A PLASTIC CURVE WROTE 'POSSIBILITIES'
David Bennewith

I am looking at two plastic french curves. Both are yellowed by age and covered with ink blots and smears, scratches, Twink marks, burn marks (and burn holes), and bits of tape. One is broken in half. At the break point, it has been patched up with different-coloured tapes that are layered and brittle with age. On both curves, there are light-toned marks where bits of previously removed tape have left soft, photogram-like images in the plastic.

In drafting, french curves are used to create smooth and even curves — one hand rotating the tool as the other traces concave and convex edges to create ellipses, parabolas, hyperbolas. In type design, they can aid the production of the 'like', or matching, curves that help the letters, numbers and punctuation in a typeface visually relate to each other — for example, how the curve of a letter 'o' can also be referred to for producing a matching letter 'c'.

These french curves in front of me belonged to the Samoan-New Zealand type designer Joseph Churchward (1932-2013), and they are now in my care — a gift from the Churchward family on the sad event of Joseph's passing in April this year.

I began a correspondence with Joseph, initially via his daughter Marianna, in 2005. By this time I'd already been introduced by friends to a few of his typefaces and had subsequently found more by leafing through the ELAM School of Fine Arts Library archive of Designscape magazine. Among selected examples in Designscape were news items about his type designs being licensed by the German firm Berthold in the late 1960s, Joseph's international debut as a type designer. More licences to type-producing companies in both Europe and the United States would soon follow, providing Churchward International Typefaces with some pretty reasonable royalties in the 1970s and early 80s.

It was in 2006 that we finally met in person, at his home studio in Hataitai, Wellington. Even though he was no longer running a commercial operation, signs of on-going work

1. David Bennewith and Warren Olds, 'Churchward Video Notes A-J', *The National Grid*, Christchurch, vol. 3, 2007, p. 57

2. C Winterberg (ed), *Divina proportione*, Vienna, 1889, pp. 129-131, quoted by R Wittkower, 'Architectural Principles in the Age of Humanism, London', 1949, p. 14, in Milliard Meiss, 'The First Alphabetical Treatises in the Renaissance', *The Journal of Typographic Research*, Cleveland, vol. 3, January 1969, p. 8

3. Robin Kinross, 'What is a typeface?', *Unjustified texts: perspectives on typography*, Hyphen Press, 2002, pp. 116-117. The term 'visual manifestation' used above is also derived from this article.

covered the walls and most surfaces. During each meeting these french curves were somehow always present. This is how Joseph described the broken-in-half curve in our first meeting:

Look, I still have this — my oldest instrument — that I first got when I started work at Charles Haines [the Wellington advertising agency where Joseph began his career as a commercial artist after graduating in the late 1940s]. The poor thing has fallen apart. I used it all the time. It's worth a lot to me. That's the first instrument I bought when I left Wellington Technical College. It's broken, I bashed it up, and I'm still using it! It's over 50 years old.[1]

You could say that digital, vector-based type design has largely made the french curve a redundant tool — an artefact of the hand-lettering era. But Joseph continued to use these curves throughout his six-decade career — even after the advent of the personal computer, yet again, changed the format of type design.

In his 1929 essay 'The Biography of the Object', the Russian constructivist theorist Sergei Tretyakov wrote that we might understand human narratives through cultural productions,

rather than explorations of the individual or the psychological. Just as tracing Joseph's typefaces by hand has helped me understand, question, and think about his work, in this essay, I'd like to endeavour an assessment of some aspects of it through the prism of these two curves.

On one hand, a french curve represents a play between the contradictions of nature and culture. It is a manufactured thing, yet it follows mathematical principles that are derived from natural phenomena — for example in diffraction (how a wave bends as it encounters an obstacle) and spiral patterns (like those found in nautilus shells or koru forms). In turn, the curve is used to design cultural products that refer to but ultimately resist nature. Comparably, for me, a typeface incorporates this play of the contradiction between the naturally and culturally produced; it is an abstract visual manifestation retaining only *reference* to nature, while at the same time it is the implication of language becoming concrete.

We might find evidence of this contradiction as far back as the Renaissance, when Felice Feliciano (circa 1460), Damiano da Moille (circa 1480, Parma), Luca Pacioli (1509, Venice) and Sigismondo de' Fanti (1514, Venice) compiled the first didactical and theoretical treatises on the design of the [Roman] alphabet. Through a process that could be compared nowadays to reverse engineering, they attempted to prove the divine geometry of classical Greco-Roman lettering: to show that the alphabet was the product of classical proportion, through which God 'reveals the innermost secrets of nature'.[2]

But letters are human constructions not outgrowths[3] and paradoxically, these early attempts could never strictly apply the ratio-dependent geometries (inspired by the Roman architect and engineer Vitruvius) that they referred to. The letters of a classically designed alphabet won't fit into rigid geometry-based boxes without visual distortion. For example, a classical 'A' and an 'H' make use of slightly different amounts of horizontal space in their design. Feliciano even stated that the letter 'R', by not conforming to Vitruvian

4. Milliard Meiss, 'The First Alphabetical Treatises in the Renaissance', *The Journal of Typographic Research*, Cleveland, vol. 3, January 1969, p. 15

5. David Bennewith and Warren Olds, 'Churchward Video Notes A-J', *The National Grid*, Christchurch, vol. 3, 2007, p. 56

geometry, is a sort of second-class letter.[4] These 'innermost secrets of nature' in our alphabet that Feliciano and company were searching for would remain elusive.

