DAIR
Restoration and extension of Cartier Shinntype
In Search of Cartier

By Nick Shinn

Things created combine qualities that are both emergent and imagined beforehand. The typeface Cartier is an idea that Carl Dair conceived and set out to realize as fonts. But as with many an exceptional typeface, the author’s is rarely the final hand, and not always the definitive one (if such a thing is possible)—especially if he has the misfortune to die, as Dair did, when the typeface had just been released, in only two fonts with limited character sets.

He never had the opportunity to fulfill Cartier, succumbing to a heart attack on a plane from New York to Toronto in 1967; never able to refine his only type design, nor add small capitals, kerning, fractions, bold weights, display or agate cuts.

Some typeface revivals hew more closely to the original than others, and these have been termed, by Paul Shaw, restorations. This typeface, Dair, is my Canada 150 project (unofficial), celebrating Mr Dair’s 1967 design, Cartier, the first Canadian text typeface. The goal was to create a digital font which could produce a facsimile of the original Cartier’s typography, and in so doing discover something of the type’s essence, existing, as it does, as both ideal and artefact.

Dair’s typeface was rather unusual and lacking a bold weight (just two fonts, roman and italic), so perhaps that is why it never achieved popularity, although it did become a minor fixture during the ’70s and ’80s in the niche of coffee-table books with Canadian content, such as those created by the Illustrated Book Division of esteemed publisher McClelland and Stewart. And notably, the official poster of the text of the Canadian Charter of Rights and Freedoms (1982) was set in Cartier.

When the graphic arts went digital around 1990, CG Cartier was available for a while, but withdrawn by Linotype and replaced with Rod McDonald’s 2000 redesign, Cartier Book, which departs considerably from the original.

My restoration, named after the man, is based on a printed sample of the typeface, in a book I discovered and fell in love with, The Magic Fiddler and Other Legends of French Canada by Claude Aubry, published in 1968 (fig. 1). Working in this manner, rather than from Dair’s drawings or the original film font, would, I reasoned, best capture his intention, and, given that his design harks back to the early days of typography, for which only the...
I suspect that Dair anticipated a transformation of his original drawings, with the glyphs becoming softer and fatter, so he pre-empted this effect and drew his letters a little on the sharp and thin side.

printed record remains (the fonts having long since been melted down and the metal re-used), be quite sympathetic—this is, after all, the way that the classic Renaissance types Jenson, Bembo and Garamond have always been revived.

Another, and more functional reason to work from the printed image: Dair’s ultra-retro design was informed by letterpress printing, a process he was deeply involved with, and in which there is notable press gain, with letter forms swelling in size during printing, the ink spreading down the edges of the type as it presses into paper, stretching it at the periphery of the letters. A slight softening also occurs, as ink bleeds into paper fibre. Similarly, during photo-composition for offset printing (the method primarily used from the late 1960s until the advent of digital reproduction), letter forms lost their crispness incrementally as they were copied during pre-press production, being transferred photographically in at least three stages—from film font negative to positive galley, then from assembled art-boards to size-as negative film assembly, and finally when these were exposed onto printing plates.

I suspect Dair anticipated a transformation of his original drawings, with the glyphs becoming softer and fatter, so he pre-empted this effect and drew his letters a little on the sharp and thin side. At any rate, the glyphs in the first Linofilm font are also a little heavier than his drawings. Now, with digital type, whether for print or screen, the subtle decay of font shapes does not occur; digital files are rendered directly to printing plate or computer screen.

So there is virtue, if one is closely reviving a letterpress or phototype era typeface for body text, in working from the printed image, not the original drawings or font. This was a lesson the type industry learned the hard way during the early days of the digital era (DTP or desktop publishing), when most versions of existing type designs were copied verbatim from artwork or fonts, resulting in body text that was somewhat weak and emaciated. The sturdy new book faces Scala (1990) and Quadraat (1992) were instrumental in elucidating and remedying the problem, as was Adobe Garamond (1989).

