From Elegance to Diversity:
The British Tradition
In the Modern Québec Gnomonics

by

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La Commission des Cadrans solaires du Québec
Today, in Quebec we have more than 314 sundials, but it all started…

with some old dials from Europe, mainly from…

the United Kingdom
The Québec Sundial Society (1993), \\
(La Commission des Cadrans solaires du Québec) has found most of its information about Gnomonics in our museums. In this lecture, I wish to present some examples of one source of my inspiration, the Old English Sundials, and their influences in crafting modern sundials on our territory.

There in no doubt in my mind: that tradition could improve our knowledge of the functions of these fascinating objects.

The English Dials In the Québec Register of Sundials
In Quebec, we are very fortunate in having three different traditions of our old sundials, anterior to the 20th century and corresponding to the three influences of the organization of our society:

The French old regime (1534-1760/1789),
The British colony era (1763-1899),
The American new republic experience (1773-1899),

With their 3 different political structures.

And we still have to appreciate the implications of the Indians living in North America (especially their traditions of measuring time).
Few of these dials have been recorded and researched by historians and gnomonists over the last 300 years (before 1950).

It is only in the last 30 years of the 20th century, that there was a real interest for these sundials on our territory.

Today La Commission des Cadrans solaires du Québec, the Quebec Sundial Society, is involved in collecting information and in transmitting the knowledge to the future generations.

The Quebec register of sundials includes 314 specimens (the last computation was made on 2004 / 01 / 01), with some general statistics as followed.
a) **Years of production of sundials (total=314)**

17\(^{th}\) C. = 13  
18th C. = 17  
19th C. = 11  
20th C. = 151  
21st C. = 22  
N.I. = 100

b) **Origins (total=314)**

Canada (7)  
**France** (30)  
**Great Britain** (20)  
Germany (3)  
Quebec (180)  
Taiwan (3)  
The Netherlands (1)  
USA (5)  
N.I. (65)
A case study:

Some pictures of Old English dials with some rough drawings from myself, imitating their beauty and their precision.

A summary of the characteristics of these dials and a follow-up with our modern sundials.
Some English sundials: from our Register, (m) means motto

17th century: (8 dials)
- 1631: 166-MTRL-063: Quadrant, Gunter Type;
- 1634: 237-MTRL-098: restored for Montreal (from Great Britain)
- 1664: 193-MTRL-080: Booth Funeral Monument
- 1665: 056-ESTR-001: Horizontal, (m)
- 1670: 167-MTRL-064: Horizontal, by Walter Hayes
- 1672: 222-CAPP-004: Horizontal, (m)
- 1690: 217-MTRL-090: Noakes Funeral Monument,
- 1694: 192-MTRL-079: Monument Reed Monument, (m)

18th century: (6 sundials)
- 1720: 182-MTRL-074: Equinoctial Ring, by Thomas Heath
- 1721: 146-OUTA-004: Horizontal, by Thomas Wright, (m)
- 1725: 227-LANO-003: Horizontal, (m)
- 1795: 222-MTRL-009: Equinoctial, West
- 1799: 018-QBEC-002: Horizontal, by Gilkerson, (m)
- 17??: 027-QBEC-011: Horizontal, at St-Jean d’Orléans

19th century: (2 dials)
- 1880: 034-CNQC-003: restored for Drummondville
- 1882: 145-OUTA-003: Horizontal, by I.V. Fraser

And some 4 other ones with no indication of year of production.
Motto:  I Tell Ye passage of there day / Beyond Ye tomb fresh flowers bloom / Midst Summere Flowers I tell Ye hours / When wintere Steals Ye Flowers awaye.

056-ESTR-001

Motto:  Serene I Stand / Midst Sun & Shower / But Only Show you / Lifes Brightest Hours

222-CAPP-004

Motto:  Make Time Save Time While time lasts / All time is no time / When time is past.