This introduces an interesting and important detail about how we, as humans, relate to the designed alphabet. Beyond its objective-seeming geometries, a designed alphabet needs many small corrections — and even a fallible human hand — to produce what is generally regarded as a 'good' or 'working' typeface. Interestingly Churchward suggested that this quality of a typeface 'working' is somehow already present in the outset of its design — that it is something that you have to 'find'.[5] There are of course typefaces that do adhere to strict grid systems, like the 'dot-matrix' typefaces — designed for electric signs and early home computers and printers, for example — that today, ironically, evoke a lo-resolution or retro charm. Rapid improvement in display technologies ensures their gradual disappearance.

It seems, after all, that a typeface needs to incorporate the suggestion of 'gesture', or the hand-made, in order for us to relate to it more easily. This idea is what gives type design — as a practice — qualities that I often experience as mysterious. And this 'mysteriousness' of type design lies within a very subjective (and ever-shifting) idea of what constitutes a 'good' typeface, which then begins to hint at why our 26-letter alphabet has been revisited or redesigned so many times, by so many different people. It's perhaps no wonder that type design usually requires an obsessive personality. It is in this circumstance that I begin to optimistically speculate that, in utopian thinking, perhaps typefaces should never be owned or subject to copyright.

But — even when it has been designed to look 'hand-made' — the typeface creates a multifarious system that is constantly in negotiation with the concept of standardisation. This is because a typeface has become, foremost, a product, and inherent to the idea of a product is the requirement that it meets certain standards and makes a kind of ordinary sense.

A typeface is an intermediate object: employed to put across information via certain media. Therefore its design is often defined by what is legible, compatible and available. As a digital file, a typeface has a sort of latent quality, waiting to be 'activated' and used.

Still, between design and use, a type designer struggles to find a relative balance between subjective and objective considerations. A typeface often both embodies and exploits its own call to neutrality. This call to neutrality I understand as being the typeface's *privilege* to be chosen and applied, and the expectation to serve the words it is typed in.

Sometimes a typeface's own internal system threatens to descend into visual chaos. The type designer may push legibility and logic to an edge that reminds us about our expectations of these ubiquitous 'things', at the same time as it challenges them. There are examples in Joseph's catalogue where this is certainly the case: Churchward Maori (where we see the natural and cultural koru motif in action), Churchward Ta Tiki, Churchward Roundsquare, to name just a few. In Joseph's hands, the french curve, used to create the exacting standardisation (mass-)production and reproduction requires, could also be manipulated to produce strange signs of human-created fluctuation and distortion.

Which leads me — after a long meander — back to Joseph's curves. It is safe to type that these curves accompanied the design of every one of his typefaces: around 695 of them. A *really* large body of work (greater, Joseph often claimed, than that produced by any other individual typographer) that presents both repetition and variation many times over. They are inextricably tied to his obsessive commitment to the reinterpretation — and therefore questioning — of the alphabet. They suggest how the form of a letter or a typeface can be as flexible, malleable, and negotiable as language itself.

But a curve cannot completely account for the hand that operated it, as Joseph's varied explorations of the alphabet

demonstrate. I have a vivid image of the very particular way Joseph would flick his right wrist as he described a pen stroke. Sixty years earlier, this same wrist (and hand) had accidentally smashed through the glass panel of a swinging door at Wellington Technical College — a horrific end to a friendly chasing game.

Joseph's nearly severed hand was reattached to his wrist, but the tendons were permanently shortened, resulting in restricted movement in his drawing hand and a loss of feeling to parts of it. The accident changed the way he held a pen, which must have significantly altered the manner in which he drew his letters. Was this restricted hand able to mimic the tight movements of a machine, creating an even more riddling connection between his hand and his french curves, between the hand-made and the mechanical?

Joseph's curves have certainly been pushed to the limits of their manufacture, and I'm amazed that he never replaced them. But, as a designer, I can also understand his attachment to them. Looking at them now, on my desk, maybe for too long, I'd even suggest that they have a kind of 'magic' about them.

What would happen if I began to use them?

Essay set in Churchward Newstype