

media archaeology lab

[about](#) [catalog](#) [projects](#) [news](#) [wishlist](#) [visit](#) [donate](#)

Bibliographical Awareness in Art: Joel Swanson's Spacebar

🕒 December 3, 2013 📰 News

Written by James P. Ascher, Doctoral Student, University of Virginia, and solicited in response to Joel Swanson's artist residency for the Media Archaeology Lab which took place in September 2013.



Joel Swanson's "Spacebar"

A nearly white image faces us: a white background, a white oblong plastic rectangle, framed in white, on a white gallery wall. Shading and highlights outline a familiar object, the spacebar. Joel Swanson's *Spacebar* is a cypher and an invitation to examine the mundanely textual. As in much of his work, objects taken for granted are given new light and viewers are encouraged to consider historicity and aesthetics.^[1]

Bibliography, simply put, studies the history and aesthetics of books. The roots, "biblio" and "graph," speak of book-writing, a seeming tautology that asks scholars to make hermeneutic what was merely a carrier. Write not in books, but about books. Terry Belanger explains, "to the book collector, the word bibliography properly means the study of books; a bibliographer is one who studies them."^[2] Modern scholarship further divides bibliography into five types. Enumerative bibliography is the synthetic listing of knowledge; analytical bibliography reconstructs production processes; descriptive bibliography gives detailed accounts of physical structures; textual bibliography endeavors to reconstruct texts and their transmission; and historical bibliography means the historical study of books.^[3] Although recent work has expanded bibliography to include electronic, artistic, even choreographic works, the tools have even more to contribute.^[4] G. Thomas Tanselle provides a framework for considering images as textual transmission, but artistic images can be associative as well as historical.^[5] This essay proposes bibliographical awareness as expanding the semantic resonance of *Spacebar*, demonstrating the role that bibliographical understanding and education can play in the study of art.

I introduce the term “bibliographical awareness” to indicate that the approach here does not deploy the rich, complicated tools of the five forms of bibliography, but that it uses knowledge gleaned from these forms to explore cultural articulations in art. An analytical bibliographical study of *Spacebar* would address the complete production and printing history of the digital print. How was the image captured? How was it edited and printed? What affordances did these technologies allow for the work? A full textual bibliographical study would emerge along those same lines, adding iconography and reception history. These sorts of studies are desperately needed, but require a substantial technical vocabulary and adjunct research not widely known into printing history and the history of technology. Bibliographical awareness, however, aims to gesture to these techniques and identify points of articulation in the art within bibliographical frameworks. But, let us first return to the image of *Spacebar* itself.

The print is a large image of a key, removed from a computer keyboard, and placed on a white background. We are not presented with an entire keyboard, an object of office labor, or typographic characters as we are in Swanson's other works, but a single key removed from its home sitting blank on a blank background.^[6] Other keys would have a letter and a typeface, but the spacebar is unmarked. In some ways the spacebar is the only accurate key. Rarely do the typefaces of the letters appearing on your keyboard match the typefaces of the letters appearing on your screen, except in the case of the spacebar. You push the space bar and a blank appears between words, an icon of breath, of vacancy. While the shape of a spacebar appears symbolic—an arbitrary sign to indicate a space—in the ontology of the keyboard where each character is labeled, it becomes an icon, the smoke that directly traces the presence of fire. Yet, removed from the keyboard the spacebar becomes flummoxed. Without its sister keys, its iconicity is uncertain. Could the key symbolize work? The whole keyboard? Are the rest of the keys covered with non-iconic alien characters that rather than producing similar images on a screen, produce sounds? We are faced with a reification of the materiality of space.

Space isn't required for textuality and is a rather new invention relative to human history. Early manuscripts often leave out spaces between words as in the example of *Vespasian Psalter*.^[7] The first part was written in Latin in the 2nd quarter of the 8th century and has glosses in old English were added in the 9th century. Other parts were written as late as 1480 and glossed as well. The book contains a psalter, a canticle, prefaces, hymns, and liturgical texts in a variety of hands and the beginning is written in *scripto continuo*.^[8] The words flow from one to the next without spaces but with some indication of the new sections. This would be eminently legible to the users who were already familiar with the text, so the lack of space doesn't provide much of a difficulty in reading aloud for service. Although, for a modern reader the lack of spacing can provide alternate readings where the end of one word is smashed into the next, creating new words and confusing philologists.^[9] It is written on vellum, alum-tawed animal skin stretched as thin as paper that is expensive and time-consuming to produce. It might seem that the lack of word spacing is to save material; you can fit more words on a page without spacing, but the text contains margins and illustrations that also consume space. Whatever the reason, some spaces were more important in the text than others. A solid bottom margin to turn pages? Yes. Spaces between all the words? No. Spaces between some of the words in some sections? Sure.

