After the First Click: Typewriters and Tying Literacy in the United States, 1870s-1930s

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Abstract

One of the greatest inventions that launched the modern age of writing technology was definitely the typewriter. Subject to continual tinkering, it was finally invented in the late 1860s; the typewriter underwent a great amount of technical transformation before it became an indispensable tool used by professional writers in private homes or for business correspondence in offices. As the very first pioneer in writing technology, the typewriter challenged human's cognition and practice with machinery, and furthermore revolutionized business communication from the nineteenth century onward. From cumbersome to portable, from noisy to noiseless, and from manual to electric, the typewriter remained popular for over one hundred years until personal computers largely displaced typewriters by the end of the 1980s. Currently, the typewriter no longer serves as a main clerical device in office work or an efficient instrument for mechanical writing; instead, most of them are relegated to museum artifacts or individual collections for preservation or display. The start of the computer era marked the end of the mechanical typewriter era. Concerning the initial development of the typewriter in the United States and examples of first-generation users, this paper aims to delve into how those prototype typewriters evolved and how the general public undertook to learn the skill of typing. This paper concludes that the typewriter reshaped human consciousness of writing into a new means of mechanical writing, despite its homogenous and impersonal characters, leading the public into a technological age, in which typing literacy thus developed as a primary skill of script in preparation for the advanced word input technology of the present day computer.

Key Words: typing, mechanical writing, typewriter, typist.

1. Introduction: The Dawn of the Typewriter

One of the greatest inventions that launched the modern age of writing technology was definitely the typewriter. Subject to continual tinkering, it was finally invented in the late 1860s; the typewriter underwent a great amount of technical transformation before it became an indispensable tool used by professional writers in private homes or for business correspondence in offices. As the very first pioneer in writing technology, the typewriter challenged human's cognition and practice with machinery, and furthermore revolutionized business communication from the nineteenth century onward. From cumbersome to portable, from noisy to noiseless, and from manual to electric, the typewriter remained popular for over one hundred years until personal computers largely displaced typewriters by the end of the 1980s. Currently, the typewriter no longer serves as a main clerical device in office work or an efficient instrument for mechanical writing; instead, most of them are relegated to museum artifacts or individual collections for preservation or display. The start of the computer era marked the end of the mechanical typewriter era.

The history of the typewriter dates back to the eighteenth century. An Englishman, Henry Mill, assembled a machine, described as "an artificial machine for the impressing or transcribing of letters, singly or progressively one after another as in writing" in historical archives (Russo, 2002). The main function of the device was to "impress letters on paper one after another" (Russo, 2000). Though it seems to be the first patented idea of the typewriter, unfortunately, there is no surviving model or illustration of the Mill invention (Russo, 2002).

When it came to the early nineteenth century, there was a growing need for the mechanization of the writing process, and many dedicated inventors in many countries strived to develop such a machine.[1] In 1829, William Austin Burt patented a machine called the "typographer" which, in common with many other early machines, was listed as the "the first typewriter" (Russo, 2002). He was the first American inventor of a typewriter-like device. From 1829 to 1870, many typing machines were patented by inventors in Europe and America but none of these early attempts was practical enough for commercial production.[2] The speed of the machine while working defined its practicality since its operators were unable to attain a speed "that would allow typing substantially faster than writing" (Russo, 2000).

In the 1860s, John Pratt from Alabama invented two writing machines, one of which was called "Pterotype": "the case of the instrument is small and compact" was the comment by *The Scientific American* (Hoke, 1990). Yet Pratt failed to get his machine produced due to the problem of licensing agreements with manufacturers (Hoke, 1990). Afterwards, Christopher Latham Sholes and Carlos Glidden, inspired by the article which introduced Pratt's machine, advanced the design with the development of individual type bars, each carrying a single type and operated by a single finger (Hoke, 1990). Their first typewriter was patented in 1868, and later a second model emerged in 1873. They persuaded a New York firearms manufacturer, E. Remington & Sons, to produce their typewriter (Russo, 2000). Christopher Sholes is hence generally reputed as "the Father of the American Typewriter" for producing the first commercially successful typewriter (Russo, 2002). The Sholes & Glidden typewriter, therefore, witnessed the dawn of the typewriter in the United States, and evolved so quickly as to foment a revolution in machine writing that continues through the present day all around the world.

Concerning the initial development of the typewriter in the United States and examples of first-generation users, this paper aims to delve into how those prototype typewriters evolved and how the general public undertook to learn the skill of typing. Some principal issues will be discussed: what were users' feedbacks to the typewriter as it first came onto the market? What were nineteenth-century users' experiences of the machine? For the most part, how was users' or operators' literacy changed by or resulted from the machine? To explore the above issues, this paper is divided into three sections: the first traces the evolving design of the typewriter keyboard configuration and its effects; the second discusses the new form of relationship between machines and operators as the impression of typing was gradually established as the number of users grew rapidly; the last section is concerned with how typing ability became a general clerical skill, as well as a means of promoting writing literacy in the first decades of the early twentieth century.