111-MTRL-027
The drawings of these sundials gave me an idea. Why not to look for information in Great-Britain; and I discovered the two catalogues (that you know well):


And I found a unique language for the description of the dials!
Catalogue No. 3A  HORIZONTAL PEDESTAL DIAL

T. BLUNT, Cornhill [London]
c. 1820

Bronze. Circular dial plates, 256 mm dia., pierced with three holes for fastening to a pedestal. Calibrated VI to XII to VI by I, divided to 3 minutes. 8-point compass rose with lettered points. Solid style. [ For 14° N].

Bryden, op.cit. p. 6
Horizontal dial, (1634); with a lost gnomon
A quest of the latitude by George Serle (1657)
Inclined sundial (1634), from Great Britain lat. 55°N., restored in Montreal, lat. 45,5°N
General James Murray (1721-1794) used that sundial in Montreal after the defeat of New France (1760).

The general was the first Governor of the Province of Quebec \( (Canada) \) (1763-1766).
Three Funeral Monuments at the Mount Royal Cemetery

193-MTRL-080

217-MTRL-092

192-MTRL-079
Circular horizontal Sundial  
Notre-Dame Island, Montréal

Motto: *Make Time Save Time
While time lasts / All time is no time / When time is past.*

Characteristics:
Sun at its center;  
Compass with two wings,  
Roman numerals,  
from IV to XII, I to V.
by Walter Hayes, (1670)
Stewart Museum, in Montréal

Walter Hayes at the Moore Fields Cross Daggers *in Londoni Fecit* 1670
Horizontal dial (1725)
Ile-DuPas, Québec
by De Pulbest, London (UK)

Motto: *Domine Nos Dirige*

227-LANO-003

With two griffins
By Gilkerson & Co, London, (1799)
Musée de l’Amérique française, Québec City

Tower Hill, London,
For James Black
Lat. 46°55N

018-QBEC-002
An intellectual framework

« The great Creator, who made the sun to rule the day and the moon and the stars to govern the night, has adapted our nature to these intermitting changes, and implanted in us an immediate desire to count how, drop by drop, or grain by grain, time and life are passing away. »

Mrs Alfred Gatty, Book of Sundials, 1890.
Our inspiration:

Nicholas Kratzer
(c. 1487-c. 1550)

A friend of Thomas More, Erasmus, Albrecht Dürer, Hans Holbein …

He became the *deviser of the king’s horologes* to the court of Henry VIII.
Some readings:

Thomas Fale (1593), William Oughtred (1632), Samuel Foster (1638), Thomas Stirrup (1652), George Serle (1657), Joseph Moxon (1668), William Leybourn (1682), William Wynne (1682), Charles Leadbetter (1727).
The summary of my sundial studies in different Quebec museums

Here are some descriptions of the data from my codex. I discovered a lot of characteristics going from simplicity, beauty to precision:

+ There was no vertical sundial in the museum collections, but a lot of horizontal ones.

+ Square or circular horizontal sundials. In England, they became fashionable in the sixteenth century, both as instruments for marking the passage of time and as garden ornaments.

+ They used the art of engraving on a hard surface. It appears to be of a later period than the fourteenth century, more like that of the sixteenth century.

+ Horizontal sundials have remained popular as garden ornaments to this day, being a symbol of ELEGANCE: attractive to look at, simple to read, and requiring little maintenance.

+ However, during the seventeenth and eighteenth centuries, DIVERSITY became also one characteristic: like their vertical counterparts, well made horizontal dials were often engraved with useful furniture, including devices to give the position of the sun in the zodiac, its position and altitude at any moment, and the values of the equation of time.
+Most good instrument makers also signed and sometimes dated their dials, which were used by their owners for the serious purpose of checking their watches and household clocks, as well as serving as centerpieces for the garden.

+The most important primary class of sundial, and the fundamental dial from which all others are derived, is that known as the equinoctial dial, that is, one described on an equinoctial plane, or a plane representing that of the equinoctial. The equinoctial is the plane of the equator extended to the celestial sphere (the imagined sphere of the heavens), that is, the celestial equator.