The mere survival of the manuscript through space and time is remarkable. It was previously owned by St Augustine's Abbey, Canterbury, later by William Cecil, 1st Baron Burghley (d. 1598) and finally Sir Robert Cotton (d. 1631).^[10] Sir Robert Bruce Cotton was an English politician who also collected English manuscripts, focusing primarily on historical ones, which he also lent to his friends. His collection was kept at Cotton House in Westminster and on his death, his son Thomas inherited nearly eight-hundred manuscripts. His grandson John arranged to sell them to the nation in 1702. Many of the manuscripts were destroyed in the Ashburnham House fire in 1731, but this one survived and became part of the Cotton collection at the British Museum in 1753.^[11] Although there are other examples of *scripto continuo* in other manuscripts, the survival of each is a remarkable feat. Without these manuscripts and the institutions that preserve them, we would lack an

important piece of the history of word spaces and the context of *Spacebar* would be less articulated with history.

Marshall McLuhan historicizes even the act of writing. In his *Gutenberg Galaxy*, he argues that “visual appearances cannot interest a people before the interiorization of alphabetic technology.”^[12] He argues that in a pre-literate culture, words are not linear but based on sensuous and associative clusters. Like Aristotle’s dialogs, putting words into a linear sequence is not obvious and using space to indicate a pause between words even less so. The Greek and Roman development of alphabetic technology provided a framework that expanded our sense ratios beyond the “non-visual resonating interplay of the audile-tactile by which electricity and radio especially were to regenerate what Conrad called ‘the Africa within’ the Western experience.”^[13] As McLuhan was writing in a proto-computer environment, he wasn’t referring to computerized new media, but the sonorous radio broadcaster’s voice penetrating darkness, the presence of the broadcaster in television, and the potential for interactive television. His assessment is prescient in exploring computer technologies which do not require typographic linearity, nor word-space linearity. It’s easy to imagine an alternative system of meaning-making in computers composed of interactive video, voice-chat, clicks of “like” buttons, and photography. In this sense, *Spacebar* plays with McLuhan’s sense ratio, reminding us that the spacebar is all but inevitable or even necessary. While looking futuristic, the digital image can be seen as a new technology subsuming the old. The spacebar is enshrined as an obsolete technology whose future is in digital photography and the immediacy of experience, returning us to an experiential culture like the oral that predates the typographic. But this time the visual replaces the oral giving a culture of snapshots, moments captured and frozen as an icon of themselves. However, let us not misunderstand the printed page.

From the invention of printing and nearly five centuries afterward, words were printed on a page with metal type. Individual letters were raised bits on the metal that would be arranged to form a page of text, inked, and pressed into paper. Like a digital photograph, the printed page is a trace of actual arrangements of objects, an immediate imprint of the moment that has become so familiar that we forget its materiality and iconicity. Early printers knew this materiality intimately. Joseph Moxon published the first known manual on the whole art of printing in 1683 as a series of pamphlets.^[14] The manual focuses on the material requirements for printing, starting with type, presses, letter cutting, and only arriving at composing texts by the second volume. The compositor looks at a manuscript which he is preparing to print as follows,

... the Compositor falls to Composing. But first reads so much of his Copy as he thinks he can retain in his memory till he have Composed it, as commonly is five or six words, or sometimes a longer Sentence. And having read, he falls a Spelling in his mind; yet so, that his Thoughts run no faster than his Fingers: For as he spells A, he takes up A out of the A Box, as he names n in his thoughts, he takes up n out of the n Box, as he names d in his thoughts he takes up d out of the d Box; which three Letters set together make a Word, viz. “And”; so that after the d he sets a Space: Then he goes on to the next Word, and so Composes on Setting a Space after every Word till the Words come to the end of the Line, for then he sets no Space.^[15]

So, our compositor takes one letter at a time from a box and puts them in order, like tapping the letters of a keyboard, each key a box. She inserts a special piece of type between words called a “space.” This space is a small piece of type like the others, but with no letter cast on the face so it lies below the printing surface. On inking, little or no ink ends up on its surface so when the text is printed, it does not appear. A vacant space in

smooth *Spacebar* contains a trace of the work. Each time it is pushed, a fresh new digital space is waiting, no matter how battered the key becomes.