2. The Writing Machine Proper

The story of the typewriter starts with its keyboard configuration. In a wide variety of keyboard layouts, three basic themes were subject to experimentation. One was circular, with the letters laid out alphabetically and the other, with the letters laid out in a long row, like the piano. Yet both the circular layout and the piano keyboard proved difficult or inefficient to operate. A third arrangement, a rectangular arrangement of keys in alphabetical order, was accordingly adopted (Norman, 1998). Among all of the rectangular forms of keyboard layouts, Christopher Sholes and Carlos Glidden's model was outstanding for its irrelevant logic of QWERTY (Russo, 2002).[3] In the process of design and manufacture, Sholes and the sponsor James Densmore faced a critical problem in seeking the optimal placement of the characters on the keyboard.

[1] One of those important inventors, Peter Mitterhofer, a carpenter from Austria, developed several models and a fully functioning prototype typewriter in 1867. Without any technical help, only with simple tools he developed five models of typewriters from 1864 to 1869; two of them were made of wood and the others of metal. The third and fifth model he brought to the emperor Franz Josef I. in Vienna. He agreed to give Mitterhofer a subsidy for his invention, and the fifth model was taken to the Polytechnical Institut. But the experts in the institution did not see the real value of Mitterhofer's great invention. So it happened that a few years later the typewriter came from the USA to Europe. For more, see Peter Mitterhofer Museum homepage, http://www.typewritermuseum.com/en/index_2.htm.

[2] In Europe, Hans Johan Rasmus Malling Hansen from Denmark invented a writing machine called "The Hansen writing ball", a well constructed machine and used as late as 1909 (Hoke,1990). This machine was the only machine manufactured prior to the Sholes & Gidden Typewriter in Europe. It was perfectly made, superior in the construction and appearance in comparison with its American successors. Yet it was not affordable and faded out of the market afterwards.

[3] The "QWERTY" keyboard was such an outstanding arrangement that it remains with us today on almost all computers (Russo, 2000). As the device of the typewriter no longer acts as a clerical device, this design of keyboard layout turns to be the computer keyboard layout that continues through the present day.

Since the arrangement of type bars was tied to the arrangement of the keys, and two adjacent bars were more likely to clash if struck together or in a rapid sequence, the problem was that the keys would jam when one attempted to type faster. The internal clashing of type bars prevented the user from proceeding. These kinks made typewriters rather difficult and slow to operate, with its speed reduced to that of handwriting. After a great deal of trial and error, they developed a keyboard arrangement to separate the most commonly used characters to allow for the typing mechanism to avoid jamming. That keyboard arrangement was later referred to as the "QWERTY" for the first character keys on the top row of the keyboard (Russo, 2000). Though the QWERTY layout was not the most efficient layout possible for the English language, it allowed users to type faster without jamming. The very first practical typewriter thus took its primordial shape.

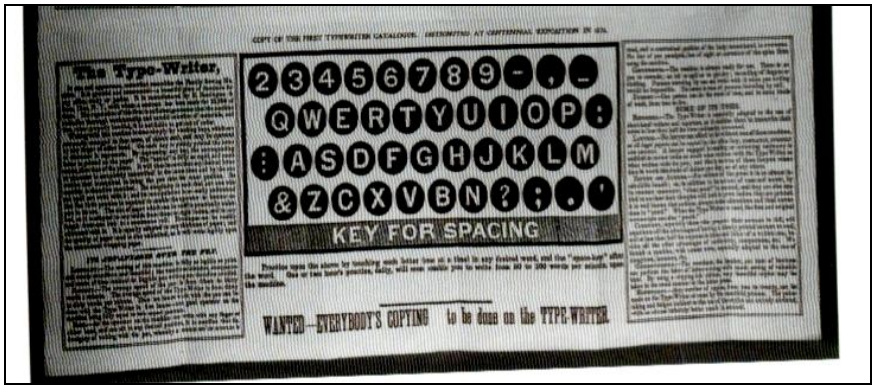

Figure 1: The QWERTY keyboard layout developed by Christopher Sholes. Russo, Thomas A. (2000). *Office Collectibles: 100 Years of Business Technology*. Atglen: Schiffer Publishing, 147.

After the mechanical problem of jamming was finally solved, the Remington Type-Writer Model One began to be produced for market sales. During the last months of 1873, eight machines were completed and put on the market in 1874 (Russo, 2002). However, this production group failed. In 1876, Remington showed off its machine at the Centennial Exposition in Philadelphia. Visitors to the Remington booth were treated to a few typewritten lines they could keep for a mere twenty-five cents as a kind of promoting strategy. The strategy worked because everyone queued up to take a look at the newfangled machine which appeared as a "gimmick" (Flatow, 1993). Disappointingly, no one walked home with one. The same situation happened in New York City. The Remington Company drew huge crowds at exhibitions where a typist's flying fingers would spit out words at sixty per minute. Everyone applauded and marveled at the new machine, and ardently discussed typewriters as the wave of the future, yet few customers actually made a purchase. Sholes and James Densmore became paupers, barely able to support their families, while the Remington Company nearly faced bankruptcy (Flatow, 1993). If measured by standard of profit, this gimmick was a discouraging commodity.

