

<http://www.shadycharacters.co.uk/2011/07/the-symbol-part-1-of-2/>
<http://www.shadycharacters.co.uk/2011/06/the-ampersand-part-2-of-2/>
<http://www.shadycharacters.co.uk/2011/07/the-ampersand-part-2%C2%BD-of-2/>

Shady Characters

The secret life of punctuation

The @-symbol, part 1 of 2

Like the [ampersand](#), the '@' symbol is not strictly a mark of punctuation; rather, it is a logogram or grammalogue, a shorthand for the word 'at'. Even so, it is as much a staple of modern communication as the semicolon or exclamation mark, punctuating email addresses and announcing Twitter usernames. Unlike the ampersand, though, whose journey to the top took two millennia of steady perseverance, the at symbol's current fame is quite accidental. It can, in fact, be traced to the single stroke of a key made almost exactly four decades ago. In 1971, Ray Tomlinson was a 29-year-old computer engineer working for the consulting firm Bolt, Beranek and Newman.^[1] Founded just over two decades previously,^[2] BBN had recently been awarded a contract by the US government's Advanced Research Projects Agency to undertake an ambitious project to connect computers all over America.^[3] The so-called 'ARPANET' would go on to provide the foundations for the modern Internet, and quite apart from his technical contributions to it, Tomlinson would also inadvertently grant it its first global emblem in the form of the '@' symbol.

The origins of the ARPANET project lay in the rapidly advancing state of the art in computing and the problems faced in making best use of this novel resource. In the early days, leaving a ruinously expensive mainframe idle even for a short time was a cardinal sin, and a so-called 'batch processing' mode of operation was adopted to minimise down time. Each computer was guarded by a high priesthood of operators to which users submitted their programs (often carried on voluminous stacks of cards) for scheduling and later execution.^[4] The results of a such a 'batch job' might arrive hours or days later, or sometimes not at all: a single error in a program could ruin an entire job without any chance for correction. As time wore on, however, processing power grew and costs fell — by the mid-1960s, room-sized mainframes had been joined by newly compact 'minicomputers' measuring a scant few feet on a side^[5] — and the productivity of users themselves, rather than of the computers they programmed, became the greatest problem. In place of batch processing arose a new 'time-sharing' model wherein many users could 'talk' at once to a single computer, typing commands and receiving immediate feedback on their own personal terminal.^[6]

The most common terminal design of the era was the 'teletype',^[*] a combined keyboard and printer on which a user could type commands and receive the computer's printed reply.^[7] There were terminals which used other means to display input and output — notably cathode ray tubes, or CRTs — but teletypes were near-ubiquitous, spawning hardened military versions and 75-pound 'portables'.^[8] Unlike today,

where a keyboard and display normally occupy the very same desk as their host computer, teletypes were routinely separated from their hosts by hundreds of miles; a teletype might just as easily be in the next city as the next room, communicating with its host computer over a telephone line.

Despite this ability to be geographically distant from its host, each terminal was still inextricably tethered to a single computer. Moreover, many models of computer understood different sets of commands, making it difficult or even impossible to move programs from one model to another. Robert Taylor, the head of ARPA's Information Processing Techniques Office, was well acquainted with both problems. His office contained three teletypes connected to three different computers in Santa Monica, Berkeley and MIT respectively, and each one spoke its own unique dialect of commands. Taylor said of the situation:

For each of these three terminals, I had three different sets of user commands. So if I was talking online with someone at S.D.C. [of Santa Monica] and I wanted to talk to someone I knew at Berkeley or M.I.T. about this, I had to get up from the S.D.C. terminal, go over and log into the other terminal and get in touch with them. [9]

Thus, despite their ever-increasing complexity and utility, for the most part computers still lived in splendid isolation. It was the combination of these factors — the attractions of ever-increasing power and

flexibility, impeded by a frustrating inability to share information between computers — which spurred ARPA to investigate a network linking many computers together. As Taylor concluded:

I said, oh, man, it's obvious what to do: If you have these three terminals, there ought to be one terminal that goes anywhere you want to go where you have interactive computing. That idea is the ARPANET.[\[9\]](#)

In 1968, the agency solicited bids from 140 interested parties to build the experimental network.[\[10\]](#) Although it would not be the first computer network, it was by far the most ambitious: not only would it span the continental United States (and, eventually, cross the Atlantic via satellite link[\[11\]](#)) but it would be the first to use a novel and as yet untested technique called ‘packet switching’ on a grand scale. Packet switching relied not on a direct connection between sender and recipient, but instead sent messages from source to destination by a series of hops between sites adjacent on the network, fluidly routing them around broken or congested links.[\[12\]](#)

