

V.—*On the Vocabularies of Children Under Two Years of Age.*

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Some time ago,\* I made an examination of my own vocabulary, in order to see how many words were at one's command in ordinary speaking and writing.

I desired to do this, as I was sure that the ordinary statement that "the vocabulary of an intelligent adult is about ten thousand words" was quite inaccurate.

This I supposed to be the case because ten thousand *technical* words is by no means a large vocabulary for a specialist in many branches of science. A chemist, a geologist, a botanist, a zoölogist, has frequently command of many thousand mere *names*, which if added to the vocabulary which he possesses in common with unprofessional persons of his own rank in life, will bring the sum total of the words at his command up to a very high figure.

To avoid misunderstanding, I defined *a word* to be a symbol occurring in capital letters in WEBSTER'S Unabridged Dictionary, edition of 1852. By an approximate method I found that my own vocabulary was thirty-three thousand four hundred and fifty-six words, with a probable error of not more than *one per cent.* Allowing a probable error of even *two per cent.*, my own vocabulary would then be comprised between the limits of thirty-four thousand one hundred and twenty-five words and thirty-two thousand seven hundred and eighty-seven words. I am confident this is not too large, for the following reasons:

1. The method of obtaining this number, though necessarily approximate, is tolerably accurate, and the limits of *error to fear* are ample.

2. My own process was repeated, in part, by Mr. FARQUHAR of the Patent Office, independently of me, in the most careful manner, and with the result of finding a still larger vocabulary than my own.

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\* Bulletin of the Philosophical Society of Washington, 1875, Appendix VI., and Proceedings American Philological Association, 1875, p. 4.

3. The same work was done independently by Professor EASTMAN, of the Observatory, with a like result.

4. Dr. GRAY, of Harvard College, and Professor THEODORE GILL, of the Smithsonian Institution, have informed me that their own merely technical vocabularies comprise a very large fraction indeed of thirty thousand words, and hence it appears that the limit of ten thousand words is exceeded in some cases by technical words alone.

5. The Anglo-Saxon Chronicle, which was *completed* before A. D. 1100, actually contains no less than eleven thousand nine hundred and thirteen words, which were all in use before this date; and while some of these are now obsolete, it is little less than certain that the succeeding seven hundred years has at least doubled the number of words in daily use by intelligent men. The mere introduction of the telegraph has added scores of words to ordinary vocabularies and steam has added hundreds.

For these reasons, and because of other partial trials, I have great confidence in repeating my previous conclusion, viz.: that twenty-five thousand words and over is by no means an unusual vocabulary for persons of average intelligence and education.

While I am myself satisfied of the correctness of this result, and while I am also satisfied that an examination of the subject by any competent person will lead to the same results, I still desired to carry this research a little further, as I had opportunity. It is plainly a matter of great difficulty to form a concordance to the published works of any writer, and the purpose in hand is perhaps not sufficiently important to justify the expense of time and labor.

It is, however, possible to determine the actual vocabularies of children while they are yet young, with great precision. This I have done in two cases, which are herewith presented, and I am able by the courtesy of a friend in England to give the same data in another case. In all these cases only words are included which were actually *used* during the twenty-fourth month of the child's life. The most rigid system of exclusion of all doubtful words has been followed. For example, there

are few children who are not familiar with many nursery rhymes, but in the cases presented, no word of such rhymes is included in the vocabulary unless it was independently and separately used, in the same way with the words of daily and common use. In the first two cases the words so excluded are above 500 in number. Again, the names of objects represented in pictures which were known and frequently repeated, are omitted unless they were often spontaneously used or applied to living objects as well. I desire to emphasize the rigor with which words at all doubtful were excluded. I may give still another example of it. In descending or ascending stairs their number was frequently and intelligently counted in order from *one* to *fourteen*: yet I have only included such numbers as were separately and independently employed.

I have presented the lists of words in the order of their initial letters, as I at first believed (and now am certain) that the ease or difficulty of pronouncing a word largely determines its early or late adoption, it being all the while entirely comprehended. Under each initial letter I have divided the words used into several classes: 1. nouns, etc.; 2. verbs, etc.; 3. adjectives, etc.; 4. adverbs, etc.; 5. all other words. This was done because I supposed that I should meet with more nouns than verbs, more adjectives than adverbs, and that this inequality would be great according to the varying complexity of the idea. Thus, the idea of a modified action, as "walking easily" is far more complex than that of a modified substance, as "red clay." I expected then to find great inequality: the comparative tables hardly bear this out, as may be seen by consulting them.

