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Document Examinations of Handwriting with a Straightedge or a Writing Guide

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ABSTRACT: Occasionally sighted writers practice "straightedge writing," sometimes referred to as "blind-man's writing," in which a straight object is used as a baseline. Many systems are used, and individual characteristics are established especially in the descenders (lower zone). Most of these writers try to be neat, yet wish to be unique.

The writing of sighted people differs considerably from that of the functionally blind, who use many types of writing guides. Guides used by the blind are often flexible, yet confine writing to a given space instead of only using a straight line. For example, there are check templates which fit standard checks to keep the writing in certain areas for the visually impaired. The writing of a blind person is normally not as evenly spaced and precisely formed, and the "t" crossing and "i" dots are often missing. Such writing is individualized and identifiable.

KEYWORDS: questioned documents, blindness, handwriting, writing guides, sighted writers, straightedge baseline, functionally blind writers, writers' guides, individual writing characteristics, identifiable handwriting

Occasionally, sighted writers are found who practice "straightedge writing," or what is also known as "blind-man's writing"; that is, they use something as a guide for the baseline. This type of writing is usually achieved by holding a card or a similar edge at the baseline and writing above it. Some writers touch the pen to the straightedge and follow it as one uses a ruler; others know about where it is and follow the edge as if using lined paper. Most users feel that this system of writing is neat and unusual. With practice, the same forms can be made on a limited basis without using a straightedge, and the writing will appear as if one had been used. The style usually shows straight lines at the bottom or base. The most variable factor is how each writer treats the descenders (lower zone), which are those segments of letters that descend below the writing line, since the straightedge must be removed to write in this area. Some writers resort to printing, while others use a mixture of printing and cursive writing to avoid using descenders. Still others lift the straightedge out of the way each time to complete the descenders. On even rarer occasions, the writer will do the whole page without the descenders and then return after completion to proofread and complete the letter formations.

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Straightedge Writing

Figure 1 shows a bank holdup note recovered after a robbery/murder. Unfortunately, it was processed for latent fingerprints without first being photographed, or examined for indented writing, or undergoing other forms of examination. This writer started with a pen that did not flow properly, as is indicated by the retracings and skips. After completion of the note, the writer went back and proofread it and added the descenders and a word in the lower left corner, using a different pen. This is shown in Fig. 2, which has partly filtered out the first writing to accent the new ink. Note, for example, that the "y" is first formed like a "u," and its completion was missed in the second word of the second line. (A word was also omitted.) The placement of the commas and other punctuation marks is obviously important to the writer. Figure 3 is a sample of the suspect's unrequested writing in a prison memo using a similar system. As a sidelight on this case, it was noted that the defendant sat in court taking his own notes using a straightedge!

Figure 4 shows writing of another person who used a straightedge. In this case, marks were found on the edge of the envelope that had been used as the edge (Fig. 5). The writer combined cursive and printing and, by doing so, often avoided descenders. At other times, the straightedge was lifted to complete the letter as it was written. Bouncing the writing off the straightedge was apparently not important to this person or to the robbery note writer.

Figure 6 shows the writing of another person using the straightedge system and in this case employing printed forms, perhaps because there was a requirement to "print or type." In doing so, the writer used upper case letters, thus avoiding using descenders.

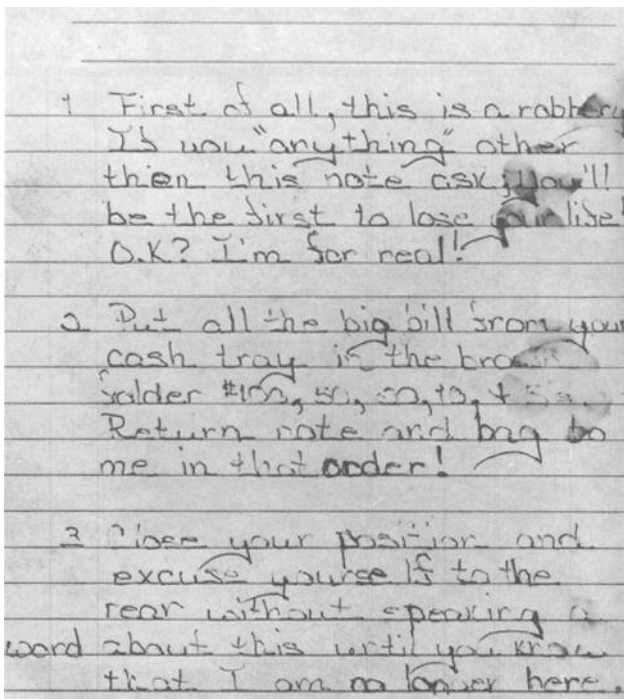


FIG. 1a—Holdup note written with a straightedge.