Some of the heavyweights of the time did not even bid. IBM, firmly wedded to the traditional (and expensive) mainframe computer, could not see a way to profitably build the network,[\[13\]](#) while Bell Labs’ parent company AT&T flatly refused to believe that packet switching would ever work.[\[14\]](#) In the end, an intricately detailed 200-page proposal submitted by relative underdogs BBN secured the contract, and construction of the ARPANET began in 1969. The project was a success,

and by 1971 nineteen separate computers were communicating across links spanning the United States.[\[15\]](#)



An internet router, circa 1965: a wardrobe-sized Interface Message Processor, or IMP, modified by Bolt, Beranek and Newman from a Honeywell DDP-516 'minicomputer'. Each node in the fledgling ARPANET consisted of an IMP. (Image courtesy of [Jurvetson on Flickr](#).)

Working in BBN's headquarters, Ray Tomlinson had not been directly involved in building the network, but was instead employed in writing programs to make use of it.^[16] At the time, electronic mail already existed in a primitive form, working on the the same principle as an office's array of pigeon-holes: one command left a message for a named user in a 'mailbox' file, and another let the recipient retrieve it. These messages were transmitted temporally but not spatially, and never left their host computer — sender and recipient were tied to the same single machine.[?]

Taking a detour from his current assignment, Tomlinson saw an opportunity to combine this local mailbox system with the fruits of some of his previous work. He used CPYNET, a command used to send files from one computer to another, as the basis for an improved email program which could modify a mailbox file on *any* computer on the network, but the problem remained as to how such a message should be addressed.^[16] The recipient's name had to be separated from that of the computer on which their mailbox resided, and Tomlinson was faced with selecting the most appropriate character to do so from the precious few offered by the keyboard of his ASR-33 teletype.

Looking down at his terminal, he chose the '@' character.



One of the ubiquitous Teletype model ASR-33 teleprinters. Unlike modern keyboards, the '@' symbol shares a key with the letter 'P'. (Image courtesy of [Steve Elliott on Flickr](#).)

With four decades of email behind us, it is difficult to imagine anyone in Tomlinson's situation choosing anything *other* than the '@' symbol, but his decision to do so at the time was inspired in several ways. Firstly, it was extremely unlikely to occur in any computer or user names; secondly, it had no other significant meaning for the TENEX operating system on which the commands would run, `[+]` and lastly, it read intuitively — user 'at' host — while being just as unambiguous for the computer to decipher. His own email address, written using this newly formulated rule, was `tomlinson@bbn-tenexa`, signifying the user named `tomlinson` at the machine

named `bbn-tenexa`, the first of the company's two PDP-10 mainframes running TENEX.[\[17\]](#)

With the modifications to his mail program completed and an addressing scheme decided, Tomlinson typed out a brief message on the second machine and sent it to his mailbox on the first. The message was broken down into packets as it entered the ARPANET, which then routed each packet individually to its destination and reassembled them into a complete message at the other end, before it was finally appended to his mailbox on `bbn-tenexa`. In real terms, the two machines occupied the same office, and the first network email travelled a physical distance of only around fifteen feet.[\[18\]](#) Perhaps appropriately to this anticlimactic first step, Tomlinson has since forgotten the contents of the message:

I have seen a number of articles both on the internet and in print stating that the first email message was "QWERTYUIOP". 'Taint so. My original statement was that the first email message was something like "QWERTYUIOP". It is equally likely to have been "TESTING 1 2 3 4" or any other equally insignificant message.[\[19\]](#)

Half-fearing the wrath of his superiors were they to discover his pet project, Tomlinson initially kept his invention to himself. As a colleague recalled, "When he showed it to me [...] he said, 'Don't tell anyone! This isn't what we're supposed to be working on.'"[\[20\]](#)

His concern was misplaced: email quickly became the fledgeling network's first 'killer app', gaining influential converts such as ARPA's director Steve Lukasik. Lukasik took to travelling with one of the aforementioned 'portable' teletypes so he could check his mail even when out of the office,^[21] and his managers quickly found email was the only reliable way to keep in touch with him.^[22] This viral quality led to an explosion in the use of email across the network, and by 1973 — only two years after the first email was sent from one side of Ray Tomlinson's office to the other — it accounted for three-quarters of all traffic on the ARPANET.^[23]

Tomlinson's makeshift programs were replaced many times over as the ARPANET expanded and ultimately evolved into the modern Internet, but the use of the '@' symbol remained a constant. As one half of an indivisible double act with the world wide web, email became synonymous with the Internet as a whole, and the '@' symbol's place in history was assured.