One more reason to mimic The Magic Fiddler—to differentiate my efforts from the Monotype/McDonald version, conceptually, aesthetically, commercially and legally. The space for type revival is broad, with room for many different interpretations of serifed styles; Cartier, Raleigh, CG Cartier, Cartier Book and now Dair demonstrate that Mr Dair’s design is indeed the real deal, with version proliferation just like all those Jensons, Caslons, Garamonds and Bodonis.
With few exceptions, Canadian culture lagged behind that of Europe and the USA until after World War II. Then we caught up in a hurry, aided by institutions such as the NFB (1940), the Canada Council (1957) and the Art Directors Club, Toronto (1948), which held a contest every year, publishing an awards annual showcasing the winning entries. This practice was copied from the Art Directors Club of New York (founded 1920). Carl Dair was a member of the club and a frequent award winner early on. At the back of the annual was a section of edgily creative trade ads for suppliers—illustrators, photographers, agencies, paper companies, etc. Typesetter Cooper & Beatty was a client of Dair’s and advertised there. This ad (fig. 2) is from the 3rd annual, 1951, and shows the key role of contrast in Dair’s typography—maxed out between the headline in an all lower case italic serifed font, and the advertiser’s signature in extra bold all caps sans serif, letter spaced. Dair also wrote the ad, and designed and drew the cartouche logo.

Deeply engaged with typography both practically and intellectually, as well as being one half of the graphic design studio Eveleigh and Dair, he had written and lectured for several years before producing the book *Design with Type*, published by Pellegrini & Cudahy, New York, 1952 (later substantially revised, re-issued in 1967 and still in print). The book is largely structured around the concept of contrast, in its many dimensions.

In the 1955 Art Directors Club annual, Dair advertised his services as a typesetter (fig.3), before heading off to Holland in 1956, with a government grant, to study the ancient skill of punchcutting at the Enschedé foundry—no doubt he considered this essential preparation for the ur-Canadian typeface he was planning, not necessarily because he intended to punch cut it, but because he needed to physically absorb the fundamental DNA of roman type at its point of genesis, through the action of hand and eye.

Given the inherent modernism of Dair’s graphic design, as seen, for instance, in his layouts for *Karsh & Fisher See Canada* (1960, fig. 4), full of asymmetry and white space, why then was his typeface design, released in the year of the Centennial, the modernity, nay, the futurity of which was exemplified by Expo 67 with its geodesic dome, monorail,
Habitat and International Style typography in Univers, why was his typeface an oldstyle serifed design, echoing the early days of type, pointedly referencing the 16th century in its name? (Jacques Cartier had mapped the Gulf of St. Lawrence in 1534.)

The answer is complexity. For as much as modernity in the 1960s was high-tech and minimal, it was also eclectic and primitive, embracing the long ago and far away as well as the here and now. In classical music, there were experiments with electronics, and also the birth of a period-instrument movement. In mid-century modern architecture, the austere quality of built form, in which ornament was crime, was humanized by the organic patterns and textures of wood grain, marble striation and raw concrete (béton brut). Similarly, in the coffee table books of the era—in which Cartier was to find its métier—the cool tonality of spare, asymmetric layouts was seasoned by body texture set in Garamond and Bembo, classic 16th century types which had been revived in the historicist era of the early 20th century and have flourished ever since.

In his sumptuous 1967 celebration of Canada To Everything There is a Season, the king of coffee table books, photographer and designer Roloff Beny paired headlines in the Expo 67 headline face, Optima, with text in Poliphilus and Blado.

During the 1960s, typography trended towards very tight fit, driven...
by the capabilities of dry transfer (e.g. Letraset) and typositor setting. In serified types, this favoured the oldstyle over the moderns (didone), as the angled stress of the former’s curves does not concentrate weight spottily in adjacent round letters, and the serifs too are shaped to avoid one another in close proximity; also the quality of spacing depends more on the disposition of white space than the regularity of serifs. Cartier performs well in the “tight-but-not-touching” look of its era (fig. 5), even in all cap settings, where letterspacing is generally preferred for serified faces.