Figure 2: Remington Type-Writer Model NO. 1. Russo, Thomas A. (2002). *Mechanical Typewriters: Their History, Value, and Legacy.* Atglen: Schiffer Publishing, 19.

While Dens more pictured himself selling machines to literary men, writers and clergymen in general for a great profit, one of their first customers, Mark Twain, the famous American author, encountered unpredictable difficulties resulting from his purchase of this new machine. In 1873, twain claimed that he saw one "type-machine" in a Boston dealer's window and went in for a demonstration as he was a curiosity or novelty-lover (Twain, 1963). Shocked by the sight of a girl who could type fifty-seven words per minute, Twain decided he must have a typewriter and bought Remington right on the spot. At the start, surprised at the fashionable machine and expecting to increase his speed of writing, twain was, on the contrary, bewildered by the machine when in use, which then frustrated him to abandon the device before long.

Twain's difficulties were also much more complicated than the manufacturer imagines. In his essay "The First Writing-Machines", twain claimed that the original machine was remarkably problematic in three ways. The first problem concerned the efficiency of using the machine in comparison with handwriting to which he was accustomed. The device, for both its producer and customer, was destined to hasten the speed of writing. At first sight of the new device, Twain was apparently attracted by its unimaginable speed: "The salesman explained it to us, showed us samples of its work, and said it could do fifty-seven words a minute—a statement which we frankly confessed that we did not believe", almost twice faster than ordinary handwriting (Twain, 1963). He did not believe that the device could do that and asked for a real experiment to prove how fast it could be. Such doubts from customers seemed to be already assumed by the salesman, and he took his action as below,

So [the salesman] put his type-girl to work, and we timed her by the watch. She actually did the fifty-seven in sixty seconds. We were partly convinced, but said it probably couldn't happen again. But it did. We timed the girl over and over again-with the same result always: she won out (Twain, 1963).

Twain was astonished by the type-girl's speed and decided to make a purchase. He immediately examined this curiosity and found that there was something different about the machine: "At the hotel we got out our slips and were a little disappointed to find that they all contained the same words" (Twain, 1963). Later, twain even found a great discrepancy between his and the type-girl's usage. He described how he used the device with quite a slow speed, much slower than his longhand writing, "I played with the toy, repeating and repeating and repeating 'The Boy stood on the Burning Deck,' until I could turn that boy's adventure out at the rate of twelve words a minute" (Twain, 1963). Twelve WPM (i.e. the rate of words per minute that typewriters produce) falls very short of fifty-seven WPM. If the device worked slower than hand writing, it repeated the same fallacy as those precedent impractical ones prior to Sholes. Due to a lack of user guides or instructions for the device, Twain presently "resumed the pen, for business, and only worked the machine to astonish inquiring visitors" (Twain, 1963). It served merely as an astonishing toy rather than a handy writing machine. Although Twain realized the fact that "the girl had economized time and labor by using a formula which she knew by heart" (Twain, 1963), he had little knowledge of how the machine was supposed to work, specifically, to be "typed".

The second problem lies in the expressive significance of handwriting scripts and typescripts. Despite his clumsy operation of the machine, twain endeavored to use it in another way, dictation. Twain hired a young woman and did his first dictating of letters, yet to his disappointment again, it turned out to be his last dictation (Twain, 1963). His dictation of letter was to Edward Bok "who … was accumulating autographs, and was not content with mere signatures, he wanted a whole autograph letter" (Twain, 1963). Twain faced a great challenge with his dictation: he furnished the letter "in type-machine capitals, *signature and all*" (Twain, 1963, original italics). When dictating, Twain pointed out some defects about the machine: "the machine did not do both capitals and lower case (as now), but only capitals" (Twain, 1963).

Through this experience, he learned that the capital words were awful for the personal communication of letters. The capital typed letter, unlikely his formerly written ones, seemed cold and lacked the distinctive personality of its writer. Twain could not bear the monotonous letters and contended they were "gothic and sufficiently ugly" (Twain, 1963). For him, his penmanship was lost in the typed letter. Aware of this problem, Twain contened: "I said writing was my trade, my bread-and-butter; I said it was not fair to ask a man to give away samples of his trade; would he ask the blacksmith for a horseshoe? Would he ask the doctor for a corpse?" (Twain, 1963) Like Twain, other writers, soon felt anxious about the dehumanized trait of the typescript and were most likely to condemn it in order to defend their traditional written texts. The last and also the foremost problem was Twain's perceived threat about the authenticity of authorship.

