MY

Through typography

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Y

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P

we can attempt

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to explore the complicity

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between writing

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and the rest of the world

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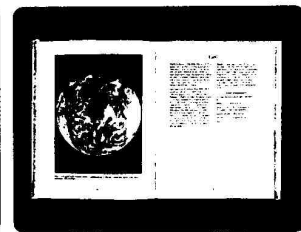
01110000

On slide viewer: weather chart issued by the Meteorological Office. Satellite weather reading from 850 miles above the Northern Hemisphere.


Spread from *The Night Sky Book* (Jamie Jobb, Little Brown & Co, 1977) showing the Earth seen from space.

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A personal view

S

on the kinship of type and things

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By Paul Elliman

The day was very hot and windy and there were scribbles of cirrus blowing across the sky. (Bruce Chatwin, *The Songlines*)

Typography may have entered the stratosphere of a new age, but the internal dynamic that propels it remains the same, a fusion of language and the alphabet. There is a linguistic impulse whereby the qualities we generally "ascribe" to one or the other – alphabetic writing and language – cross over. The unassuming line from Bruce Chatwin, in which he sees the locks of cirrus cloud as a kind of wild writing on the sky, as if he put it there (which in a sense he did), immediately conjures the thread connecting us to our physical environment via writing. Writing gives the impression of things. Conversely, things can give the impression of writing. This association between writing and things provides a crude basis from which to outline a reading/writing list of favourite "typographies".

For me the collection is characterised less by any traditional attributes of "typography" and more by a desire to inflect the idea of typography with a wider sense of what it is to read and to write. And neither are they "my typographies" in the sense that I constructed them: in this case I've replaced the idea of a typography – the impression of writing – of my own making with the impression of a typographical relationship to those
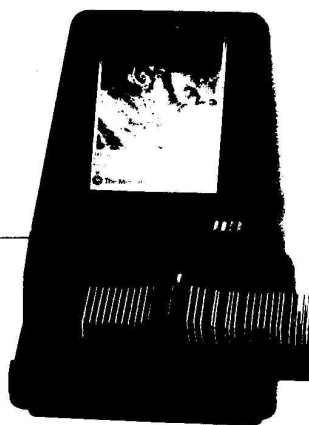
rather prosaic acts of reading and writing: a relationship based on a literacy no longer contained by the *litera scripta*, the written text, and which, at times, extends beyond the written word altogether. A poetics of typography operates in the space between language and the alphabet and along the invisible networks that connect writing to the world. It is characterised by a sense of literacy that allows us to see cirrus clouds as "scribbles" of writing. Its typography emerges in moments of horror, as points of light in the televisual relay of a laser-guided military assault, or in something as unexpectedly poignant, yet equally visceral, as the observation of Aleksei Leonov, the Russian astronaut, when he said: "I believe I never knew what the word 'round' meant until I saw Earth from space."

The *Shipping Forecast*, prepared by the Met. Office and broadcast by the BBC, is one of my favourite typographies. It describes – in a combination of code and windswept location – an outline of the British Isles by reporting the weather condition from sea area to sea area, in a clockwise direction around the coast.

The voice and theme of this reassuringly familiar British institution – that of a "blessed plot ... bound in with the triumphant sea" – carries the resonance of Gaunt's deathbed speech in *Richard II*:
Small show'rs last long, but sudden storms are short; this royal throne of Kings ... this scept'red isle ... This precious stone set in the silvered sea ... Whose rocky shores beat back the envious siege Of wat'ry Neptune ... this Low Fair Isle one thousand falling slowly ...
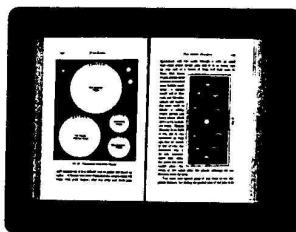
Spread showing "Comparative Sizes of the Planets" from *Starland, Being talks with young people about the wonders of the heavens*, Robert Stawell. Boston: Ball, Ginn & Company, 1893.
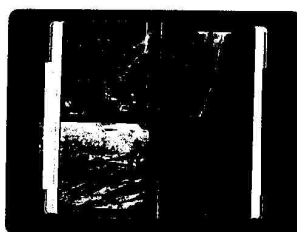
Mapping the atmosphere and cumulus clouds, from *National Audubon Society Field Guide to North American Weather*, Alfred A. Knopf, New York, 1991, 1996.
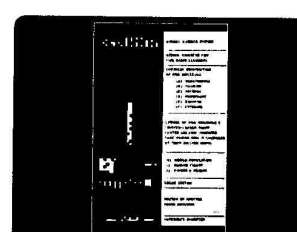
Pictographic message transmitted into space by the Arecibo radio telescope in Puerto Rico in 1974.

