: CCA



human head drawings, seeking to understand Piero's interest in mathematics and cosmology leading to what could arguably be the first accurate, i.e. scientific, representation of the human head. Smedley's

sculpture thus probes the limits of both figural and architectural representation, two paradigms that saw their inception in Piero's artistic practice. His work simultaneously engages a contemporary expanded field of the plastic arts, beyond conventional categorizations.

Woven from Smedley's central meditation on Piero della Francesca's drawing, this exhibition is organized following themes suggested by the great Renaissance master. During the Renaissance, mathematics in the form of proportion, geometry and numerology became a prime vehicle to articulate architectural meaning. The mathematical work of Piero della Francesca, in particular his perspective treatise *De prospectiva pingendi*, stands as a great testimony of the fundamental concerns that emerged at that time and that marked the development of architecture in the Western world.

Smedley's meditations reveal an expanded field of architecture, traditional yet always relevant, disclosing architecture as an activity far beyond the making of buildings, engaging concerns such as cosmology and astronomy, perspective representation, surveying, and anatomy. These are the four broad topics which will organize the exhibition both spatially and thematically, accompanied by outstanding material from the collections of the CCA Library, the

Osler Library and the Rare Books Department at McGill University. The treatises from diverse disciplines during this period of transition, between the late Middle Ages and the late Baroque, suggest relationships that are often ignored by our disciplinary organization of work, and that in fact constitute the fertile ground upon which our modern outlook is founded.

While Piero's conceptual "sectioning" of the body was indeed a precursor of modern anatomy, the human head as a "cloud of numbers" was not merely an instrument to "draw correctly" the human physiognomy. This anatomical connection, illustrated by the Osler material, will be pursued in the three cases along the corridor at the CCA, presenting a chronological collage of architectural and anatomical "sections," ranging from the late Middle Ages to the late 17<sup>th</sup> century. The period represents a transition between the cosmological world of the Renaissance, the world from which Piero's drawings are issued, and the mechanistic understanding of the human body at the beginning of modernity. A selection of books and images will lead the visitor through a meditation on the parallels between the representation and mapping of architecture and the human body in section, particularly the head. The chosen material, some of which is named in the following paragraphs extracted from the exhibition catalogue, is expected to reveal important coincidences, opening a critical reflection about later developments and assumptions.

It has been well established that systems of representation in art, architecture and anatomy share many premises. In Piero's time, dissection was still not a common practice in medicine. The body's health, in Galen's classical theory, depended upon a balance of humours, related analogically to the fluids of the body, the Aristotelian and Platonic four elements, and the influences of the planets and stars. This humoral body was always unstable and in becoming, permanently in flux, and the live body, as commonly experienced, could not easily be identified with a

cadaver. Spirit, ultimately *pneuma* or breath, animated the live body and was responsible for its warmth, the fire of motility. This traditional understanding, coupled with religious prohibitions, made it difficult for a body to be cut, whether physically or conceptually.

In architecture, the building was analogically understood as a live body, and the tools of conception and representation used by architects, from Vitruvius's prescriptions in Book I of his *Ten Books on Architecture*, through to the Middle Ages, did not include *section*. Geometry was traditionally a tool for construction *in situ*, for raising an elevation from a plan, and in the sketchbooks of Villard de Honnecourt, for instance, it is related to the appearance of surface, to the geometry of the living world. Thus the importance of Piero's careful and systematic measurement of the head and his constructive, orthogonal drawings, unique among the other prescriptions for perspective drawing in *De prospectiva pingendi*. In *The Body Emblazoned*, Jonathan Sawday writes: ". . . the positioning of the body [in perspective space,] within a three-dimensional matrix, was the key to anatomical understanding."<sup>1</sup> A few years after Piero, Dürer's *On Human Proportions* employed similar geometric techniques of representation to explore a more frank sectioning of the figure. From Dürer we get a first glimpse of a human body represented in "plan," truly sectioned according to the rules of orthogonal geometry.

The body of the Renaissance remained opaque, however, the concern of medicine being a live body. Rainaldo Colombo, Michelangelo's doctor, preferred (animal) vivisection to dissection, initiating a serious debate in medical science and ethics, while the great artist, his patient, insisted that in order to appropriately represent the human figure, Dürer's methods were inappropriate and *perspectiva artificialis* was hardly useful. According to Michelangelo, the artist could not learn true foreshortening from simple orthogonal projection, treating the live body as if it were an object.<sup>2</sup> Thus, somewhat paradoxically,

throughout the 16<sup>th</sup> century the body exposed in the medical amphitheatres for dissection still resisted objectification, mechanical concepts, or even, in its representation, its identification with a truly dead body. Coincidentally, the many analogies so crucial to architectural theoreticians, between the body and architecture, between bodies, buildings and cities, included not only the well-known cipher of the body as a link between the building and the cosmos, but functional associations, as for example in Di Giorgio's "town with fortress," in which the parts of a city are associated to the body through their metaphorical purpose.