Losing his concern for the machine, Twain discovered that "In the year '74 the young woman copied a considerable part of a book of mine on the machine… I wrote the first half of it in '72, the rest of it in '74-' My machinist type-copied a book for me in '74, so I concluded it was that one" (Twain, 1963). He dogmatically claimed that the book "must have been *The Adventures of Tom Sawyer*" written by him and that he was "the first person in the world to apply the type-machine to literature" (Twain, 1963). From his claim, he was not the one who "types" a literary work. Twain's typist had done the actual typing, but abrogated her right to have her signature on the first piece of typed literature (Wershler-Henry, 2005). Even though Twain announced that he was the one to apply the typewriter to literature or to dictate the work, he may have felt extremely threatened by the woman who typed his work. It caused confusion between the authentic text and the copied text. When others copy texts, it seems to blur the identity of the authors. In this light, Twain felt uncertain about the machine and the text it produces: "That early machine was full of caprices, full of defects-devilish ones" and "it had many immoralities" (Twain, 1963). The machine, the typed text, and even the one who types the text, may impair the authenticity of authorship for writers.

These three problems confounded Mark Twain so much that he became determined to give up the machine: "After a year or two I found that it was degrading my character, so I thought I would give it to Howells. He was reluctant, for he was suspicious of novelties and unfriendly toward them, and he remains so to this day" (Twain, 1963). Neither Twain nor Twain's friend accepted it. This new curiosity explicitly generated Twain's frustration and anxiety. Disappointment with the machine comes from both authors and the selling company. Originally manufacturers attempted to sell machines to writers and clergymen, literary men in general, yet the goal of making the typewriter as a writing machine that facilitates the speed of writing actually proved a failure. Criticism of its design and practice never ceased. Even until 1895, the writer Lucy Bull in *The Atlantic Monthly* kept complaining that this business machine did not really meet the needs of the serious writers (Baron, 2009). Writers of that time did not learn to type, or to be precise, typewrite on the device. They had little knowledge of typing practices. Through the first years following the advent of typewriters, typing had not yet been considered as a skill equal to that of writing. Longhand writing remained the predominant way of word processing, whereas typing had not yet been taken into account by users. Then, like many new inventions, no one knew if the typewriter could survive. Twain concluded: "If the machine survived—if it survived—experts would come to the front, by and by, who would double this girl's output without a doubt" (Twain, 1963). In short, the typewriter in its initial age did not function as the writing machine proper at all for it was hardly accepted by those so-called literary men.

3. The Typing Machine Proper

As typewriters were incipiently sold in the 1870s, they were neither as popular as their producers had hoped nor as efficient as their customers had desired. The first model fell short of expectations as a writing machine proper. In reflection of the astoundingly slow sales, the Remington Company learned from its experiences in the first few years and quickly found two major problems plaguing their initial design. First, as what had bewildered Mark Twain, the first Remington typewriters printed only capital letters, which may have been "suitable for invoicing or billing applications, but not for private correspondence" (Russo, 2002). Yet when Remington went after sales, it targeted a group of "court reporters, lawyers, clergymen, writers, and editors," for whom capital letters could never have been adequate for various writings or documents (Flatow, 1993). The appeal was not focused on customer needs. Second, there was general resistance to the new concept of typing. With its high price and lack of instruction, the typewriter seemed impractical for users, and typing was simply considered as a specific selling strategy and scarcely accepted by both writers and the public.

One of the defects, the lack of small letters in the keyboard arrangement, was gradually corrected. In the beginning, the addition of lower case letters was accomplished by adding a new key for each lower case letter, so in effect there were two separate keyboards. Some early typewriters organized the keys for upper case differently than for lower case (Norman, 1998). It took years to develop the shift key so that both upper and lower case letters could share the same key. In 1878, two Remington employees, Lucian S. Crandall and Byron A. Brooks, developed and patented a mechanical method for putting two characters on the same type lug and shifting for capital letters (Russo, 2002). This feature was available on the Remington Model Two, and soon placed on the market since it was a breakthrough improvement with "a dual-faced type bar" (Norman, 1998). It was at this point that the typewriter passed the experimental stage and became practical. Throughout their history of manufacture, the Remington Company kept referring to this machine as "the first practical typewriter" (Russo, 2002).

Figure 3: Remington Model NO. 2. Russo, Thomas A. (2002). *Mechanical Typewriters: Their History, Value, and Legacy.* Atglen: Schiffer Publishing, 21.

After the mechanical problem was solved, the second problem proved even more troublesome, i.e. how to enable more users to manage the keyboard and learn the skill of typing. One of the steps to settle such a predicament was to newly target companies and offices as customers, instead of personal users. As mentioned earlier, James Densmore and his partners simply had not targeted businessmen, since businessmen were not seen as "independent agents, guiding a widening sales force that canvassed the country for increased market share", but rather were formally seen as proprietors of small establishments and local shops (Flatow, 1993). A more significant customer at that time was the New York firm of Dun, Barlow and Co. (the predecessor of Dun and Bradstreet, Inc.). This company bought typewriters for its home office, and then added forty more for its branch offices.