A similar history can be seen in composing type. Early machines for composing intended to work more quickly, but took some time to be effective. As early as 1822, Dr. William Church patented what is generally accepted as the first composing machine. The user operated a keyboard that released type onto a horizontal plate to be later justified by hand. The compositor, now enhanced by a machine, still handled the type by distributing it for reuse. To make this distribution more efficient, Church also invented a casting machine for supplying new type for his composer.^[19] His idea was to eliminate the need to put the type back in the boxes after use and instead melt it down and recast new type each time. In this way, endless supplies of fresh characters could be generated, as in the case of digital characters generated by a spacebar. However, nothing resembling our modern keyboard was yet used. Church's machine used buttons more inspired by a telegraph, yet his was just the beginning. In 1840, James Young and Adrien Delcambre patented their Pianotyp composing machine that used a keyboard made of piano keys to compose text, which was used to set the *Family Herald*. The machine was hotly attacked in the *Compositors Chronicle*, the journal of the London Union of Compositors.^[20] A later innovation in keyboards was the Kastenbien, invented by Charles Kastebein and patented in 1869. Keys were arranged in four rows and—like the previous composing machines—it included a key for a space. The space key looked like the other keys and was simply marked “spc” rather than being a blank bar set-off from the rest.^[21] These machines were followed by more machines, some which included a system to automatically distribute the type after it was cleaned and used. It was Ottmar Mergenthaler who solved the problem of automatically casting whole lines of type, changing the typesetters keyboard from a device that manipulated existing objects into one that created new one.

Experimenting and producing several machines that cast whole lines of type anew, Mergenthaler produced a working casting composition machine in 1877 which was not a commercial success and another one called the Band machine by 1884 which was too expensive to manufacture. Both of these machines failed because of their complexity. Eventually Mergenthaler came up with the key simplifying idea which was that the matrices^[22] should move independently and designed a new machine in 1885 called the Blower Linotype that was used commercially. Unsatisfied with this one too, he started his own company and designed another machine which would eventually become the Linotype. He still needed to provide for automatic justification. In 1890, the Rogers Typograph appeared and was declared an infringement of the Mergenthaler patents.

While litigation was proceeding the Mergenthaler company was sued by J.W. Schuckers for infringement of his double wedge patent of 1885. The Gally single wedge had been practical on the Band [Linotype] machines but not for the independent matrix machines. The Rogers Typograph Co. bought out the Schuckers patent and continued his suit, which was sustained by the courts. The Mergenthaler company bought the patent of the double wedge justifier from the Rogers Typograph Co.^[23]

Thus, Mergenthaler ended up with all the pieces for what became one of the most significant composing machines of the 20th century. By Mergenthaler's death in 1899 more than 6,000 of his machines were in use, mostly for newspapers. By 1972 Philip Gaskell writes, “In America the Linotype was soon used for setting books as well as newspapers, and it has remained the principal composing machine there for all purposes.”^[24] In 1976, the *New York Times* stopped using Linotype and moved to film composition, for many signaling the end of Linotype as a composing machine.^[25]

Linotype remains a significant articulation in the cultural history of typesetting in America and it is hard not to see its method of justification related to computer based justification. After the matrices were released by the compositor at the keyboard, the wedge shaped spaces that had been inserted were pushed up, making the line tight, and a slug was cast, ejected for printing, and the matrices were returned to their magazine. In this way, each line of text was justified with equal sized spaces as in word processor typography. Every space that was inserted was not a single object but a command to a machine that would expand the blank until it filled the line as Moxon's compositor did by hand. In this way, the Linotype is a spiritual sister to *Spacebar*, creating a set of commands that produce some final object. The operator does not handle the type itself, but the keyboard, leaving her trace on the keys, but creating fresh type and letters each time. *Spacebar* reminds us that we operate at a distance from the setting of type in a computer environment, but, like a Linotype operator, our actions are realized as commands to some other system. The endless chain of fresh spaces string into the past as long as the computer still operates.