Low Fair Isle one thousand falling slowly ...

In his book *Strange Weather*, Andrew Ross explores the role technology plays in our relationship with the world. One of his intentions is to reconcile the cultural with the technical, to explore technology as a "fully cultural process". Weather mapping systems are one of his examples. Typography, whose social meaning resonates with every part of everyday life, is part of the same network of connections. As an advanced model for communications technology, meteorology employs a reading/writing system that responds to the unstable characteristics of the weather.

I once approached the Meteorological (Met.) Office about reading a weather bulletin on BBC Radio 4 as a "talking typographer".

And now the *Shipping Forecast* issued by the Met Office at 23.58 on Saturday the thirtieth of September. There are warnings of gales in Viking, North Utsire, South Utsire, Forties, Cromarty, Plymouth, Finisterre, Sole, Lundy, Fastnet, Irish Sea, Shannon, Rockall, Malin, Hebrides, Bailey, Fair Isle and Faeroes. The general synopsis at one-eight-double-o: Atlantic glow 974 moving steadily North, expected Iceland 971 by one-eight-double-o on Sunday. The area forecasts for the next 24 hours: Viking, North Utsire, South Utsire; South Easterly seven to severe gale nine, occasionally six in North Utsire and South Utsire, occasional rain, good becoming moderate or poor.

The names of the areas – Malin, Lundy, Fastnet etc. – and the names of the coastal observation stations, including Channel Light-Vessel Automatic, Tiree and Ronaldsway, are part of a precise format and vocabulary which is almost pictographic. For example: Rockall / north backing north-west / five increasing six later / showers / good ... lists in a diagrammatic order wind direction, wind change, wind force (the Beaufort scale, of which gale force is eight), general weather condition and visibility (either good, moderate, poor or fog).

And while the language of the *Shipping Forecast* broadcasts relies upon the fixedness of typography and the placedness of topography, it also continually reshapes as a permutational text dependent on one variable factor – the weather.

Arecibo

Recently, many of the coastal stations that use Morse code have given way to satellite navigation. Last year Le Conquet in western Brittany sent its final message: "Best wishes to all remaining on air ... silent key forever."

Silent key (dotdotdot dashdotdash), is code for "end of message", prompting the image of Earth's last typographer, tapping out the valedictory message of a spent planet. It reminded me of another favourite (and radio-transmitted) typography. In 1974, a message was

beamed into space from the Arecibo Observatory in Puerto Rico, aimed at the cluster of 300,000 stars known as M13 in the Hercules constellation. The signal, a sequence of radio pulses, contained 1,679 bits of information. It was hoped that this number, the product of two prime numbers – 73 and 23 – would suggest a grid structure – 73 x 23 – that reveals a pictographic version of the message.

It assumes, of course, that the communicative system of the receiving species is capable of responding to the same semiotic contrasts as are displayed in the pictogram (shape, length, etc.). If the entity receiving the signal happens to have a communication system based on, say, heat, the astronomers will have wasted their time! Although the message apparently

Thymine) These are arranged in words of three letters such as CGA or TGG. Most of the words code for different amino acids, the building blocks of the body. Although the DNA message is simple, it is very long. Each cell in our body contains about six feet of DNA. A useless but amusing fact is that if all the DNA in all the cells in a single body was stretched out it would reach to the moon and back 8,000 times.
(Steve Jones, *Reith Lecture*, Radio 4, 14 November, 1991.)