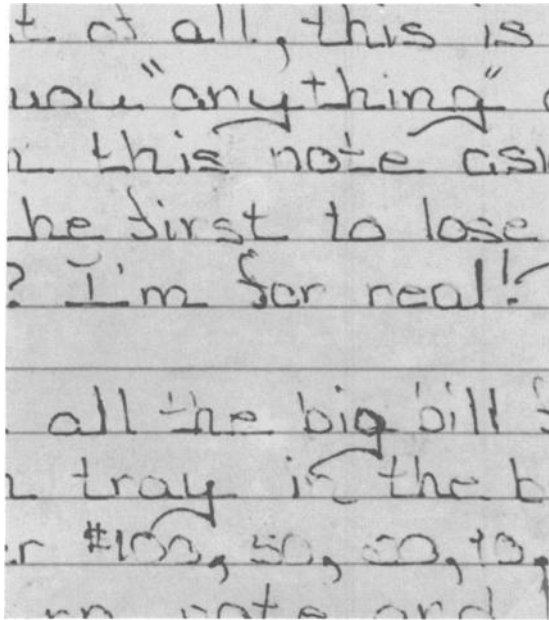


FIG. 1b—Enlarged hold-up note.

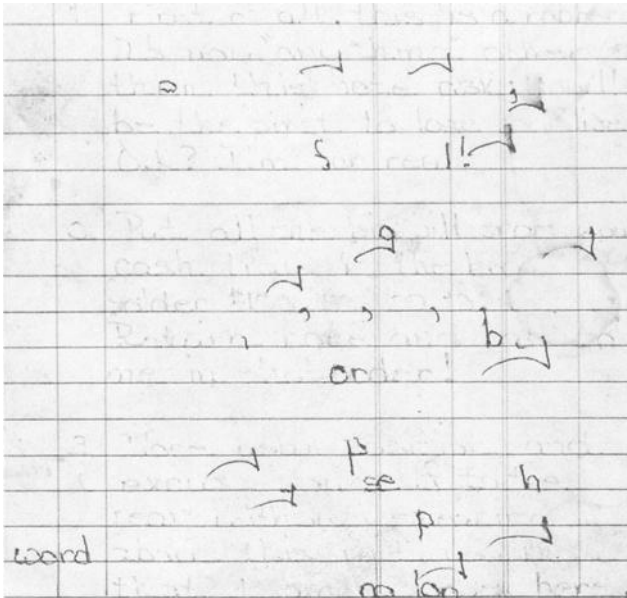


FIG. 2—Filtered note showing the ink used in writing the added descenders.

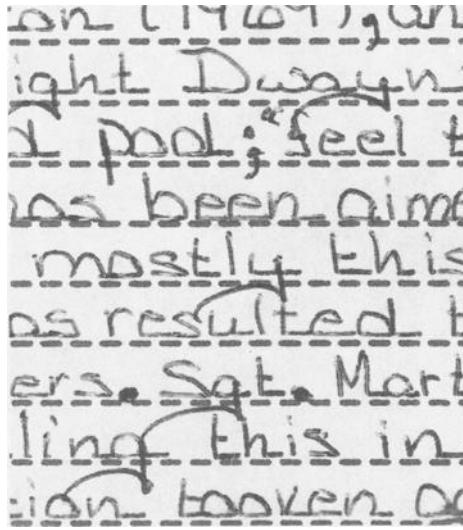


FIG. 3—Unrequested writing of the individual suspected of writing the note in Figs. 1 and 2.