Clearly, Hermann Zapf’s ubiquitous Palatino (1949) had a significant influence on Cartier. Frederic Goudy’s type designs had demonstrated the possibilities of new original styles in the manner of the Renaissance, notably Kennerley (1911), with a ductus informed by the angled, broad nibbed pen. His letters smoothed out the transition of curved strokes between horizontal and vertical, but Zapf took it a step further and animated Palatino with the distinct suggestion of the nib’s presence at many of its bends, and this quality is apparent in Cartier (fig. 7). It occurs in another contemporary new German old-style, Georg Trump’s Trump Medieval (1954).

Further demonstrating Cartier’s grounding in calligraphy are the tapered top right vertical serifs of the capitals, exhibiting the method by which calligraphers rotate the nib and raise the right end while dragging its left corner down to finish at a point, leaving a slight indent at the right along the way. Such calligraphic infrastructure is even more evident in Les Usherwood’s first great success, Caxton (1981).

However, what distinguishes Cartier most from its precursors and descendants is not its calligraphic quality but its outrageous proportions, and it is here that Dair showed his commitment to contrast without reservation. Few typefaces have ascenders which loom so loftily above capitals, few if any have italics so much narrower than the roman. At the character level, “e” has a tiny eye contrasting a gaping aperture in both roman and italic; similarly, the roman “a” and “A” have small closed counters. “M” and “W” are magnificent, wide letters, while “S” and “s” appear to have escaped from a condensed font. In the italic, true to the style of Aldus (c.1500), the capitals are roman! Trump’s Delphine of 1952 has a similar feature, and towering ascenders. Arthur Baker’s Signet (1964) is also comparable in this respect.
calligraphically informed and amenable to tightly kerned display setting (fig. 9).

In the manufacture of the Cartier fonts, Dair’s designs were rendered into film fonts at Linotype’s US facility quite roughly—omitting the usual step of re-working into precise engineering drawings by Linotype draftspersons. This ensured that the hand-rendered concept he had been crafting for over a decade would not be derailed by others who weren’t familiar with his line of thought. His wariness was likely buttressed by the words of Fred Goudy in Goudy’s Type Designs (Myriade Press, 1946) concerning the manufacture of Garamont:

“Drawings like mine which were made free-hand, were not the sort usually worked from at the Monotype Company, so there was a constant fight to see that the workmen did not ‘correct’ what seemed to them to be bad drawing on my part. If I intentionally gave a letter an inclination of one degree, they straightened it up. My serifs, which had a definite shape, were changed to meet their own ideas, since they ‘had always made them that way.’”

Subsequent revision in the Compugraphic version did indeed standardize the serifs and straighten things up, for instance in the vertical stem of “a”, shaving off the slight bulge drawn by Dair at top right.
I scanned a page of *The Magic Fiddler*. The magnification required would be extreme, and at a resolution of 600 d.p.i. the images of 12 pt. type were less than perfect. I imported the letters from Photoshop into the Background layer of FontLab, with bitmapping adding further imprecision; but it was all to the good—the necessity of interpretation would assure a distinct personality for the reworking. In the Outline layer, I traced (fig. 10), setting down bezier points and dragging out handles to bend curves, vaguely at first, then refining my drawing in successive iterations, referring to the source by loupe to get a close look at detail, and adjusting the letters to one another, comparing glyphs in the Metrics panel.

I did use Dair’s drawings in one respect: for the character widths he had indicated, because they are the key to the way his fonts worked. Designing to the Linofilm system, he shaped letters within a limited number of widths, with the maximum being 18 units (W) and the smallest 2 units (comma, period). These “unitized” character widths included the sidebearing on either side of the glyphs.

Notably, neither the serifs nor the sidebearings of vertical stems in lower case letters are uniform, most obviously being quite narrow on the right of h, m and n (fig. 11). Now, one might think that this would be a detriment to the evenness of text colour, but in fact it posits two kinds of readability: one like Cartier, in which the overall balance of spatial areas between and within characters is emphasized, privileging the space within over the space between, and another, like Cartier Book, in which the regularity of serif shapes and stem-to-stem distance is intrinsic.