The machines were sent out complete with carbon paper, tissue paper and detailed instructions for typing reports and returning them to the central file in the home office (Davies, 1982). According to Richard Current, "previously subscribers to the credit-rating services of the company had had to go to one of the offices and consult the handwritten ledger there"; now they could obtain by mail the data they required (Current, 1954). Dun, Barlow and Co. was slightly ahead of the time. To many firms, the new machine probably seemed more of an expense than an asset; few capital-related firms were willing to invest in office machines in the 1870s (Davies, 1982). As the 1880s progressed, the typewriter slowly replaced hand correspondence, found its way into offices and became a more firmly established piece of office equipment. The reason was simple: the typewriter facilitated office work because typing was faster than handwriting (Davies, 1982). At the turn of the century, the emergence of large corporations and global markets produced a blizzard of documents: accounting ledgers, purchase orders, memos, correspondence, and so on; it required increasing numbers of clerical workers to produce, reproduce, sort and file these documents (Wershler-Henry, 2005).

It aided in meeting the vastly increased demand in correspondence and record keeping, and in processing paper more quickly (Davies, 1982). As the *Penman's Art Journal* observed in 1887, "Five years ago the typewriter was simply a mechanical curiosity. Today its monotonous click can be heard in almost every well regulated business establishment in the country. A great revolution is taking place, and the type writer is at the bottom of it" (Davies, 1982). In 1886, all typewriter factories combined were producing 15,000 machines a year. Two years later, production had expanded to the point where Remington alone was manufacturing more than 1,500 a month. The typewriter rapidly became a permanent office fixture and continued to be constructed almost entirely in accordance with the demands of business (Davies, 1982). As a permanent fixture in the office, there was one more pivotal reason for the increased sales of the typewriter, the typist.[4] The establishment of the job category "typist" followed almost immediately upon the typewriter itself. The sales of the typewriter had much to do with the typists.

[4] The word "typewriter", as Friedrich Kittler contends, is quite ambiguous because it means "typing machine and female typist" (Kittler, 1999). In Oxford English Dictionary, the word "typewriter" refers not only to "a writing-machine," but also to "one who does typewriting". The world's first typist was Lillain Sholes from Wisconsin. She was the daughter of Christopher Sholes (Russo, 2002).

From the very beginning, typewriter advertising adopted a similar strategy, hiring fashionable young women with typing skills to demonstrate the product in a showroom setting. This practice led to competing firms touring their spokes models on lecture and exhibition circuits (Wershler-Henry, 2005). Typing requires special training that is dependent on human attributes not inherent in the typewriter. In the early years, people kept their eyes on the keyboard and typed with one or two fingers of each hand. Then, Frank McGurrin of Salt Lake City memorized the key locations and learned to type with all his fingers, without looking at the keyboard. His skills were not recognized at first; it took a national contest held in Cincinnati, Ohio, in 1877 to prove that this method was indeed superior (Russo, 2002). He was the first person to use the touch method of typing, with the Remington Model One. As mentioned earlier, the Remington Model One, featured with the anti-jamming arrangement of the QWERTY board, already put many common letter pairs on opposing hands; one hand could be getting ready to type its letter while the other was finishing, so typing was speeded up (Norman, 1998). Touch typing then served as a typing method without using the sense of sight to find the keys; once an operator was trained on this keyboard, "it was next to impossible to un-train them" (Russo, 2000). The typist's familiarity with English grammar and spelling, and his or her speed and accuracy were important qualities that might make her or him indispensable to an employer.[5] Since the typewriter is most efficiently operated by a trained typist, a skilled typist is best suited to the operation of the machine. The typist, the operator of the device, revealed the great significance of the device in the rapid development of industry and commerce.

As there was a booming need for typists and typewriters, training in typing become more and more popular. In response to business demand for trained typists, business colleges, which previously had taught penmanship and mathematics, began to offer typing courses. Typewriter agencies also began to offer transcription services, and some typewriter sales offices offered an employment service of sorts, providing typewriter and typist as well as training. The first business school to begin offering instruction in touch-typing was the Longley Shorthand and Typewriter Institute of Cincinnati, Ohio, which was eventually owned and operated by Mrs. Longley. In 1881, she called her teaching process the "All Finger Method" (Russo, 2002). One year later, Mrs. Longley published her own book called, *Remington Typewriter Lessons*. This was the first printed system for teaching the "All Finger Method" (2002: 25).[6] In the same year, the Young Women's Christian Association began its first typing class for girls, with eight students. It also became common practice for typewriter manufacturers to establish typing training programs for young women "and then more or less 'sell' them to business houses with their machines" (Wershler-Henry, 2005). The changes in the organization of capitalism brought about a great amount of office work, while the typewriter facilitated the employment of women as clerical workers (Davies, 1982).