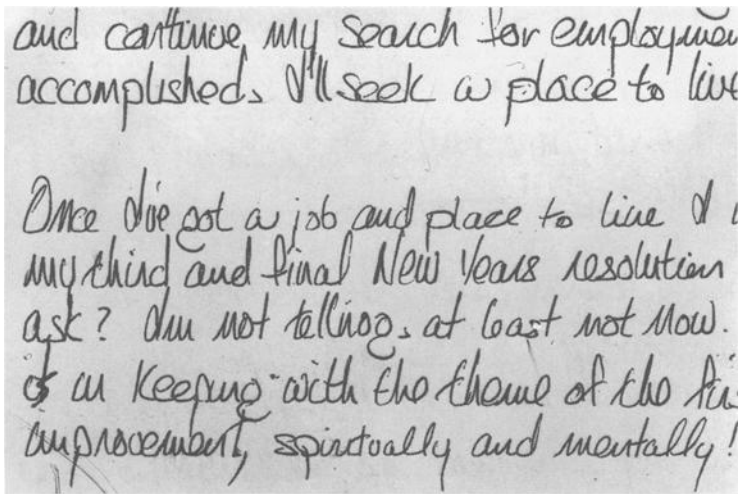


FIG. 4—Another sample of straightedge writing (see Fig. 5 for the edge). Note the mixture of print and cursive, and upper and lower case forms.

Figure 7 was obtained upon request from yet another writer who used a straightedge and mixed cursive with printing, and lower with upper case letters, but avoided using descenders.

All of these writers were found to have highly individual characteristics and to conform to no special group of class characteristics. Consequently, their writing can be easily identified. They all follow a system that was originally used by the blind to give a reference point to their writing. Most sighted straightedge writers could be described as wanting to be careful about their writing by making an extra effort toward neatness, yet having a desire to be individual and unique.

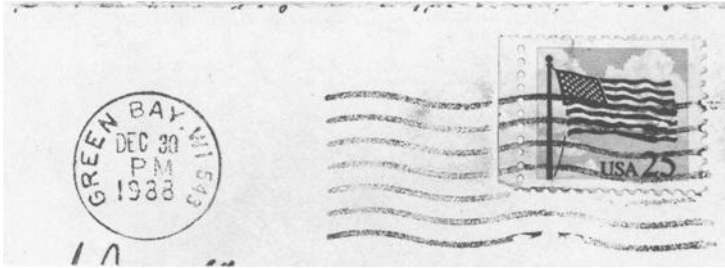


FIG. 5—Top of the envelope which was the edge used to produce the straightedge writing shown in Fig. 4.

RIVER: (Print or Type Full Name) ANGELA D. BARNARO				PHONE: 470-2530	
RIVER'S ADDRESS: (Street or R.F.D.) 5145 W. LOHME LINCOLN, NE				CITY, STATE AND ZIP CODE:	
RIVER'S LICENSE	DATE OF BIRTH		NUMBER: 602-124123	STATE: NE	<input type="checkbox"/> MALE <input checked="" type="checkbox"/> FEMALE
	MO. 5	DAY 24			
VEHICLE	LICENSE PLATE	YEAR: 1989	STATE: NE	NUMBER: Z-58734	ESTIMATED DAMAGE VEHICLE: 100.
	YEAR: 1982	MAKE: MERCUARY	MODEL: COUPE	BODY STYLE: 4 DOOR	COLOR: WHITE
	VEHICLE I.D. NO. (VIN) 1MEB077BXLB1Z785				ODOMETER READING 63268
OWNER: (Print or Type Full Name) JERRY-ANGELA BARNARO				PHONE: 470-2530	

FIG. 6—Straightedge printing.

The alignment and descender characteristics found in the writing of sighted people using a straightedge differ considerably from those of functionally blind people using writing guides. This is due in part to the types of writing guides commonly used by blind people. As opposed to the hard straightedges used by sighted people wanting to write on a straight line, writing guides used by the blind are often more flexible and confine writing to a given space instead of providing a straight hard line.

String-Board Guide Writing

One type of guide used by the blind is a string-board guide, such as the one shown in Fig. 8. The hinged lid is lifted and a 8.5 by 11-in. (21.6 by 28 cm) sheet of paper is inserted. The lid is then closed, bringing the string lines down on top of the paper. The strings are very flexible, which allows the pen to drop below the string to form descenders. Because of the flexibility in the strings, writing with the use of this guide cannot usually be detected as having been written with a guide. In fact, the strings are so flexible that writing done with this type of guide is often as out of alignment as totally freehand writing. Figure 9 compares freehand writing by a blind person (top), with string-board writing by the same person (middle).