The constraints of unitization provided a framework for a typographic rhythm that chuggles along (more Harley than Hayabusa)—a little gappy here, a little squishy there—and this loosely woven texture was not evened out by kerning, which was absent in the Linofilm composition of 1967.

The x-height vibrates, for which there is plenty of precedent in the classic book faces. The idea that glyphs should conform in x-height is routinely adhered to in current type design, a consequence of the PostScript Type 1 format’s Alignment Zones, which were configured to temper artefacts in the low resolution of early digital media, artefacts now largely obsolete.

As comprehensive kerning is de rigueur in today’s typefaces (and Dair would not perhaps have been adverse) I’ve added that,
with discretion, while making the x-height and cap height a tad more consistent, to maintain the degree of irregularity across different aspects of the design.

And I’ve departed from the simple unitization scheme in a few characters, most notably the lower case “s”. Certainly, Dair wanted a narrow “s” (Baskerville has one), and 6 units would have been too wide, but 5 is cutting it too close, so I gave it some room to breathe—5 1/2 units, as it were.

It’s all very well to work from a printed specimen, but one has to come to terms with rendering the vagaries and artefacts of the printing process, including the blur of press gain. A systematic and deliberative treatment of detail is required, not just because the type may be used at display size and people admire precision, but also because taking account of the vocabulary of detail is how typographers familiarize themselves with typefaces, identifying and categorizing serif style—if not literally, at least in a purely visual manner, as the material of gestalt. In my Dair, the amount of sharpness/blur at corners is definitive, most critically in rendering serifs. The shaping of these was informed by Hermann Zapf’s Melior (1952), and more specifically by Robert Slimbach’s technique in Adobe Garamond’s PostScript outlines, with his omission of extrema x-axis Bezier points (fig. 12).

For a book face, Cartier was seriously lacking in the niceties of expert typography: small caps, fractions, alternate figures, and so forth. These days, such types are expected to contain extended language support and many OpenType features, so I’ve added to and adapted Dair’s work to provide these (fig. 13).

All in all, the Dair typeface is smoother and more substantial than the original Cartier. I’ve made concessions to the present day—adding kerning, providing a Q with a discreet tail, and giving the italic capitals a six degree slant.

However, just for the sake of it, I’ve made some alternate versions of the fonts. Dair TBNT is kerned to produce the “tight-but-not-touching” headline style of the 1970s, and the other, Dair 67, will create facsimile settings of the original un kerned Cartier, with roman capitals in the italic font, and a long-tailed, disconnected “Q” that gives “u” a good kick in the rear view mirror.

NB: In 1842 missionary James Evans produced a crude font for his invention of Cree syllabics, in Rupert’s Land, a territory now in Manitoba, then considered to be owned by the Hudson’s Bay Company. That typeface is generally referred to as Canada’s first, although Rupert’s Land was not annexed by Canada until 1868.
the English line of poetic wit had crossed the Atlantic. Passing through Puritanism, it came out, sometime in the mid-eighteenth century, not as lyric poetry, but as the lean, strong, functional poetry that is also the American Windsor chair. Case concluded: this style of chair, a unique form, is a product of the same mind and culture that produced Donne and Herbert and Marvell.

But the American Windsor is more than just a functional by-product of the line of wit! Siegfried Giedion said:

"There is something Art Nouveau about the morning glory, and its shapes are forever associated in my mind with that fashion. It grows wild on the river banks and tame in our garden, where it first climbs formally to the top of the fence, then falls gracefully as if suspended in air. I like that feeling of space, and, although morning glories are such neat and organized flowers, I like to paint them."
Preface

Here is the working life of Lawren Harris. Painting is not an entertainment or an occupation for him; it is a communicative way of life. The paintings have been chosen to show the range of the work produced during the years from 1910 to 1968. Writing was, for him, a means of clarifying thought, of sorting out observations, and of sifting ideas. The text is made up of selections from his writings—published articles, notebooks written between the years 1920 and 1960, and Contrasts, a volume of poems published in 1922. The selection and arrangement of the paintings has been made by Bess Harris, and of the text by R. G. P. Colgrove.