Within the matrices of the body, the chemical basis of life is fixed for reading through a kind of hypertext markup language – A, C, G and T. For meteorology, the history of the world is also a kind of literate organisation of its patterns. Meteorology and genetic science are able
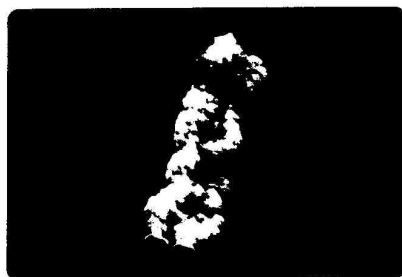
The double helix of a strand of DNA magnified millions of time, generated by a scanning tunnelling microscope (with a probe tapered to the thickness of an atom), at California Institute of Technology. Image first published in *Nature*, 1990.
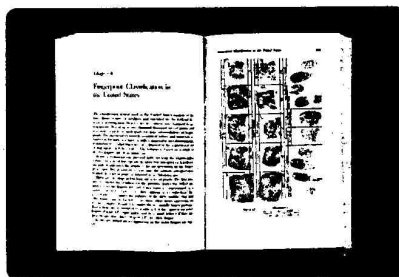
Fingerprint card shown in *Fingerprint Techniques* by Andre A. Moenssens. New York: Chilton, 1971.
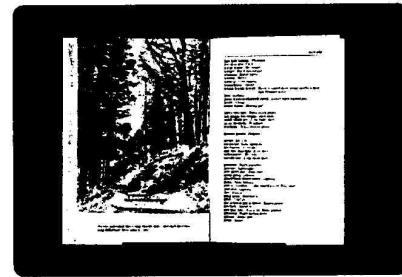
Spread from *An A-Z of Bird Song* by John Bevis, Norfolk: Coracle & St. Paulinus, 1995.

raced past Pluto and sped out of our solar system within five hours and twenty minutes, the Hercules constellation is 24,000 light years away – which means that, if any one or thing is there to receive it, and chooses to reply, the response should arrive in about 50,000 years time.
(David Crystal, *Cambridge Encyclopedia of Language*.)

DNA
The Arecibo message represents an early and scientific manifestation of typography's new matrix, the networked intersections of the computer. Among the basic information about us, our planet and its solar system, the astronomers of Arecibo included a DNA helix. For genetic science, our genes are a signal transmitting messages from the past. On the radio again, I once listened to scientist Steve Jones giving an account of the language of genetics.

… a set of instructions passed from generation to generation. It has a vocabulary – the genes themselves; a grammar – the way in which the inherited information is arranged; and a literature – the thousands of instructions needed to make a human being. The language is based on the DNA molecule, the famous double helix; the icon of the twentieth century. It has a simple alphabet; not 26 letters, but just four, the four different DNA bases – A, C, G and T for short. (Adrenine, Cytosine, Guanine,

to produce typographies of the unseeable that enable us to read backwards into the past a history of the planet and of the body. The obituary, last year, of legendary climatologist Hubert Lamb described the exegetical approach of a methodical "reader".

Using all available archives, evidence of ancient forests, the movements of primitive peoples, the growth of civilisations and their agriculture, fossil pollen distribution and other information including some of the earliest radio-carbon dating, H. H. Lamb painstakingly unravelled and reconstructed the slowly moving patterns and timescales of past climatic changes. Change, he found, is the norm.
("H. H. Lamb, A change in the weather," Anthony Tucker, obituary in *The Guardian*, 30 June 1997.)