+It is so called because the *ecliptic* or apparent path of the sun intersects this great celestial circle at two points, and because the length of the day equals the length of the night (whence the term *equinox*) when the sun reaches one or other of these points. Thus an equinoctial dial, in its most basic form, is a flat plate or ring, set to lie parallel to the plane of the equator, with a gnomon passing through its center at right angles to the plane of the dial.
Some modern influences in Quebec Gnomonics

One of the purposes of this lecture is to remind that the system of time measurement we use today didn’t always exist!

But in some parts of the greater Montreal, Where we understand a certain idea of the past, We do remember that Great Britain has an enviable reputation in the world for its gardens.
There is nothing more beautifull

Than an English countryside

It is a stairway to Paradise
One source of inspiration is *architecture* where the sundials are so often one of the symbols of art & science.

Buckingham Palace, (1830)
London, UK
John Nash, architect

«God save the King»

Brébeuf College, (1928)
The famous Jesuit College in Montreal
Viau & Venne, architects.
The Golden Square Mile

Is the district where at the turn of the 19th century, 70% of Canada’s wealth was in the hands of a few hundreds families living in the Square (that the golden part). That’s an area that is just about one square mile. It’s also where you’ll find the McGill university campus, the Mount-Royal Park and the Milton-Park.

Historians and enthusiasts through the decades have remarked that the Golden Square Mile is one of the most interesting and architecturally important expression of the British tradition in Montreal.

The first fixed sundials were located in that area on superb houses.
All these houses were built with gardens, and are part of the McGill University Campus in Montreal.
Some architects were from the Royal Academy Schools at Edinburgh: they were also professors at McGill University and great dialists!

*Sir Andrew Taylor* (1850-1937): one dial on Milton St. (1900);

*Percy Erskine Nobbs* (1875-1964): two sundials: (1911) and (1923);

*Thomas McLaren* (1879-1967): one sundial (1915), Loyola College in Montreal, now the Loyola Campus, Concordia University;

*David Jerome Spence* (…-…): one dial (1921) on Perrone Av. In Outremont;

*Ramsey Traquair* (1874-1952), the third Director of the School of Architecture at McGill University made significant contributions to teaching, historic preservation, cultural awareness and establishment of a library for the profession of architecture.
Sir Andrew Taylor (1900)

(1850-1937) 570, Milton, Montréal

088-MTRL-004
Nobbs-Hyde (1911)

1581, avenue Docteur-Penfield, Montréal

Percy Erskine Nobbs (1875-1964)

086-MTRL-002
David J. Spence (1921)

21 Avenue Perrone, Outremont, Montréal
Nobbs-Hyde (1923)

1240, Lakeshore, Dorval, Montreal.
241-MTRL-101
- The Quebec dials (in 2004): 314 (100%)

20\textsuperscript{th} century: 168 sundials (53.5\%)
21\textsuperscript{st} century: 21 sundials (06.7\%)

- The Quebec dialists:

17\textsuperscript{th}-19\textsuperscript{th} centuries: 23
20\textsuperscript{th}-21\textsuperscript{st} centuries: 52
Quality and quantity: also a question of diversity in 2004
The students of architecture at McGill University (1994)
The Old English dials gave us two great characteristics:

- The *elegance* of a mathematical instrument for measuring time. Let’s remind the simplicity of their structures, the precision of their line hours, the beauty of their pictures, the philosophy and the humour of their mottoes, and the great tolerance for maintenance and restoration.

- The *diversity* is the taste for innovation and creativity. It gave us a variety of forms and situations, where imitation could lead to creation. They were the true symbols of necessity of vision and readiness for adaptation.

A true *insight* in the cultural experience, of art and science, in the context of North America.
We can find the Quebec sundials and dialists on our Web site (in French):
http://cadrans-solaires.scg.ulaval.ca/

We can also read our Journal: « LE Gnomoniste», on line on our
Web Site: http://cadrans-solaires.scg.ulaval.ca/v08-08-04/mediatheque/gnomoniste.html