The systematization of anatomical representation for modern medicine is best exemplified by Vesalius's *De humani corporis fabrica*. A similar systematization was accomplished for architecture by Palladio's *Quattro Libri*. Yet, for both Palladio and Vesalius the body is not mechanistic, it is still a body that must be "tempered," in constant change and determined by the proportion of humours and cosmic influences. Palladio believed that like the human body, certain parts of buildings must not be visible, and the architect's plan should accommodate this "natural" order. The dissected bodies in Vesalius's treatise follow the rules of classical representation and are often depicted as alive, while curiously, buildings in section start to appear as ruins.

Often authors were interested in both medicine and architecture. A notable example is W.H. Ryff, author of a book of anatomy and also of a translation of Vitruvius. Architecture, since antiquity, had been associated with health, as buildings and cities were expected to provide a place for a wholesome physical and spiritual existence. This was indeed their prime value, over and beyond "aesthetic" categories which become dominant only after the Enlightenment.

The crossover between disciplines is also clear in Charles Estienne's *De dissectione partium corporis humani* (1545), in which anatomical details are

literally pasted on plates that had been generated for a key erotic text using the representation of classical sculptures. It reveals the inside of the body through the mysteries of dissection, suggesting identifications between the traces left by the surgeon and the artist, between the surgeon's table and the drafting board, surgical knives and drafting or carving instruments. The use of section drawings became increasingly popular in 16<sup>th</sup> century architectural design, and section (*skiographia*) received theoretical legitimacy in the writings of several authors. In his *La Pratica della Prospettiva*, Danielle Barbaro identifies section as one of the three Vitruvian "ideas" or tools of architectural representation (together with the plan and the elevation). Well into the early 17<sup>th</sup> century, however, medical amphitheatres still functioned as "theatres of the world," in which anatomical "demonstrations" still revealed the order of the microcosm and its analogy to the macrocosm. Interestingly, Vincenzo Scamozzi's Villa Bardolini, shown in section in his *L'Idée dell'Architettura Universale* is a kind of "inhabited sundial" a shadow tracer that does not acknowledge an ideal position of the sun, but rather seems to indicate the power of architectural section drawing (of architectural shadows — *skiographia*) to conjure a potential order for architecture, its "light," disclosing the relationship between the "soul" and the "body" of the villa.<sup>3</sup>

René Descartes', *Anatomia Variæ*, and Claude Perrault's *Mémoires* on natural history, represent the moment in which the new modern physiology affected the scientific and philosophical conception of the body. The "experiencing body" became a mechanistic conglomerate of autonomous senses, in which vision was privileged. The seat of vision was construed by Descartes as an alternate "I" located in the pineal gland, somewhere in the centre of the head, a real geometric point (as opposed to Piero's ideal centre). Perrault, himself a doctor, biologist, architect, and theoretician transformed the architectural section — previously *skiographia* — into light. Coherent with his rational approach to theory, his interest in prescriptive

methods and his impeccable scholarship demonstrated in his translation of Vitruvius, for Perrault architectural representation became a vehicle to objectify the building as a predictive set of projections,



constructed for and by the Cartesian mechanism of vision with its geometrical centre. The body was now truly dead. And the observations effected on a dead body by anatomy tended to become normative for life and health. Increasingly, during the late 17<sup>th</sup> and the 18<sup>th</sup> centuries, the depiction of sections as ruins, true decaying bodies, became more prevalent, anticipating perhaps the modern decline of architecture due to its objectification and its transformation into a picture, away from a consideration of the building as a living entity.✱

#### References

1. Jonathan Sawday, *The Body Emblazoned, Dissection and the Human Body in Renaissance Culture*, (London & New York: Routledge, 1995).
2. See Pérez-Gómez and Pelletier, *Architectural Representation and the Perspective Hinge*, (Cambridge MA: MIT Press, 1998), 40-44.
3. See Marco Frascari, "A Secret Semiotic Skiagraphy," *VIA II* (Philadelphia: Graduate School of Fine Arts, University of Pennsylvania; New York, Rizzoli, 1990), 32-51.