The tendency was more and more women participating in the labor market as typists. The prevalent and progressive development of mass-produced typewriters later exerted a great effect: the gender division of machine operators. The sudden demand for machine operators at the turn of the century created a kind of gender vacuum that women were available to fill (Strom, 1992). Women were especially suited to mechanized or rationalized jobs requiring only general levels of skill. When the YWCA formulated its plan to begin teaching young women to type, the popular consensus was that typing was anything but suitable employment. Many people believed that the women who became typists personally risked "unsexing" themselves, and might eventually experience "a complete mental and physical collapse"; others predicted even more dire consequences, including "the collapse of the family unit and the moral integrity of the nation" (Wershler-Henry, 2005). Despite negative criticism, the statistics on the gender of professional typists in the United States from 1870 to 1930 demonstrate a startling transformation of clerical labor. In the 1870s, only 4 percent of typists were women; that number jumped to 40 percent in the 1880s (when the Remington No. 2 first hit the market). By 1910, 80.6 per cent of typists were women, and by 1930, almost all typists (95.6 per cent) were women (Wershler-Henry, 2005). Women's employment as typists, totaling 5,000 up to 1890, underwent a rapid growth to 800,000 in 1930. In brief, the number of typists as well as the proportion of female typists was simultaneously rising.[7]

[5] Speed typing is considered as a physical skill which requires "a pedagogical discourse" focused both intensively and minutely on the body which types. Physical endurance is also necessary (Olwell, 2005). For more about the physicality of the typing body, see Olwell, 2005.

[6] The first person to use the word "touch," in connection with the typing system was Mr. Bates Torrey, of Portland, Maine. According to a Remington article, there was no evidence that the word "touch" as applied to typewriting, was ever used prior to the publication of Mr. Torrey's book, *A Manual of Practical Typewriting*, in 1889 (Russo, 2002).

[7] The rapid spread of female typists was equal to the invention and rapid spread of the typewriter. The work of typewriting

To sum up, the typewriter gained popularity as it evolved as a more practical device. Typing creates a new kind of task and enhances the ability of the operator to perform a job previously done by hand. From the proliferating number of typists (in particular women typists), commercial benefit, and a prevailing typing skill, the typewriter had now become a typing machine ubiquitously used. The machine could actually facilitate the work of those who used it and permit the performance of more complicated operations. Writers who were unable to learn typing hired typists and dictated their work as a compromise solution.[8] Typing, widely undertaken, served as a clerical skill for women to earn their living. Typists, typewriters and the skill of typing sprang up all over the country, and even globally. The typewriter, as its inventors and salesmen promoted, functioned as a proper typing machine.

4. The Typewriting Machine Proper

The typewriter became the word processor of choice in the American workplace since 1890s. Typing speed served as a workplace tool for those who needed to finish their work with relatively acceptable quality and considerable speed demanded by the employer. Typewriter sales and the number of typists climbed steadily. As the Remington Model Two was the top performer with accumulated sales approaching 100,000 units, Models Three, Four, and Five were continually produced to meet the demands of the marketplace (Russo, 2002). The Remington Company was also introducing and manufacturing machines with different functions: for instance, typewriters in many languages in addition to English; the first portable typewriter in 1920; noiseless typewriters went on line in 1924, as well as the first fully automatic electric typewriter in the United States. When the typewriter craze swept across state-wide offices, the public's concept of typing as well as literacy practices were imperceptibly influenced because the overwhelming usurpation of typing inevitably threatened the concept of traditional writing practices (Baron, 2009).

As the typewriter was applied to many clerical documents, it was apparently in favor in regard to business writing. By the 1920s, it was clear that typewriters were not only changing office writing, but also affecting personal writing, despite the successive criticism (Baron, 2009). The application of the typewriter seemed to go farther and farther from its primordial purpose, or what it was assumed to be: a device which helps to write. The typewriter obviously facilitated the work of copyists and clerks, rather than authors. In that sense, typing skill equals signified a dexterous way of operating a machine. The concept of typing and writing, nevertheless, remained incompatible. Complaints included: that the typewriter "threaten[ed] to render handwriting obsolete" (Baron, 2009) and that its "impersonality… kills off both handwriting and the soul" (Baron, 2009). For writers who were hostile to typing, typewriters gave too many would-be writers access to authorship because typescripts resembled printed texts (Baron, 2009). In 1938, *The New York Times* thought the problem of typing had become serious enough to editorialize against the machine that had usurped the place of "writing with one's own hand," warning that "the universal typewriter may swallow all" (qtd. in Baron, 2009). The machines helped to produce reasonably clear, consistent letters with each keystroke, which meant it was no longer necessary for writers to keep up "a uniform and legible penmanship"; they form a "cold, unfeeling uniformity" not just in routine business correspondence, but also in the thoughtful individuality of the handwritten note as a vehicle for intimate personal interaction (Baron, 2009). The fear of loss of authorship since the first generation users, Mark Twain for instance, never vanished. As analyzed in the last two sections, whether as a writing machine or a typing machine, the typewriter was critically despised and accused of monotonous and impersonal traits that would overturn traditional literacy practices.