How, though, how did the '@' symbol find its way onto the keyboard of Ray Tomlinson's ASR-33 teletype and so pass into Internet history? Moreover, where did it come from in the first place?

- ^[1] Smith, Gina, "Unsung innovators: Ray Tomlinson, who put the @ sign in every e-mail address," in *Computerworld*. Framingham, MA: Computerworld Inc., 2007.

<<http://www.computerworld.com/s/article/9046658/>> [Bibtex](#)

- [2] K. Hafner and M. Lyon, “The Third University,” in *Where wizards stay up late : the origins of the Internet*, Pocket Books, 2003, p. 82.
<<http://www.worldcat.org/isbn/9780743468374>> [Bibtex](#)
- [3] K. Hafner and M. Lyon, “The Third University,” in *Where wizards stay up late : the origins of the Internet*, Pocket Books, 2003, p. 102.
<<http://www.worldcat.org/isbn/9780743468374>> [Bibtex](#)
- [4] P. E. Ceruzzi, “Computing Comes of Age, 1956-1964,” in *A history of modern computing*, The MIT Press, 2002, p. 74.
<<http://www.worldcat.org/isbn/9780262032551>> [Bibtex](#)
- [5] P. E. Ceruzzi, “From Mainframe to Minicomputer, 1959-1969,” in *A history of modern computing*, The MIT Press, 2002, p. 133.
<<http://www.worldcat.org/isbn/9780262032551>> [Bibtex](#)
- [6] P. E. Ceruzzi, “The “Go-Go” Years and the System/360, 1961-1975,” in *A history of modern computing*, The MIT Press, 2002, p. 154.
<<http://www.worldcat.org/isbn/9780262032551>> [Bibtex](#)
- [7] J. Daintith and O. U. Press, “Teletypewriter,” in *Oxford dictionary of computing*, Oxford University Press, 2004, p. 529.
<<http://books.google.co.uk/books?id=Hay6vTsGFAsC>> [Bibtex](#)
- [8] “Want To Take Your Teletype Around With You?,” in *Computerworld*. Cambridge, MA: Computerworld Inc., 1968, pp. 4+.
<<http://news.google.com/newspapers?id=rdtOAAAAIBAJ&sjid=IE4DAA AAIBAJ&pg=6190\%2C1492488>> [Bibtex](#)
- [9] Markoff, John, “OUTLOOK 2000: TECHNOLOGY & MEDIA: TALKING THE FUTURE WITH: Robert W. Taylor; An Internet Pioneer

Ponders the Next Revolution,” in *New York Times*. New York: New York Times Company, 1999.

<<http://www.nytimes.com/1999/12/20/business/outlook-2000-technology-media-talking-future-with-robert-w-taylor-internet.html>> [Bibtex](#)

- [10] S. Segaller, “Something Seductive,” in *Nerds 2.0.1: a brief history of the Internet*, TV Books, 1998, p. 69.
<<http://books.google.com/books?id=GLruAAAAMAAJ>> [Bibtex](#)
- [11] S. L. Kota, K. Pahlavan, and P. A. Leppänen, “Overview of Broadband Satellite Networks,” in *Broadband Satellite Communications for Internet Access*, 1 ed., Springer, 2003.
<<http://www.amazon.com/exec/obidos/redirect?tag=citeulike07-20&path=ASIN/1402076592>> [Bibtex](#)
- [12] T. Johnson, “Electronic post for switching data,” *New Scientist*, vol. 70, iss. 1000, 1976.
<<http://books.google.com/books?id=4MOHdMUkkYkC&pg=PA351#v=onepage>> [Bibtex](#)
- [13] K. Hafner and M. Lyon, “A Block Here, Some Stones There,” in *Where wizards stay up late : the origins of the Internet*, Pocket Books, 2003, p. 80. <<http://www.worldcat.org/isbn/9780743468374>> [Bibtex](#)
- [14] Mayo, Keenan and Newcomb, Peter, “An Oral History of the Internet: How the Web Was Won,” in *Vanity Fair*. Condé Nast Digital, 2008.