Strange sets in ranges of size
I could also imagine my favourite typographies laid out according to a chronology that moves forwards from a distant past towards what is in many ways an equally distant present. Any history of typography is conflated within the histories and pre-histories of writing. Historian Denise Schmandt-Besserat of the University of Texas has collected "tokens" in the Uruk region of Iran that complete some blank passages in the evolution of writing. This is a typography that precedes writing,

clay counters used in the accounting of agricultural goods, catalogued into various typological subsets such as cones and discs, further grouped by additional markings, perforations and pictograms. These tokens seem to suggest how even in a world without written words a kind of typography would emerge. Idiosyncratic typologies and topologies, strange sets in ranges of size, offered as language and/or currency: types of metals, shades of green, sources of energy, ice-cream, stones, butterflies, clouds, false moustaches, ways of walking. A typography that re-imagines the quality of our relationship to the things around us by being of those things. In Stanley Morison's book *Fra Luca de Pacioli*, the Renaissance scholar speaks of *"l'alphabetico*
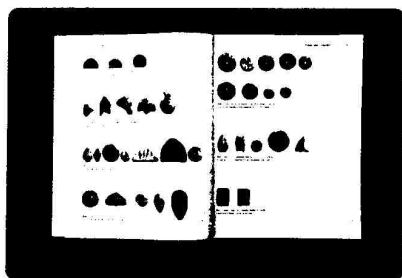
Spread showing clay tokens, from *Before Writing* by Denise Schmandt-Besserat, University of Texas, 1992.

An edition of the Talmud from Sterling Memorial Library, Yale University.

Spread from *Underweysung der Messung* by Albrecht Dürer, Nurenberg, 1525 (Beinecke Library of Rare Books and Manuscripts, Yale University).
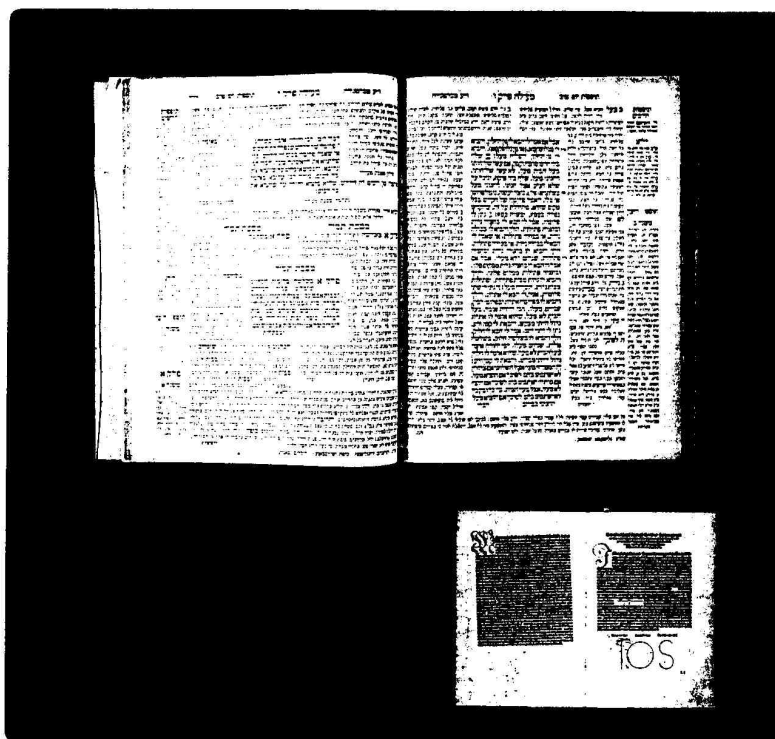
dignissimo antico" [the most excellent ancient alphabet] as if it might never have happened:

As a speculation Fra Luca de Pacioli – in *De Divina Proportione* [On the Divine Proportion] printed 1509 – ventures that letters were invented by chance . . . He proves his point by saying that the porphyry tomb opposite the Rotunda guarded by the two lions carries cyphers and signs of pens, knives, animals, shoe soles, birds and pots, all used as letters. By way of concluding the whole matter, the Friar announces that at last men "fixed upon those which at present they use". (Stanley Morison, *Fra Luca de Pacioli.* New York: The Grolier Club, 1933.)

