unlike his previous severity shows that Richard knew how to be gracious as well as despotic. Whether the marriage actually took place is not known. Jane certainly lived to the year 1513, when More wrote his history of Richard III., but how much later we cannot tell.

SHORTHAND, or Stenography, Tachygraphy, &c., is a term applied to all systems of brief handwriting which are intended to enable a person to write legibly at the rate of speech. (For the ancient Latin and Greek tachygraphy, see the last part of the article on Palæography.) In the 10th century all practical acquaintance with the shorthand systems of Greece and Rome faded completely away, and not till the beginning of the 17th can the art be said to have revived. But even during that interval systems of writing seem to have been practised which for speed ap­proximated to modern shorthand. @@1

*Shorthand in English-speaking Countries.—*England was the birthplace of modern shorthand, and at the present time there is no country in Europe, except perhaps Germany and German Switzerland, where the art is so extensively practised as in England. The first impulse to its cultivation may possibly be traced to the Reformation. When the principles of that movement were being pro­mulgated from the pulpit, a desire to preserve the dis­courses of the preacher naturally suggested the idea of accelerated writing. It is certainly striking that in the early systems so many brief arbitrary signs are provided to denote phrases common in the New Testament and Pro­testant theology. Up to the present time (1886) not less than 483 professedly distinct systems of English shorthand have been published, and doubtless many more have been invented for private use. It is impossible here to notice even by name more than a very few of them. Indeed, if we reject all those systems which are imitations or repro­ductions of earlier ones, and systems which are so unpracti­cal as to be little better than elegant toys, and a multitude of utterly worthless catchpenny publications, only a few remain. In Dr Timothy Bright’s @@2 *Characterie* (1588) and Peter Bales’s @@3 *Arte of Brachygraphie,* contained in his *Writing* *Schoolemaster* (1590), almost every word in the language is provided with an arbitrary sign. Only with gigantic memory and by unremitting labour could one acquire a practical knowledge of such methods. The first shorthand system worthy of the name which, so far as is known, appeared in England is that of John Willis, whose *Art of Stenographie* (London, 13 editions @@4 from 1602 to

1644) is substantially based on the common alphabet ; but the clumsiness of his alphabetic signs, and the confused laborious contrivances by which he denotes prefixes and terminations, involving the continual lifting of the pen, would seem to render his method almost as slow as long- hand. Of the 201 systems which intervene between J. Willis’s and Isaac Pitman’s phonography (1837) nearly all are based, like Willis’s, on the alphabet, and may be called a, b, c systems. But seven are, like phonography, strictly phonetic, viz., those by Tiffin (1750), Lyle (1762), Holds- worth and Aldridge (1766), Roe (1802), Phineas Bailey (1819), Towndrow (1831), and De Stains (1839). Of the 281 systems which have appeared since phonography a very large proportion are merely imitations of that system, or proceed on the same lines.

A few general remarks apply largely to all the a, b, c systems. Each letter is designated by a straight line or curve (vertical, horizontal, or sloping), sometimes with the addition of a hook or loop. *C* and *q* are rejected, *k* being substituted for hard *c* and *q, s* for soft *c.* Signs are pro­vided for *ch, sh, th. G* and *j* are classed under one sign, because in some words *g* is pronounced as *j,* as in *giant, gem.* Similarly each of the pairs f, *v* and *s*, *z* has only one sign. A few authors make the signs for *j*, *v, z* heavier than those for *g, f, s.* Some class *p* and *b, t* and *d,* each under one sign. The stenographic alphabet is therefore—*a, b, d,*