<<http://www.vanityfair.com/culture/features/2008/07/internet200807>>

[Bibtex](#)

- [15] G. O'Regan, "The ARPANET," in *A brief history of computing*, Springer, 2008, p. 182.
<<http://books.google.co.uk/books?id=o81H96F1enMC>> [Bibtex](#)
- [16] Tomlinson, Ray, "The First Email." 2011.
<<http://openmap.bbn.com/~{}tomlinso/ray/firstemailframe.html>> [Bib
tex](#)
- [17] Ward, Mark, "H@ppy birthday to you," in *dot.life*. London: BBC, 2001.
<[http://news.bbc.co.uk/1/hi/in_depth/sci_tech/2000/dot_life/1586229.s
tm](http://news.bbc.co.uk/1/hi/in_depth/sci_tech/2000/dot_life/1586229.s
tm)> [Bibtex](#)
- [18] Hafner, Katie, "Looking Back; In the Beginning, a Note to Himself," in *New York Times*. New York: New York Times Company, 2001.
<[http://www.nytimes.com/2001/12/06/technology/looking-back-in-the-
beginning-a-note-to-himself.html](http://www.nytimes.com/2001/12/06/technology/looking-back-in-the-
beginning-a-note-to-himself.html)> [Bibtex](#)
- [19] Tomlinson, Ray, "Frequently Made Mistakes." 2011.
<<http://openmap.bbn.com/~{}tomlinso/ray/mistakes.html>> [Bibtex](#)
- [20] Cavender, Sasha, "ASAP Legends," in *Forbes*. New York: Forbes.com Inc., 1998.
<<http://www.forbes.com/asap/1998/1005/126.html>> [Bibtex](#)
- [21] N. Newman, "How the Government Created the Internet," in *Net loss: Internet prophets, private profits, and the costs to community*,

Pennsylvania State University Press, 2002, p. 57.

<<http://books.google.co.uk/books?id=wL2UDIPp2dMC>> [Bibtex](#)

- [22] J. Abbate, “”The Most Neglected Element”: Users Transform the ARPANET,” in *Inventing the Internet*, MIT Press, 2000, pp. 107-108.

<<http://books.google.co.uk/books?id=E2BdY6WQo4AC>> [Bibtex](#)

- [23] I. Tuomi, “Combination and Specialization,” in *Networks of Innovation: Change and Meaning in the Age of the Internet*, Oxford University Press, 2006, p. 139.

<http://books.google.co.uk/books?id=KloC-n_yvRUC> [Bibtex](#)

1. [*] This type of combined keyboard/printer terminal device is more correctly called a ‘teleprinter’ or ‘teletypewriter’.[7] ‘Teletype’ is an example of synecdoche, named for a prominent teleprinter manufacturer of the time.
2. [†] The ‘@’ symbol did have some unfortunately incompatible meanings for other operating systems. Perhaps the most infamous was ‘erase all preceding characters on this line’ on Multics, the predecessor to UNIX.

This entry was written by [Keith Houston](#), posted on July 24, 2011 at 12:45 pm, filed

under [writing](#) and tagged [@-symbol](#). Bookmark the [permalink](#).

The Ampersand, part 2 of 2

From its ignoble beginnings a century after Tiro's scholarly *et*, the ampersand assumed its now-familiar '&' form with remarkable speed even as the Tironian *et* stayed rigidly immutable.

The symbol's visual development is perhaps best documented in a formidable piece of typographical detective work carried out by one Jan Tschichold, a graphic designer born in Leipzig in 1902.^[1] Famed as an iconoclastic rule-maker and breaker, Tschichold swung from extreme to extreme in a career which rewrote the rules of book design and typography. His 1928 manifesto *Die neue Typographie*^[2] called for the abandonment of traditional rules of typesetting in favour of rigorous Modernism. Then, arrested by the Nazis in 1933 as a 'cultural Bolshevik',^[3] Tschichold reacted strongly to his ill-treatment at the hands of the Third Reich and repudiated his earlier work, seeing 'fascist' elements in the strictures of Modernism. In the process, he earned the ire of his contemporaries as a betrayer of his own principles.^[4] Despite this, his work remains influential even today.

Tschichold's masterful contribution to the study of the ampersand came in 1953 in the form of a short booklet named *Formenwandlungen der &-Zeichen*,^[5] or *The ampersand: its origin and development*,^[6] as its English translation would have it. Drawing on earlier works by Paul Standard^[7] and Frederick Goudy,^[8] Tschichold collected hundreds of ampersands to chronicle the character's evolution from 1st century

Pompeian graffiti, through medieval manuscripts, and finally to 19th century printed forms. Even a single page of Tschichold's menagerie of 'and'-signs contains an embarrassment of typographical riches:



1



2



3



4



5



6



7



8



9



10



11



12



13



14



15



16



17



18



19



20



21



22



23



24



25



26



27



28



29



30



31



32



33



34



35



36



37



38



39



40



41



42



Collected ampersands in Jan Tschichold's *The Ampersand: its origin and development* (1957).