The *En Sof* and the Talmud
In the tradition of the Kabbalah, the idea that the letters happened more or less by chance is impossible. The ancient Hebrew *Sefer Yetzirah*, or *Book of Creation*, ascribes a name to the spirit that began all things. The *En Sof*, the Infinite One, began them through a mystical arrangement of letters:

Twenty-two Foundation letters: He engraved them, He carved them, He permuted them, He weighed them, He transformed them, and with them, He depicted all that was formed and all that would be formed.

(Aryeh Kaplan, *Sefer Yetzirah*, Samuel Weiser, 1990, thanks to Janet Zweig, "Ars Combinatoria", *Art Journal*, Fall 1997.)

The theological idea of the world as a book, and of a universe created through a manipulation of letters, is central to the Scriptures, and is particularly acute to Talmudic scholarship. The typographical layout of the Talmud is surprising in the way that it articulates a relationship between reading and writing. The first version was produced by the eminent Venetian firm of Daniel Bomberg between 1520 and 1523. Its layout contains separate commentaries on both inner and outer margins, with other discussions inserted throughout. In other words, the text and its readings sit side by side on the printed page.

ASCII text
The reduction of language to the pulse-no pulse of zeroes and ones is a return to the *Sefer Yetzirah*'s theme of a world created by the Infinite One, the *En Sof*. Since computer memories are most often structured in eight-bit units, or bytes, it makes sense to represent an alphanumeric symbol within a single byte.

The American Standard Code for Information Interchange – ASCII – has become the predominant character set for encoding, always preferred by hackers to more complex alternatives such as EBCDIC. Hackers require an absolute precision when talking about
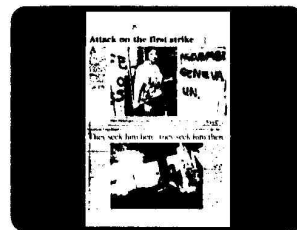
Not Van Doesberg, but "a typeface for machine recognition" developed by Epps and Evans, which avoids curves and diagonals. From *The Visible Word*, Herbert Spencer, 1968.
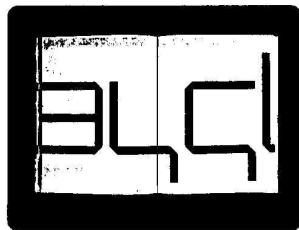
Spread from *Wim Crouwel – Mode en Module* by Frederike Huygen and Hugues C. Boekraad. Rotterdam: Uitgeverij 010, 1997.
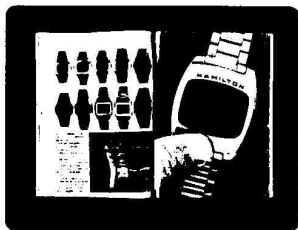

Left: Pulsar digital watches, 1971. Right: the first Pulsar Hamilton digital watch, 1969.

Newspaper cuttings showing acts of protest that use writing. 1989. Top: graffiti by Susan Komisaruk. Below: handwriting by activist Mordechai Vanunu.

Television image (printed in newspaper under the headline "Battle sets sky alight") of points of light over Baghdad during the Gulf War, 1991.
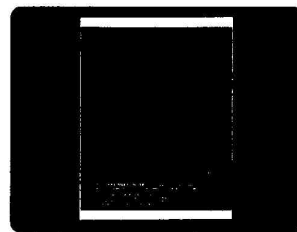
"You are here: Museu." Laura Kurgan strode letters on the roof of the Museum of Contemporary Art, Barcelona, 1995.

keyboard characters, so jargon names for ASCII characters have become another spoken typography: "bang" for !, for example, and "crunch" for #, "splat" for *, "twiddle" for ~ and so on.