The greatest loss of life in the Gulf in a single wreck occurred on Friday, 29 May 1914. In the early hours of that morning, the Empress of Ireland, a luxury liner outbound from Quebec, collided with the coal ship Storstad, and sank with 1,012 lives.

The disaster occurred on a flat calm during a night that had been perfectly clear; but as the up-bound Storstad approached the liner a few kilometres east of Pointe au Pere, fog swirled off the north shore and engulfed both ships. Both took what their helmsmen thought were precautionary measures.

This book is the story, told primarily in pictures, of the Group of Seven and Tom Thomson. Lawren Harris, in his The Story of the Group of Seven, was firm about Thomson’s inclusion: he was ‘part of the movement before we pinned a label on it.’ A.Y. Jackson emphasized the same point in his autobiography, A Painter’s Country. Two of Thomson’s iconoclastic paintings, The West Wind (p. 2) and The Jack Pine (p. 3), are the Group’s major progenitors. They defined the spirit of Canada as ‘Northern.’ With Thomson, the Group of Seven would have been eight; as it was, three more members were added over the years. These eleven artists moulded our way of looking at our land.
The formal qualities of a typeface energize, facilitate and inform the typographic layout. Skilled typographers will leverage the attributes of judiciously chosen fonts to maximize the personality of the page, thereby standing out from the crowd. The formal qualities of a typeface energize, facilitate and inform the typographic layout. Skilled typographers will leverage the attributes of carefully
The formal qualities of a typeface energize, facilitate and inform the typographic layout. Skilled typographers will leverage the attributes of carefully selected fonts to maximize the personality of the page, thereby standing out from the crowd.
OPENTYPE FEATURES
The roman Dair font is equipped with a great many features; the italic, however, has few.

SMALL CAPS

Applying SMALL CAPS does not alter any default characters except the lower case letters — this feature is really "Caps with Small Caps".

As well as letters, ALL SMALL CAPS brings up same-height versions of currency symbols, some punctuation, and lining figures.

STYLISTIC SETS

Stylistic Set 1 in the roman sets the original disconnected, long-tailed "Q".
Stylistic Set 2 in the italic replaces the angled capitals with the original roman caps.

FRACTIONS

Fractions converts "number-space-number-slash-number" to integer and fraction, replacing the full space by a thin space; this enables the global application of the effect by style sheet, without having to select each fraction in a document individually.

Nut fractions are provided for half, quarters, thirds and eighths.
For other fractions use Stylistic Set 2, which creates "slash" fractions—or if you prefer that style.
Carl Dair (1912-1967) has ten sets of figures, fulfilling a variety of typographic functions. Small Cap figures are oldstyle by default, for mixed case setting. All Small Caps selects lining small cap figures. Superior figures are smaller than Subscript figures. All figure styles have both tabular and kerned proportional options. Fractions creates neat fractions for half, quarters, thirds and eighths; for other fractions use Stylistic Set 2.
THE DAIR FAMILY

All fonts have Latin Extended encoding.

Dair

Fully-featured, lightly polished restoration of the original Cartier. Includes small caps, ligatures, fractions, alternate figures, etc.

Dair Italic

Lightly polished restoration of the original italic, but with slanted capitals. Includes ligatures, fractions and optional Roman capitals, but no small caps.

Dair 67

Facsimile of first Cartier. No kerning, no OpenType features.

Dair 67 Italic

Facsimile of first italic. No kerning, no OpenType features. Roman capitals.

Dair TBNT

Display font comprehensively kerned for ‘Tight But Not Touching’ setting. (See cover of this specimen.) This kerning is quite different than that of Dair—it’s not just that font with negative “tracking”.