Notable here are (1) Pompeiian graffiti; (8) an insular majuscule ampersand from the 7th century *Book of Kells*, and (13) an 8th century Merovingian ampersand, already recognisable as the modern ampersand form. (Image courtesy of [Linotype GmbH](#).)

In its serried ranks of ampersands, Tschichold's paper traces the divergent forms the 'and'-sign had assumed by the time the printing press embossed them permanently in metal. Each of the main families of type — roman, italic and Gothic, or blackletter — boasted its own unique 'and'-sign.

So-called 'roman' type — the familiar upright letterforms used almost universally to set long-form texts such as books, newspapers and websites — brings with it perhaps the most regular and recognisable ampersand ('&'). Inspired by, and erroneously named for, [*] what was thought to be an old Roman script, the first roman typefaces were in fact based on the 9th century Carolingian *minuscule* of the monk [Alcuin](#). [9] Marrying Alcuin's elegant lower-case alphabet to the square, chiselled capitals beloved of ancient Roman stonemasons, [10] roman type imparted a lightness and readability previously absent from the dense blackletter of early printed documents. Like those officious Roman capitals, the ampersand which accompanies the roman alphabet is solid, well defined and recognisable.



Roman (top row) and italic (bottom row) ampersands. From left to right: Jonathan Hoefler's *Hoefler Text* (Hoefler & Frere-Jones), *Palatino* by Hermann Zapf (Linotype), Frederick W. Goudy's *Goudy Old Style* (URW) and Monotype's *Garamond* revival.

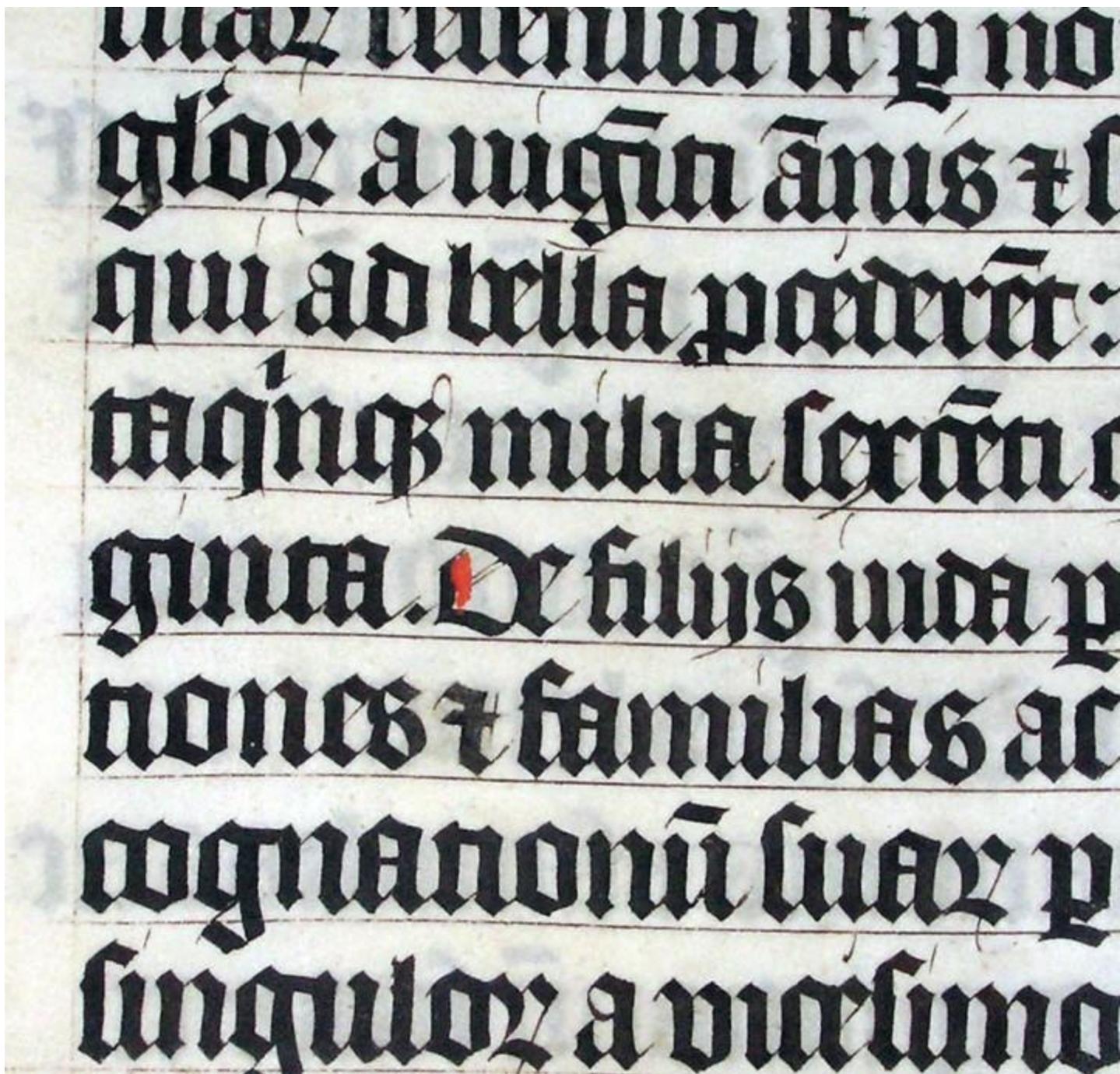
In contrast, the ampersand associated with italic typefaces is a more playful symbol which wears its heritage as an *et*-ligature on its sleeve. Often thought of as ancillary to roman characters, italics originally comprised an entirely separate alphabet modelled on the fluid, informal handwriting of a Renaissance scribe and copyist named Niccolò Niccoli.^[11] The sloping, condensed letterforms of the first italic typefaces made more efficient use of paper than their roman counterparts and due to this many early printed books were set entirely in italics.