I am inclined to take it as a result of my inquiry that the ease of pronunciation, far more than the complexity of the idea, determines the adoption of a word. This is borne out by all the material under consideration. The children under examination were as nearly as possible exposed to similar surroundings. Of the three the first [M. H.] spoke very distinctly always, the acquisition of words was a pleasure, and the total number used up to two years of age was four hundred and eighty-three. By glancing over the summary of

this case it will be seen that the words of easy initial letters predominate, and this is true in all cases. Thus for B there are fifty-three words used, while for L there are but sixteen, or a ratio of three and thirty-one one-hundredths. In the Dictionaries, which represent the vocabularies of adults, this ratio is one and seventy-three one-hundredths, and the difference I attribute to the easy pronunciation of words having initial B. In the second case [M. M. H.] the total number of words is three hundred and ninety-nine. In this case the pronunciation of many words was difficult, and they were therefore avoided and easy ones substituted, although the meaning of the ones not used was thoroughly comprehended. In the third case [B. K.] there was considerable backwardness in enunciation, although words were comprehended quite as fully as in the other cases, and the total number used is in this case but one hundred and seventy-two, and great preference is evident for the words of easy initials.

It may be interesting to exhibit the ratios of the various classes of words, nouns, verbs, etc., in the various cases, and I append the following table relating to this.

|   | M. H. | M. M. H. | B. K. |
|---|-------|----------|-------|
| Number of Nouns ÷ Number of Verbs = .....       | 2.66  | 2.56     | 3.86  |
| Number of Nouns ÷ Number of Adjectives = .....  | 8.38  | 6.22     | 8.62  |
| Number of Nouns ÷ Number of Adverbs = .....     | 9.83  | 13.53    | 18.66 |
| Number of Nouns ÷ Number of other words = ..... | 10.17 | 9.20     | 10.19 |

To show the effect of easy initial letters in the adoption of words into the vocabulary of a child, it may be interesting to compare the following table, in which the first line gives the order of frequency of the various letters of the alphabet as initial letters for adults, the second this order for M. H., the third for M. M. H., and the fourth for B. K.

TABLE SHOWING THE ORDER OF FREQUENCY OF THE VARIOUS LETTERS OF THE ALPHABET AS INITIAL LETTERS.

|                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| For adults.....  | S | C | P | A | D | R | B | T | F | M | I | E | H | L | G | U | W | O | V | N | J | Q | K | Y | Z | X |
| For M. H.....    | S | B | C | T | P | M | H | W | D | R | N | L | F | G | A | O | K | I | E | Y | J | U | V | Q | X | Z |
| For M. M. H..... | B | S | C | T | P | M | W | H | A | F | L | R | D | G | N | O | K | I | E | Y | U | J | Q | V | X | Z |
| For B. K.....    | C | B | H | P | S | M | F | G | W | A | D | N | R | T | K | J | L | I | O | E | Q | Y | U | V | X | Z |

This table appears to show that in general the order of frequency of initial letters is the same for adults and children, but that in the latter case this order is modified by the greater ease of pronouncing words with some initials. The cases of M, R, D, etc., illustrate this well.

In conclusion, I may say that I have the less hesitation in presenting this research in a field to which I am unaccustomed, as I am confident that the *facts* upon which it is based are correct and as I have given with it sufficient data for those more skilled than myself to correct any erroneous inferences I may have drawn. The tables here given seem to me to have more than a merely statistical value, as rightly studied they throw much light upon the mental processes of the child, and give us a clue as to the desires, impulses, and thoughts which continually seek and find expression. In the course of collecting these data, the comparatively great complexity of these processes has been repeatedly and vividly brought before me.

It may perhaps be asked why these vocabularies were not continued longer in each case, as they would thus acquire additional value.

In answer I would say that such a labor would be immense, as from my own experience I should consider it almost impossible to be as certain of the accuracy of the vocabulary of a child of three years as I am in the cases here given, so rapid is the acquisition of new words after the early part of the third year.

#### VOCABULARY OF M. H.,

*Comprising only words USED by her in every day speech during the twenty-fourth month of her life, October–November, 1875.*

- A. NOUNS, ETC.—Auntie, Annie, apple, arm. VERBS, ETC.—Asleep. ADJECTIVES, ETC.—A, an, another, afraid. ADVERBS, ETC.—(All), away, again, along. ALL OTHER WORDS.—And, at.
- B. NOUNS, ETC.—Bummer-laddie (to a doll), baby, book, bonnet, bed, bread, butter, berries, bureau, brush, bell, bottle, boots, boy, button, [bird, birdie], bumb(y)-bee, bib, box, bricks, bath, bath-tub, bone, bundle, beef, bracelet, bubble, ball, bench, Bessie, biscuit, band (article of dress), bucket, buttock-hook, blanket, bit (a little bit), basket. VERBS, ETC.—Burn, bite, break, broken, brush, button, be, bring, brought, bump, blow, bark. ADJECTIVES.—Bad. ADVERBS, ETC.—Backwards, badly, better (may better) by-low. ALL OTHER WORDS.—By and by.