*Andreas Vesalius, De humani corporis fabrica libri septem (Basel, 1543). Frontispiece. Osler Library of the History of Medicine, McGill University. Photo: CCA*

The photograph shows Dr. Clarke Fraser, Pamela Miller and Dr. Der Kaloustian who arranged for the presentation. On the table may be seen documents from Dr. Clouston's binder along with records presented to the Osler Library by Dr. Clouston's family in the 1980s.

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## AN ADDITION TO THE CLOUSTON FONDS

In August 2000, Dr. Clarke Fraser, Canada's first medical geneticist, founder of the first Canadian medical genetics department in a pediatric hospital, at the Montreal



Children's Hospital, presented an unusual binder of notes to the Osler Library. These notes record some of the research conducted by Dr. Howard Rae Clouston (1889-1950) of Huntingdon, Québec. Apart from being a consummate family practitioner, Dr. Clouston conducted research on a then little known hereditary disease, Ectodermal Dysplasia. This condition, while not life threatening, often made the sufferer the object of ridicule due to the victim's lack of hair, eyebrows and fingernails. Dr. Clarke Fraser and Dr. Vazken Der Kaloustian, Director of the Clinical Genetics Unit at the Children's and Professor of Pediatrics and Human Genetics at McGill, are publishing a paper on Dr. Clouston, entitled: "A man, a syndrome, a gene: Clouston's hidrotic ectodermal dysplasia (HED).. in the *American Journal of Medical Genetics*.

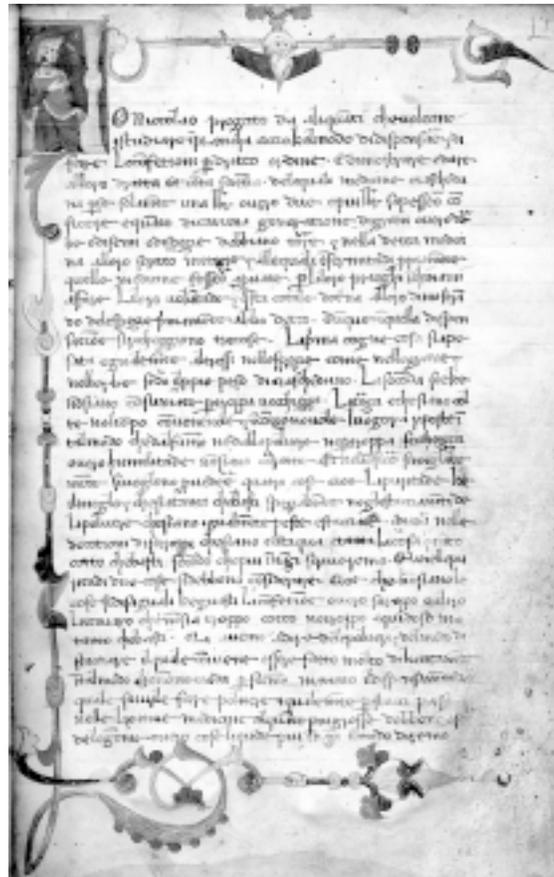
It is believed that the source of the condition in Québec is a mutation which was present in France and may have arrived here with an early French settler. The binder contains handwritten notes and Dr. Clouston's charts of the occurrence of the condition in affected families, and reprints.\*

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In late September, Professor Lucia Fontanella and her husband Professor Alessandro Vitale-Brovarone, visited the Osler Library. Professor Fontanella teaches



Romance philology, and communications, at the University of Turin, and specializes in editing mediæval texts. The visit was an



occasion to present the library with the fruit of Professor Fontanella's work on Bibliotheca 7628, which is an Italian translation of the Antidotarium of Nicolaus Salernitanus, "written in the first half of the 14<sup>th</sup> cent." according to the entry in the Bibliotheca. The manuscript is apparently the first translation into Italian of this pharmaceutical work, which is also known in other manuscript versions.

*Professor Lucia Fontanella and the original manuscript. (Photos: Alan Forster)*

The new publication, entitled "Un volgarizzamento tardo duecentesco fiorentino dell'Antidotarium Nicolai" is a transcription of our manuscript with notes. Professor Fontanella concluded that the translation was in fact produced between the years 1270 and 1280 by a native of Florence (there was at that time no university in Florence). This conclusion was drawn from philological evidence and from comparison with the handwriting in other versions. The illuminator, however, was from Bologna.

Among the appendices is a section called "proccho" ("pro quo" in Latin), which gives substitutes for the ingredients mentioned in the prescriptions. There is also a section giving different terms for the plant names, which involved researching modern herbaria.

When asked why she would go to such lengths, Professor Fontanella replied "C'est ma passion".\*