Strange as it may seem now, the earliest italic fonts came with lowercase letters only; the solution was to set *Italic Lowercase With Roman Capitals*.^[12] Not only that, but even after italics had acquired proper uppercase letterforms, the combination of roman and italic type in the same work — one for contrast or emphasis

and the other for body text — did not become common until the 17th century.^[13]

Italic letterforms diverge from their roman counterparts in small but noticeable ways: compare *aefkpvwz* with ‘aefkpvwz’, for example.^[†] Though not all these variations are present in all italic alphabets, true italics (as opposed to sloped, or ‘oblique’ roman letterforms) will always display at least some of these distinguishing features. Similarly, the italic ampersand has become something of a playground for typographers, and many italic ampersands are intricately designed works of art when compared to their conformist roman counterparts.^[14]

Lastly, and somewhat aberrantly, the Gothic, or blackletter style of writing — characterised by angular letterforms and densely packed text — more commonly forewent the ampersand altogether and instead made use of the Tironian et.



A bible written in Belgium in 1407, with the Tironian et visible in the second and sixth lines.

Curiously, the word *et* is used in full at the end of the final line. (Public domain image taken

by Adrian Pingstone and courtesy of [Wikimedia Commons](#).)

Blackletter shares a common ancestor with roman type: while the typecutters of the Italian Renaissance reproduced the original 9th century letterforms of Carolingian *minuscule* in their ‘roman’ typefaces, blackletter instead represents the evolution of Alcuin’s alphabet as it continued in daily use.^[15] Most prevalent in Germany and Northern Europe, when Johannes Gutenberg printed his forty-two-line bible in 1455, intended to mimic a handwritten manuscript, blackletter was the obvious alphabet in which to set it.^[16]

The Tironian et garners a scant forty-eight entries in Tschichold’s taxonomy (most of them in blackletter) compared to over two hundred ampersands, and this is symptomatic of its ultimate marginalisation in the ill-fated blackletter alphabet. While the ampersand went from strength to strength, providing a canvas on which calligraphers and typographers could indulge their artistic proclivities, the Tironian notes suffered near-extinction in the Middle Ages, victim of a curious linguistic witch hunt. The secrecy and cipher-like nature of both traditional runic writing and shorthand did not sit well with the distrust of witchcraft and magic prevalent in those times, and Tiro’s system fell out of use.^[17] Briefly revived in the 12th century, and later inspiring a series of copycat notations in English and other languages,^[18] the *notae Tironianae* were nevertheless a spent force. The Tironian et was the sole survivor, soldiering on in blackletter type until it too fell out of use in the mid 20th century.^[19] Ironically, this supremely Germanic alphabet was finally banished by a 1941 Nazi

decree condemning it as *Judenlettern*, or ‘Jewish characters’,^[20]and today it appears mainly in newspaper mastheads and the occasional document intended to convey a Teutonic flavour.

Today, the ampersand reigns almost supreme, with the Tironian et surviving in the wild only in Irish Gaelic:



An Irish Gaelic road sign showing Tironian et and ampersand. (Image courtesy of [Stan Carey](#).)

Like this road sign, the Tironian et showed the way, but the ampersand was the real destination.