Spacebar, while appearing to be a new technology, resonates with the materials and history from the past. When we look at its white surface in a gallery, we are not merely looking at our own history of computer use, but the long history of books and printing. Bibliographical awareness enables us to see the semantic space that a simple image can occupy and the semantic space that it carves out with its blankly suggestive surface. It is not a pure image, cut from a pure machine, carving a path to the future, but existing materials deeply implicated in history, tied to the past, and anticipating the future. Writing and setting type have always been systems of reuse and manipulation of existing technologies. Bruce Rogers writes in 1943,

Printing is fundamentally a selection of materials already in existence, and an assembling of these different varieties of types and papers and ornaments; and it is the way that they are assembled that counts in the effect.^[26]

Awareness of this reuse pervades our reuse of new and old computer technology, whether we are producing a digital image, typing a text, or just hitting a spacebar to fire a rocket in a fast-paced arcade game. *Spacebar* reminds us that the past is always present. It is an emblem of the presence of the past and our present as the past of the future.

[1] Joel Swanson, *Spacebar*, digital print, 24" x 32", 2012 (the artist's collection).

[2] Terry Belanger, "Descriptive Bibliography" in *Book Collecting: A Modern Guide*, Jean Peters, ed., (New York and London: R. R. Bowker, 1977), 97-101.

[3] Stephen Karian, "bibliography" in *The Oxford Companion to the Book*, Michael F. Suarez, S.J. & H.R. Woudhuysen eds. (Oxford: OUP, 2011) 525-6.

[4] Matthew G. Kirschenbaum, *Mechanisms: New Media and the Forensic Imagination* (Cambridge, Mass.: MIT Press, 2008), discusses applications to digital resources.

^[5] G. Thomas Tanselle "Textual Criticism of Visual and Aural Works" in *Studies in Bibliography* 57 (2005-6): 1-38.

[6] Swanson's work—I believe—has strong connections to bibliography. Consider *I/know/you/are/but/what/am/I*, slides, slide carousel / variable dimensions, 2012 (artist's collection) which gives single words in Georgia bold one after another or *t/here*, neon 8"x30" 2013 (artist's collection) which is serifed neon characters flashing between meanings.

[7] *Vespasian Psalter*, Cotton MS Vespasian A I, British Library Archives and Manuscripts, London. Available in digital facsimile.

[8] In fact, it's a very late example of the *scripto continuo* graciously provided as an example by Zach Stone.

[9] stet.

[10] British Library catalog entry for the manuscript, available digitally.

[11] E.A. Joy, "Thomas, Smith, Humfrey Wanley, and the 'Little-Known Country' of the Cotton Library" *Electronic British Library Journal* (2005).

[12] Marshall McLuhan, *The Gutenberg Galaxy; The Making of Typographic Man* (Toronto: U. of T. Press, 1962) 54.

[13] McLuhan, 55.

[14] Joseph Moxon, *Mechanick Exercises* (London, Moxon, 1683), ESTC R469117 (v.1), R17720 (v.2); a scarce text, excellent reprints abound such as Joseph Moxon, *Moxon's Mechanick Exercises or the Doctrine of Handy-Works Applied to the Art of Printing: A Literal Reprint in Two Volumes of the First Edition Published in the Year 1683*, notes by Theodore Low de Vinne (New York: Typothetae of the City of New York, 1896) available in HathiTrust.

[15] Moxon (1896) 212-3. Punctuation and emphasis slightly altered.

[16] Moxon (1896) 215-6.

[17] Stet.

[18] only for the desktop user. Professional typesetting software can still hand justify the lines, though many designers do not do this because it is time consuming.

[19] James Moran, *The Composition of Reading Matter* (London: Wade & Co., 1965) 24.

[20] Moran, 26.

[21] Moran, 33.

^[22] Since the invention of printing, raised type is cast in matrices. These are bits of metal with the design of a letter carved into the surface.

[23] Moran, 56.

[24] Philip Gaskell, *A New Introduction to Bibliography* (Oxford: OUP, 1972) 278.

[25] *Farewell, Etaoin ShrdU*, VHS, directed by David Loeb Weiss, (New York: Donnel Media Center, 1980).

[26] Bruce Rogers, *Paragraphs on Printing* (New York: Dover, 1979), reprinted from (New York: William E. Rudge, 1943) 10.

← interview on the Media Archaeology Lab for Infotecarios

Johannes Heldén →

One thought on “Bibliographical Awareness in Art: Joel Swanson’s Spacebar”

1. Pingback: Joel Swanson | media archaeology lab

Copyright © 2018 media archaeology lab | Theme by: Theme Horse
| Powered by: WordPress