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seemed to give women a new chance of entry into the public working world. Some cultural reviews have endorsed judgments on the significance of typewriters for women, for instance: "the value of typewriter is a blessing to mankind and especially to womankind" (qtd. in Beeching, 1974) or "typewriting was the opportunity that opened the door for the emancipation of women" (Romano, 1986). For more about social changes of female typists, see Keep, 1997, Lewis, 1988, and Zimmeck, 1985.

[8] The most noted example of dictation is the author Henry James, who began dictating to an amanuensis who typed his works directly into a Remington typewriter in 1897 (Thurschwell, 2001). His biography, *Henry James at Home*, devotes some pages to his relationship with his various secretaries, William MacAlpine, Mary Weld, and Theodora Bosanquet, who was praised by James as "a new excellent amanuensis … who is worth all the other (females) that I have had put together" (Bosanquet, 2006). During years of dictation, Theodora Bosanquet began as a fan of James, worked for him until he died, and went on to be a Bloomsbury feminist and author (Thurschwell, 2001).

The criticism that typing certain degrades writing into a mechanized uniformity was disputed. The current social phenomena revealed that more and more users had become accustomed to typing, and felt that the technique of coordinating hands and eyes with the standardized spacing of keys and letters on the board was natural and coherent. Between 1929 and 1932, Ben Wood, a professor at Columbia University and Frank Freemen conducted a large-scale experiment to demonstrate the educational impact of the typewriter (Baron, 2009). In regular school education, typing became a common lesson to increase students' skills. High school students took typing to prepare them for workplace competence; they learned to copy documents in typing class; nonetheless, they still worked with the older technology of pencil and paper for their other classes (Baron, 2009). Wood and Freemen suspected that typewriters could improve more than a child's chances for an office job, and presupposed that typewriters would benefit school children's writing literacy; they wanted to see if typing might improve not just the writing of grade school students, but also their spelling, arithmetic, geography and history. In short, the researchers hoped to prove that typing would increase learning in all the subjects covered in the elementary curriculum (Baron, 2009).

The result was satisfying to the researchers: students doing schoolwork on typewriters scored higher on a battery of standardized tests, compared to a control group working with pencil and paper (Baron, 2009). The researchers found that educational advantages for typists in earlier grades were small but important; furthermore, in later grades those students who typed outperformed their non-typing peers in subjects such as reading or geography. The researchers also discovered that none of this academic progress occurred at the expense of handwriting skills (qtd. in Baron, 2009). Wood and Freeman's experiment provided positive findings on both objective and subjective measurement scales. The conclusion of this experimentation was striking: typing, unlike its long, notorious name of mechanization, did create "the most direct path from mind to page" (Baron, 2009):

The typewriter reduces distraction of writing. In typewriting . . . the child's mind is more on what he is writing than on the task of transmitting it to the paper in legible form. There is less interference with thinking when writing with the machine than with pen, pencil, or crayon, particularly in the lower grades (qtd. in Baron, 2009). The common assumptions that typewriters made writing both mechanical and uniform might have been proven to be both old-fashioned and fallacious. The teachers in the experiment opined that typing facilitated self-expression and increased the amount of independent writing that the children did (Baron, 2009).[9] For those who feared the "mechanizing" influence of the typewriter, the results showed that the machine tends to reduce and simplify the mechanics of writing, and to free the mind of the writer for more effective thinking and composing (qtd. in Baron, 2009).

To sum up, after widespread orientation for decades, the typewriter changed its form from that of a gimmick to an important tool of expression and documentation. It became the foremost machine that "mediates between human subject and their writing" (Goody, 2011). After the skill of typing was adopted as an elementary course in school, typing came to be internalized as a mode of literacy, resembling reading and writing. The young generation began to learn typing, not for the purpose of being typists, but to write on different purposes. The concept of typing had been transformed from a specific skill simply for typists to a general ability involved with writing for everyone. Typewriting became more and more acceptable and applicable for users who could now fluently type and write what they pondered and wished to express. The typewriter, as its name claims, can be simultaneously typed and written by ordinary and professional writers. In short, it was now considered to be an ingenious mechanical product, the typewriting machine proper.

5. Conclusion: The Public and Typing Literacy

For over fifty years, the typewriter emerged and existed in American society, while the skill of typing became possible and then popular.

[9] Wood and Freeman's noble experiment didn't wind up putting portable typewriters in classrooms. For one thing, ninety percent of the teachers involved in the elementary school typing study had never before used a typewriter. They had to be taught the machine's basics, for example, how to insert the paper, change the ribbon, and clear a type bar jam, before they could begin learning how to type themselves, or how to teach typing to their first graders. For another, the Depression was in full swing, and schools had no money to replace the inexpensive and perfectly serviceable pencils and dip pens (Baron, 2009). So typewriters stayed in administrative offices and in the school's typewriter classroom, where typing, along with stenography, filing, and bookkeeping, the modern equivalents of copying the letter in a big round hand, continued to be taught to students in the secretarial course (Baron, 2009).