- ^[1] J. Tschichold and R. McLean, “Introduction to the English Language Version,” in *The New Typography: A Handbook for Modern Designers*, University of California Press, 2006, p. xv.
<<http://books.google.co.uk/books?id=MmeGat6tJiAC>> [Bibtex](#)
- ^[2] J. Tschichold, *Die neue Typographie : ein Handbuch für zeitgemäss Schaffende.*, Bildungsverband der Deutschen Buchdrucker, 1928.
<<http://www.worldcat.org/oclc/473208365>> [Bibtex](#)

- [3] “Jan Tschichold (German typographer and author) — Britannica Online Encyclopedia,” in *Encyclopaedia Britannica*, The Editors of Encyclopaedia Britannica, Eds. Encyclopaedia Britannica, 2011. <<http://www.britannica.com/EBchecked/topic/607663/Jan-Tschichold>> **Bibtex**
- [4] O. Aicher, “Typographical Warfare,” in *Texts on type : critical writings on typography*, Heller, S. and Meggs, P. B., Eds., Allworth Press, 2001. <<http://www.worldcat.org/isbn/9781581150827>> **Bibtex**
- [5] J. Tschichold, *Formenwandlungen der &-Zeichen.*, Frankfurt am Main: D. Stempel AG, 1953. <<http://www.worldcat.org/oclc/472882333>> **Bibtex**
- [6] J. Tschichold and F. Plaat, *The Ampersand: Its origin and development*, London: Woudhuysen, 1957. <<http://www.worldcat.org/oclc/721129570>> **Bibtex**
- [7] P. Standard and N. Y.). *Typophiles* (New York, *The ampersand : sign of continuity*, George Grady Press, 1936. <<http://www.worldcat.org/oclc/41033164>> **Bibtex**
- [8] F. W. Goudy and F. W. Goudy Collection Library of Congress, *Ands & ampersands, from the first century B.C. to the twentieth A.D.*, *Typophiles*, 1936. <<http://www.worldcat.org/oclc/1584342>> **Bibtex**
- [9] C. U. Clark, “How Our Roman Type Came to Us,” *The North American Review*, vol. 195, iss. 677, pp. 546-549, 1912. **Bibtex**

- [10] R. Bringhurst, “7.2.1 The Renaissance Roman Letter,” in *The Elements of Typographic Style : version 3.2*, Hartley and Marks, Publishers, 2008, pp. 122-123. [Bibtex](#)
- [11] B. L. Ullman, “A Rival System – Niccolò Niccoli,” in *The Origin and development of humanistic script*, Ed. di storia e letteratura, 1974, pp. 59-77. <http://books.google.co.uk/books?id=NE7hMosYD_YC> [Bibtex](#)
- [12] R. Bringhurst, “7.2.2 The Renaissance Italic Letter,” in *The Elements of Typographic Style : version 3.2*, Hartley and Marks, Publishers, 2008, pp. 124-125. [Bibtex](#)
- [13] R. Bringhurst, “3.4 Tribal Alliances and Families,” in *The Elements of Typographic Style : version 3.2*, Hartley and Marks, Publishers, 2008, p. 57. [Bibtex](#)
- [14] Hoefler, Jonathan, “Our Middle Name,” in *typography.com*. New York: Hoefler and Frere-Jones, 2008. <<http://www.typography.com/ask/showBlog.php?blogID=98>> [Bibtex](#)
- [15] B. Bischoff and U. O. Cambridge., “Latin handwriting in the Middle Ages,” in *Latin Paleography : Antiquity and the Middle Ages*, Cambridge University Press, 1995, pp. 127-136. <<http://www.worldcat.org/isbn/9780521367264>> [Bibtex](#)
- [16] “The Appearance of the Bible,” in *The Gutenberg Bible at the Ransom Center*. 2011. <<http://www.hrc.utexas.edu/exhibitions/permanent/gutenberg/html/6.html>> [Bibtex](#)