FIRST OF ALL, THIS IS A WARNING
 IF YOU "ANYTHING" OTHER
 THEN THE NOTE ASK, YOU'LL
 BE THE FIRST TO LOSE YOUR LIFE
 D.K. I'M FOR REAL!

Put All the Big Bill from Your
 CASH TRAY IN THE BROWN
 FOLDER \$ 100, 50, 20, 10, & 5'S
 RETURN NOTE AND BAG TO

FIG. 7—Requested handwriting showing another style of straightedge writing.

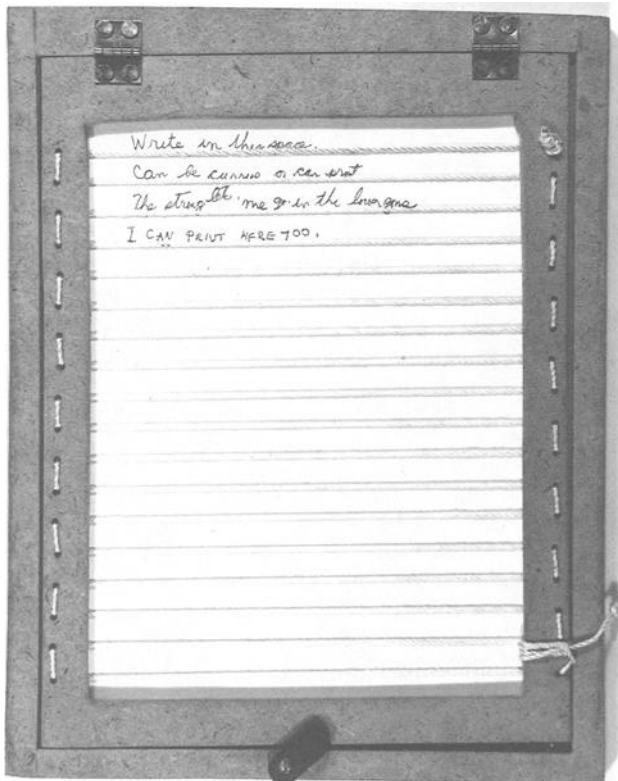


FIG. 8—String guide.

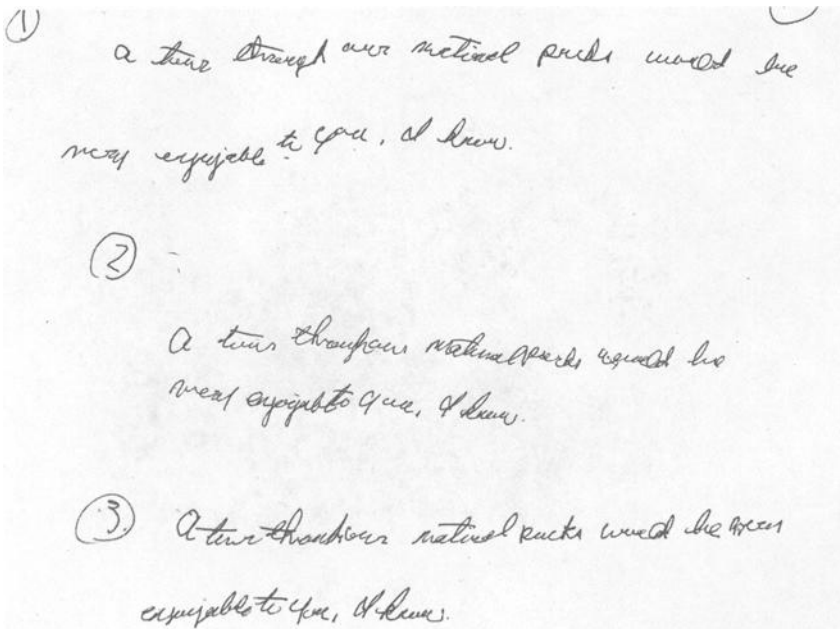


FIG. 9—Samples by the same person: (1) freehand writing, (2) writing done with a string-board guide, and (3) writing done with a cardboard guide.