In ASCII the word "Typography" can be rewritten in binary form as (T) 01010100 (y) 01111001 (p) 01110000 (o) 01101111 (g) 01100111 (r) 01110010 (a) 01100001 (p) 01110000 (h) 01101000 (y) 01111001

Wim Crouwel and the Hamilton Pulsar Digital Watch

In the 1960s Wim Crouwel investigated a computer-generated typography for which its form construction would be a set of units based on the assembly of organic cells. This typography would reflect both the technology and the kind of society that had shaped it, a typography that incorporated the ability of the computer to assume spatial and temporal calculations, and that would not, as he put it, "be anachronistic to the space craft in which the first men landed on the moon". In 1969, alluding to a four-dimensional typography that might be laser-generated, Crouwel asked "if we could then still maintain the term typography"?

Like all reworkings of the alphabet, Crouwel's typefaces display certain passages of their own history, both long term and immediate. Among others, Théo van Doesburg's 1919 geometric typeface, its characters formed from a square of 25 units, is clearly evident. As with much of the work of De Stijl, the geometry of the typeface's grid anticipated the prevalence today of the television and computer monitor. The kind of typography that Crouwel and his programmers were exploring emerged most visibly through the Hamilton

Pulsar digital watch. In 1969, Hamilton produced the first LED watch, a prototype for the Hamilton Pulsar which came out in 1971. For me, the pulsing liquid-crystal transmutation of a full character set through combinations of three horizontal and four vertical lines marked typography's finest hour.

Laura Kurgan

In 1995, for the opening of architect Richard Meier's Museum of Contemporary Art in Barcelona, the New York artist Laura Kurgan made a strange typography using a "global positioning system" (GPS) and any passing satellites. Recalling the typographical walks of a character in Paul Auster's *New York Trilogy*, who outlines the form of a letter each day by walking the orthogonal streets of Manhattan, Kurgan "inscribed" the word *museu* into the building by walking its alphabetic contours on the roof. "The structure of the word is built into the building, like the characters latent in the LED display of a digital clock ... Dot by dot, the GPS data points are transformed into the word that names the building and the institution." ("You are here: Museu" in Laura Kurgan and Xavier Costa, eds., *You Are Here: Architecture and Information Flows*, Barcelona: MACBA, 1995, pp 121-131.)

Kurgan's typography takes the idea of reading and writing at its most ordinary, and attaches it to the invisible writing of networks and dataflows, the connected world that we are still learning to see and orient (or even disorient) ourselves within. Today, typographic writing celebrates the lack of distinction between interaction and our sense of being acted upon.
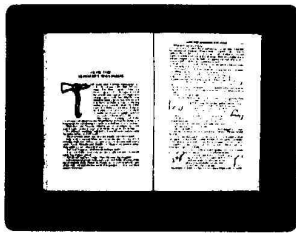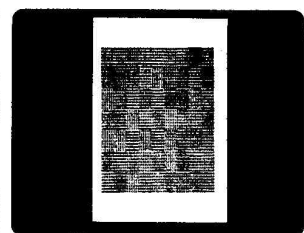
"How the Alphabet was made", a spread from *The Jungle Book* and *Just So Stories* by Rudyard Kipling.
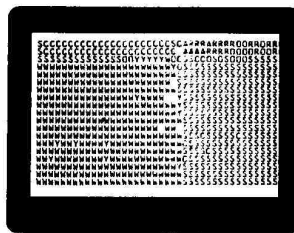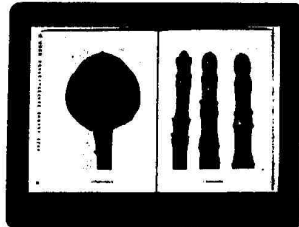

Detail from map produced by US Department of Agriculture. The "fields of letters" show crop distribution.
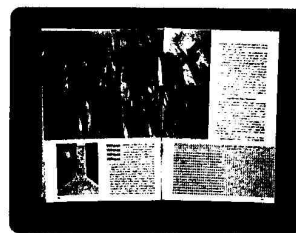

Spread containing detail shown in T.

Typewritten text from Carl Andre's STILLANOVEL, a book of 98 poems published in 1972.