*e, f (v), g (j), h, i, k, l, m, n, o, p,r, s (z), t, u, w, x,y, ch, sh th.* Letters which are not sounded may be omitted. *Gh, ph* may be counted as *f* in such words as *cough, Philip ;* but the *th* in *thing* is never distinguished from the *th* in *them.* Thus the a, b, c systems are largely phonetic with respect to consonant-sounds; it is rather with regard to the vowels that they disregard the phonetic principle. No attempt is made to provide adequately for the many vowel-sounds of the language. Thus the signs for *like* and *lick,* for *rate* and *rat,* &c., are the same. In the case of vowel-sounds denoted by two letters, that vowel is to be written which best repre­sents the sound. Thus in *meat* the *e* is selected, but in *great* the *a.* In some a, b, c systems, including the best of them (Taylor’s), a dot placed anywhere does duty for all the vowels. This practice is, of course, a fruitful source of error, for *pauper* and *paper, gas* and *goose,* and hundreds of other pairs of words would according to this plan be written alike. In the early systems of Willis and his imi­tators the vowels are mostly written either by joined char­acters or by lifting the pen and writing the next consonant in a certain position with respect to the preceding one. Both these plans are bad ; for lifting the pen involves ex­penditure of time, and vowels expressed by joined signs and not by marks external to the word cannot be omitted, as is often necessary in swift writing, without changing the general appearance of the word and forcing the eye and the hand to accustom themselves to two sets of outlines, vocalized and unvocalized. In the better a, b, c systems the alphabetic signs, besides combining to denote words, may also stand alone to designate certain short common words, prefixes, and suffixes. Thus in Harding’s edition of Taylor’s system the sign for *d,* when written alone, denotes *do, did,* the prefixes *de-, des-,* and the terminations *-dom, -end, -ened, -ed.* This is a good practice if the words are well chosen and precautions taken to avoid ambiguities. Numbers of symbolical signs and rough word-pictures, and even wholly arbitrary marks, are employed to denote words and entire phrases. Symbolical or pictorial signs, if suffi­ciently suggestive and not very numerous, may be effective; but the use of "arbitraries ” is objectionable because they are so difficult to remember. In many shorthand books

@@@1 For instances, see Zeibig’s *Geschichte u. Lit. der Geschwindschreihkunst* (Dresden, 1878), pp. 67-79. For John of Tilbury’s system (c. 1175), see especially *Shorthand,* No. 5, and *Hermes,* viii. p. 303.

@@@2 The Bodleian Library contains the only known copy of Bright’s book. For a description of the system, see *Phonetic Journal,* 1884, p. 86 ; *Circulars of Information of the Bureau of Education* (Wash­ington), No. 2, 1884, p. 8 ; and *Notes and Queries,* 2d ser., vol. ii. p. 394. *A* is represented by a straight line, the other letters of the alphabet by a straight line with a hook, circle, or tick added at the beginning. Each alphabetic sign placed in various positions, and having some additional mark at the end, was used to indicate arbi­trarily chosen words beginning with *a, b, c, d,* &c. There were four slopes given to each letter and twelve ways of varying the base, so that forty-eight words could be written under each letter of the alphabet if necessary. Thus the sign for *b* with different terminal marks and written in four different directions signified a number of words commencing with *b* ; 537 such signs had to be learned by heart. By adding certain external marks these signs were applied to other words : thus by writing a dot in one of two positions with respect to a sign the latter was made to represent either a synonym or a word of opposite meaning. Under *air* are given as synonyms *breath, exhalation, mist, reek, steam, vapour.* The best account of Bright is given in the *Dictionary of National Biography,* vol. vi. (1886).

@@3 Bales’s method was to group the words in dozens, each dozen headed by a Roman letter, with certain commas, periods, and other marks to be placed about each letter in their appropriate situations, so as to distin­guish the words from each other. For an account of Bales, see Wood’s *Athen. Oxon.,* vol. i. col. 655, and the *Dict. of Nat. Biog.,vol.* iii. (1885).

@@@4 The first edition, published anonymously, is entitled *The Art of*

*Stenographie . . . whereunto is annexed a very easie Direction for Steganographie, or Secret Writing,* printed at London in 1602 for Cuthbert Burbie. The only known copy is in the Bodleian Library.