- [17] Russon, Allien R. and Kuiper, Kathleen and Lotha, Gloria and Young, Grace, “History and development of shorthand (shorthand) — Britannica Online Encyclopedia,” in *shorthand*, The Editors of Encyclop\aedia Britannica, Eds. Encyclopaedia Britannica, 2011. <<http://www.britannica.com/EBchecked/topic/541788/shorthand/53186/History-and-development-of-shorthand#ref512802>> **Bibtex**
 - [18] B. Bischoff and University Of Cambridge, “Latin script in antiquity,” in *Latin Paleography : Antiquity and the Middle Ages*, Cambridge University Press, 1995, pp. 80-82. **Bibtex**
 - [19] T. Rosendorf, “Blackletter,” in *The Typographic Desk Reference*, 1st ed., Oak Knoll Press, 2009, p. 100. **Bibtex**
 - [20] G. Reuveni, “From Reading Books to Consumption of Books and Back Again,” in *Reading Germany: literature and consumer culture in Germany before 1933*, Berghahn Books, 2006, p. 206. <<http://books.google.com/books?id=4KNdCjZ4OZgC>> **Bibtex**
1. [*] The lowercase ‘r’ in the term ‘roman type’ serves to identify the Renaissance type family from its ancient Roman roots.
 2. [†] The differences in italic and roman letterforms you see will depend on the web browser with which you view this page and the set of fonts installed on your computer.

This entry was written by **Keith Houston**, posted on June 26, 2011 at 7:54 pm, filed under **writing** and tagged **ampersand**. Bookmark the **permalink**.

The Ampersand, part 2½ of 2

In all the excitement about the origin of the ampersand and its various visual forms, I ran out of time to discuss the etymology of its name.

This short entry is here to address that omission.

Although the ampersand's creator (if it can be said to have one at all) is **not recorded**, there exists a popular misconception that the symbol's name is taken from 'Amper's and', after a supposed originator.

Mentions of this derivation come from sources as diverse as an 1883 book on *Personal and Family Names* written by one H.A. Long,^[1] and more recently the collaborative, internet-based Urban Dictionary which suggests that the symbol was both invented by and named for a 17th century typesetter called Manfred Johann Amper.^[2] Unfortunately, both claims are undermined by a lack of corroborating evidence, and even more telling, 'Manfred Johann Amper' appears to never have existed.

The real origin of the word 'ampersand' likely owes more to Latin than to French, although it is a far more recent creation than the character which bears its name. During the 19th century, the ampersand was routinely taught as the twenty-seventh letter of the alphabet, and in common with those other letters which formed words by themselves — 'A' and 'I', for example — it was prefixed by the Latin *per se*, or 'by itself'.^[3] Schoolchildren would recite "X, Y, Z, and *per se* and", while particularly bored pupils would not so much recite as slur the final

syllables to yield any one of a dazzling variety of words. This entry from Farmer & Henley's 1905 *Dictionary of Slang and Colloquial English* recorded some of them for posterity:

Ampersand. 1. *The posteriors.* 2. *The sign &; ampersand.* Variants: *And-pussy-and; Ann Passy Ann; anpasty; andpassy; anparse; apersie (a.v.); per-se; ampassy; am-passy-ana; ampene-and; ampus-and; am pussy and; ampazad; amsiam; ampus-end; apperse-and; empersiand; amperzed; and zumzy-zan.*^[4]

'And-pussy-and', 'ampazad', 'zumzy-zan' and their ilk have since fallen by the wayside, leaving 'ampersand' alone to tell a tale of rote learning and enervated schoolchildren.^[5]

A B C D E

F G H I J

K L M N O

P Q R S T

U V W X Y

Z &

The ampersand as the 27th letter of the alphabet, in *My Own Primer, or First Lessons in Spelling and Reading* (1857) by Rev. John P. Carter. (Page image courtesy of the [Michigan State University Libraries](#).)

- [1] H. A. Long, “Birth names,” in *Personal and family names*, Hamilton, Adams & co., 1883, p. 98.
<<http://books.google.co.uk/books?id=EOUIAAAAQAAJ>> [Bibtex](#)
- [2] “ampersand,” in *Urban Dictionary*. Urban Dictionary LLC, 2011.
<<http://www.urbandictionary.com/define.php?term=ampersand>> [Bibtex](#)
- [3] E. S. Sheldon, “Studies and notes,” in *Further notes on the names of the letters*, Ginn & company, 1893, vol. II, p. 158.
<<http://books.google.co.uk/books?id=xyGR7PRq7vIC>> [Bibtex](#)
- [4] J. S. Farmer and W. E. Henley, “Ampersand,” in *A dictionary of slang and colloquial English*, G. Routledge & Sons, limited, 1905, p. 10.
<<http://books.google.com/books?id=VR1AAAAAYAAJ>> [Bibtex](#)
- [5] “ampersand,” in *Oxford Dictionaries Online*. Oxford: Oxford University Press, 2011.
<<http://oxforddictionaries.com/definition/ampersand>> [Bibtex](#)

This entry was written by [Keith Houston](#), posted on July 3, 2011 at 3:16 pm, filed under [writing](#) and tagged [ampersand](#). Bookmark the [permalink](#).