Cardboard Guides

Another type of writing guide used by blind writers is a cardboard letter-writer guide such as that shown in Fig. 10a. This guide consists of a 17 by 11-in. (43 by 28 cm) piece of thin cardboard folded in half so that an 8.5 by 11-in. (21.6 by 28-cm) sheet of paper can be inserted. The top half of the folder has cut-out spaces for each line of writing, with a notch 1 in. (25.4 mm) from the end of the space to indicate to the writer that he or she is nearing the end of the line. The cardboard lines between each cut-out space are fairly thin, which allows them to be somewhat flexible but not nearly as flexible as the string-board guide. Alignment with a cardboard guide is generally much better than that with a string-board. Figure 9 shows a third sample written by the same person using a cardboard guide.

Even with the less flexible cardboard guide, the use of the guide is not always easily detected, if it is detectable at all. Many visually impaired writers do not use the guide for the purpose of writing on the baseline but to write within the space provided. The writing may not regularly touch the top or bottom of the boundaries but is maintained within the writing space. Even though a straight baseline frequently does not occur when a cardboard guide is used, the lower zones of letters are usually made much shorter than in frechand writing or string-board writing. The writer is aware of the limited amount of space he or she has to work within and therefore tends to keep his or her descenders short. An example of this can be seen in Fig. 9. Note the shortness of the descenders in the word "enjoyable" when the cardboard guide was used. Figure 11 shows a sample written by a visually impaired writer who did produce an obvious baseline when using a cardboard letter-writer guide. Notice that his writing still differs noticeably from the writing shown in the samples written by sighted people using a straightedge (Figs. 1-7). Most of the descenders in Fig. 11 are raised off the baseline to accommodate the descender, such as in the words "through" and "enjoyable." In the word "very," the writer

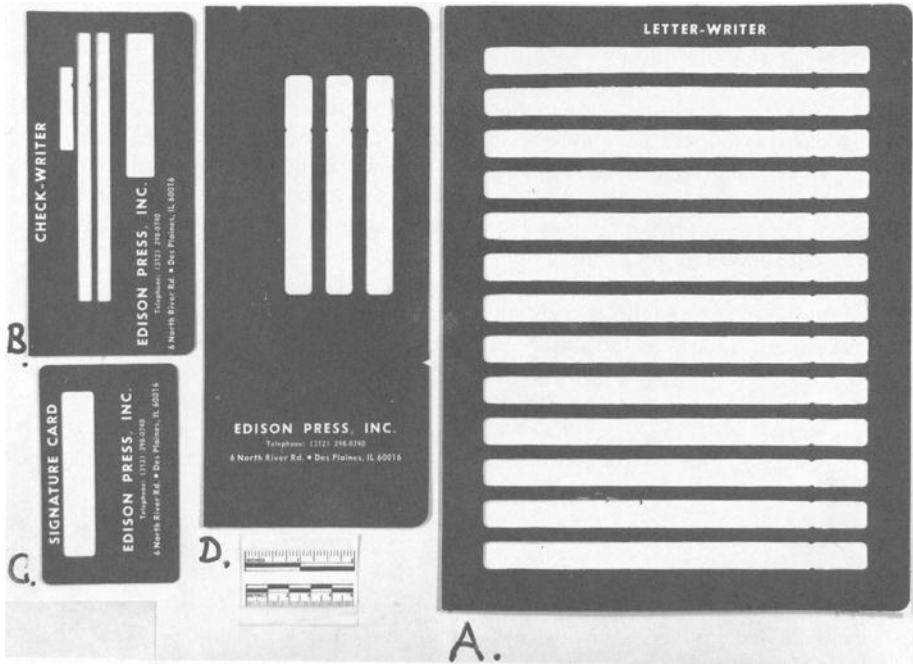


FIG. 10—Cardboard guides.

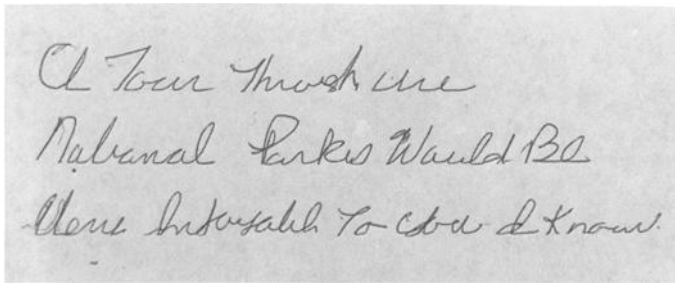


FIG. 11—Writing of a visually impaired person using a cardboard guide, wherein the baseline is noticeable. Note the absence of descenders, “t” crossings, and “i” dots.

forgot to raise the “y,” and, therefore, the descender of the letter was written on top of the guide and the very bottom of the “y” appears in the space allowed for the next line of writing. It is not uncommon to find “t”’s not crossed or “i”’s not dotted.