Left: Cynara scolymus L (Artichoke. Young flower head). Right: Aesculus parviflora (Buckeye with small flowers. Young shoots) from Karl Blossfeldt, *The Alphabet of Plants*, Schirmer, 1997.

"V" formation of migrating Canada Geese from the author's *M for Magnetic*.
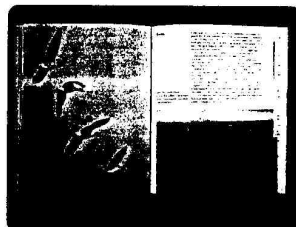
Spread from *Op de Grens van Zout en Zout* by Jan van de Kam and Wim Wolff. Amsterdam: Ploegsma 1972.
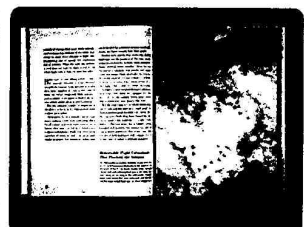
Spread from *The Birds*, Young Readers Edition. New York: Time-Life Books, 1967.

The sound of the body meets the voice of our electronic infrastructure in the uncanny vernacular of shopping: a friendly message on a supermarket receipt – "THANK YOU!" – or the synthesised voice of a Japanese vending machine: "… and remember, cigarettes make a wonderful gift …"

Quick brown fox …
As a child I knew the mysterious formation of the alphabet and its connection to the land, from Kipling's *Jungle Book* and *Just So Stories*. On the banks of the Wagai, Taffy and her Dad scratch the shapes of the alphabet into birch bark, based on drawings of carp, snakes and other sacred animals. In later reading I found more subtle foregrounding of the alphabet and its role within the construction of literary writing, a device that points to the organising principle of the system and its disruptions. At its most reductive, in a scenario that could come from Beckett but is in fact from *Sesame Street*, Bert finds Ernie at a typewriter having just completed what he calls "the greatest story ever told".

"Here goes," says Ernie, reading from the beginning: "A, b, c, d, e, f, g …" He then cries through the sad part, *"h, i, j, k, l, m, n …"*, shouts the letters of the action sequence, "O! P! Q! R! S! T! U! …" and collects himself for the solemn conclusion, "… v, w, x …" stopping at "… y …" for risk of spoiling the end.

The idea of bringing the primary text to the front, of a text that allows all the other texts to be possible or impossible, is demonstrated by pangrams, the texts that typographers use to "test" their letters. "Veldt jynx grimps waqf zho buck" is an example of a pangram with no characters repeated. Another way of accentuating the code forms the basis of a typographical work by sculptor Carl Andre, in which squares of typewritten letters suggest the "colours" of writing. The result is a "texture" that meteorologists knew already from maps produced in the 1960s by the US Department of Agriculture. In order to reveal precise crop distribution, recordings were taken of the "spectral" signature of plants. Depicting rows of C for corn, A for alfalfa, O for oats, R for red clover, Y for rye, W for wheat, S for soy beans, and so on, the resulting maps were fields of letters connected back to the land.

Walking is reading. Writing is walking …
What am I reading now? Iain Sinclair, a walker in and a reader of the City of London cuts a "V" shape across the metropolis, from Stoke Newington in the North to Greenwich in the southeast and back across the river to Chingford Mount. (The walk, in *Lights Out for the Territories*, is marred by a torrent of rain, or, as he at one point puts it: "Weather set to erase all codes.") The V, which he says has nothing to do with *V*, the novel by Thomas Pynchon, causes him to muse upon the idea of collecting an alphabet library.

"From *A* by Louis Zukofsy, through John Berger's *G* and *The Story of O*, to *Z*, the novelisation of the Costa Gavras' film.' … And Alberto Manguel, in his book *A History of Reading*, describes a grand vizier of tenth-century Persia who travels with a library of 117,000 volumes "carried by a caravan of 400 camels trained to walk in alphabetical order". A fantastic image of typography on the move. *e*