As Mark Twain predicted, once the typewriter survived, whether as a writing machine, a typing machine, or as a typewriting machine, it changed the way the world wrote about itself and entered into an era of mechanical writing. Typewriters also involved elements in the cultural and social domains reconfigured by the technological transformation of writing.[10] Through different phases of user experience in the United States, a modern dimension of "the uniform, the homogeneous, and the continuous" brought about by the typewriter had the general effect of creating monotonous and tedious jobs of typist; furthermore, it gave rise to a technologically innovative type of writing literacy, typing (McLuhan, 2001). The public's typing literacy, concomitantly derived from typewriters, experienced unstoppable growth and a wider application in everyday life. In conclusion, the typewriter reshaped human consciousness of writing into a new means of mechanical writing, despite its homogenous and impersonal characters, leading the public into a technological age, in which typing literacy thus developed as a primary skill of script in preparation for the advanced word input technology of the present day computer.

Works Cited

Baron, Dennis E. (2009). A Better Pencil: Readers, Writers, and the Digital Revolution. Oxford: Oxford University Press.

Beeching, Wilfred A. (1974). Century of the Typewriter. New York: St. Martin's Press.

Bosanquet, Theodora. (2006). Henry James at Work. Ann Arbor: University of Michigan Press.

Current, Richard N. (1954). The Typewriter and the Men Who Made It. Urbana: University of Illinois Press.

Davies, Margery W. (1982). Woman's Place Is at the Typewriter: Office Work and Office Workers 1870-1930. Philadelphia: Temple University Press.

Flatow, Ira. (1993). They all Laughed... : from Light Bulbs to Lasers : the Fascinating Stories behind the Great Inventions that Have Changed Our Lives. New York: Harper Perennial.

Goody, Alex. (2011). Technology, Literature and Culture**.** Cambridge: Polity Press.

Hoke, Donald R. (1990). Ingenious Yankees: The Rise of the American System of Manufactures in the Private Sector. New York: Columbia University Press.

Keep, Christopher. (1997). "The Cultural Work of the Type-writer Girl." Victorian Studies 40. 3, 401-26.

Kittler, Friedrich. (1990). Discourse Networks 1800/1900. Stanford: Stanford University Press.

---. (1999). Gramophone, Film, Typewriter. Stanford: Stanford University Press.

Lewis, Jane E. (1988). "Women Clerical Workers in the Late Nineteenth and Early Twentieth Centuries." The White-Blouse Revolution: Female Office Workers Since 1870. Ed. Gregory Anderson. Manchester: Manchester University Press, 27-47.

McLuhan, Marshall. (2001). Understanding Media. London: Routledge.

Norman, Donald A. (1998). The Design of Everyday Things**.** London: MIT Press.

Olwell, Victoria. (2005). "The Body Types: Corporeal Documents and Body Politics Circa 1900." Literary Secretaries/Secretarial Culture. Ed. Leah Price and Pamela Thurschwell. Aldershot: Ashgate, 48-62.

Romano, Fran J. (1986). Machine Writing and Typesetting: The Story of Sholes and Mergenshaler and the Invention of the Typewriter and Linotype. Salem: Gama.

Russo, Thomas A. (2002). Mechanical Typewriters: Their History, Value, and Legacy. Atglen: Schiffer Publishing.

---. (2000). Office Collectibles: 100 Years of Business Technology**.** Atglen: Schiffer Publishing.

Shiach, Morag. (2000). "Modernity, Labour, and the Typewriter." Modernist Sexualities. Ed. Hugh Steven & Caroline Howlett. Manchester: Manchester University Press. 114-29.

Strom, Sharon Hartman. (1992). Beyond the Typewriter: Gender, Class, and the Origins of Modern American Office Work, 1900-1930. Urbana: University of Illinois Press.

Thurschwell, Pamela. (2001). "On the typewriter, In the Cage, at the Ouija board." Literature, Technology and Magical Thinking, 1880-1920. Cambridge: Cambridge University Press, 86-114.

Twain, Mark. (1963)."The First Writing-Machines." The Complete Essays of Mark Twain. Garden: Doubleday, 324-26.

Wershler-Henry, Darren. (2005). The Iron Whim: A Fragmented History of Typewriting. Ithaca: Cornell University Press.

Zimmeck, Meta. (1985). "Jobs for the Girls: The Expansion of Clerical Work for Women, 1850-1914." Unequal Opportunities: Women's Employment in England 1800-1918. Ed. Angela V. John. Oxford: Blackwell, 152-77.

[10] For more about the typewriter's historical technology and its significance for the social and psychic meanings of writing, see Kittler, 1990 and Shiach, 2000.