Template Systems

Another guide frequently used by the visually impaired is a check template. A check template can be homemade or purchased to fit over standard bank checks, which can then be filled out by the blind person. Figure 10b shows a manufactured cardboard check template. Homemade check templates are often made out of cardboard or plastic. As with the other guides, most people aim to write within the space rather than on the line.

However, the use of a check template is more easily detectable than the use of other guides because of the limited amount of writing space available. It is difficult to write within the allowed area without routinely touching the top or bottom boundaries. Figure 12 was written by the same writer displayed in Fig. 10, using a homemade plastic check template. Note that a baseline is not obvious when this writer used the cardboard guides in Fig. 10 but it is noticeable when she used the check template in Fig. 12. It is also interesting to note that the plastic template used here was quite flexible, yet the baseline is clear. Perhaps this is due to the fact that this writer was aware of the very limited area on the checks and therefore was inclined to pay more attention to staying carefully within the designated space and not pushing outside the limits.

Figure 10c shows a guide used for signatures and Fig. 10d a guide for addresses. There are other similar guides manufactured, and there are cardboard guides with raised lines with which paper is placed on top and the lines can be felt under the paper. Also available to visually impaired people are special-order checks, which are larger than standard personal checks and contain embossed lines to guide the writing. Similarly, writing paper can be purchased with embossed lines. Some visually impaired people make their own writing paper by rolling the paper around a pencil, creasing the paper roll, and then unrolling it to use the creases as their guide [1].

Conclusions

Whereas sighted people using straightedge writing normally do so because they are pleased with the look and individuality that it gives their writing, functionally blind people use guides for the much more practical purpose of legibility. They wish to prevent overwriting and writing off the edge of the paper. The attractive appearance of their writing is not a great concern. Therefore, the writing of a sighted person using a straight-

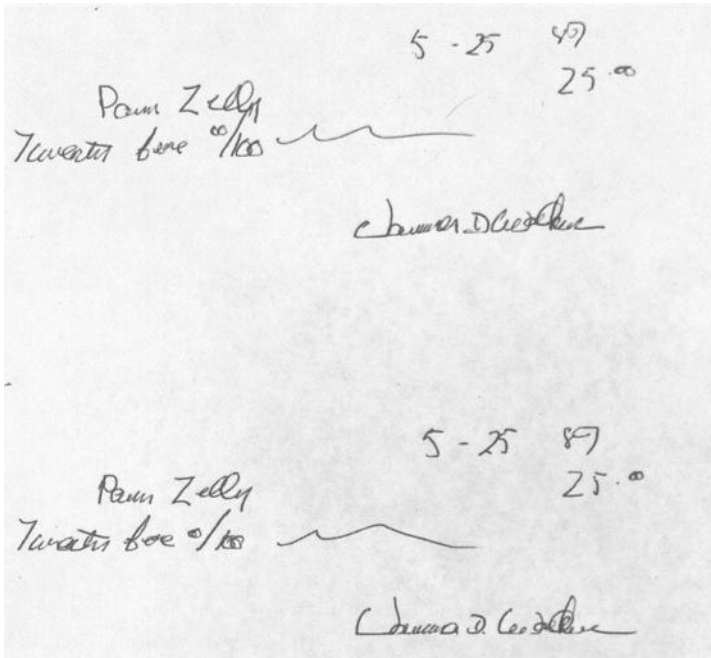


FIG. 12—Writing done with a plastic homemade check template.

edge normally appears neat and even and often contains fancy or complicated formations. The writing of a functionally blind person using a guide is usually not so evenly spaced or precisely formed nor as fancy. It is, however, individualized and identifiable. There are, of course, many blind people who simply give up and do not try to write. Those born blind or who lose their sight before developing writing skills might be taught systems of braille cell, or a box with square shapes and retraced lines [2,3]. Because functionally blind people have vision loss of varying degrees and types, the effects of vision loss on their writing varies from person to person.

Acknowledgments

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