- C. NOUNS, ETC.—Caroline, corner, carriage, Charley Kirk,\* cat, carpet, clouds, chicken-s, chair, comforter, crib, cradle, cigar, coat, collar, cuffs, clock, curtain, cotton, cane, cow, chin, closet, Captain Green,\* comb, child, car, candy, chamomilla, coal, cellar, can, cake, cup, cap, curls, cloak, clothes. VERBS, ETC.—Come-(s)-(ing), catch, [cry, crying], cut, can, creep, cover, choke. ADJECTIVES, ETC.—Cold, clean, cool. ADVERB.—Careful. ALL OTHER WORDS.—(Take) care.
- D. NOUNS, ETC.—Dorothea, door, daughter, dress, [dog, doggie], darling, drawers (2), ducks, ding-a-ling (i. e. a bell), doll, dollie, dirt, double-gown, drink. VERBS, ETC.—Don't and do, dance, dancing, (go) (going), drink, drop. ADJECTIVES, ETC.—Dear, dirty, dressed. ADVERB.—Down.
- E. NOUNS, ETC.—Eye, eyes, ear, ears, egg. VERB.—Eat. ADJECTIVE.—Enough.
- F. NOUNS, ETC.—[Foot, feet], finger, flowers, fly, flies, floor, fire, Frankie, face, forehead, fur. VERBS, ETC.—Frighten, fall, [fix, fixed], [find, found], feed. ADJECTIVE.—Four. ALL OTHER WORDS.—For.
- G. NOUNS, ETC.—Grandma, grass, [girl, girlie], geese, goose, garters, glass, glove, gas (meaning "gas-light"), Galileo (to a picture), gentlemen. VERBS, ETC.—Go, gone, going, give, get. ADJECTIVE.—Good. ALL OTHER WORDS.—Good-bye.
- H. NOUNS, ETC.—Holden, hen, hair, hammock, house, hat, [horse, horses], handkerchief, him, her, home, head, herself, hole, hominy. VERBS, ETC.—Hurt, [have, had, has], hold, hush, hear, hang, hug, help. ADJECTIVES, ETC.—Hot, high. ADVERBS, ETC.—Horse-back, here. ALL OTHER WORDS.—Hi! there, hullo.
- I. NOUNS, ETC.—I, it, ice and ice water. ALL OTHER WORDS.—In, indeed (as *no* or *yes* indeed).
- J. NOUNS, ETC.—Jack and Jacky boy, Johnson. VERB.—Jump.
- K. NOUNS, ETC.—Kittens, knife, knee, keys. VERBS, ETC.—Kick, keep, kiss, know.
- L. NOUNS, ETC.—Lap, lady, looking-glass, leg, leaves (of a tree), Lulie. VERBS, ETC.—Love, lie (down), look out (to), let, likes, listen, lost, lend, laugh and laughing. ADJECTIVE.—Lazy.
- M. NOUNS, ETC.—Mabel, mamma, match, mouse, meat, milk, mouth, man, Marie, Miss Reid, money, morning, moon, my,† me, music, Mrs. Green, Mrs. Kirk, medicine, machine (sewing), mother, matter (what is the), Mary, muff. VERBS, ETC.—Make, must and must not, may, mend. ADJECTIVES, ETC.—More, mad. ADVERB.—Much. ALL OTHER WORDS.—My gracious!
- N. NOUNS, ETC.—Night gown, nose, needle, nurse, neck, Ned, nails (finger nails), napkin, name, nipple. ADJECTIVES, ETC.—Naughty, nice, new. ADVERBS, ETC.—Now, nicely. ALL OTHER WORDS.—No, never mind.
- O. NOUNS, ETC.—One (as "Mabel have one"), oatmeal, outside, observatory. VERB.—Open. ADJECTIVE.—One. ADVERBS, ETC.—Out, off. ALL OTHER WORDS.—Oh! on, over, of.

\* Inseparable.

† Meaning *your*, as "get up in my (*your*) lap." Also used correctly.

- P. NOUNS, ETC.—Papa, pussy and pussy cat, picture, piano, pillow, potato, porch, peach, piece, pocket (used correctly), pocket (= pocket-book), pantaloons, pin, petticoat, pipe, plate, paper, pencil, pig, park, puppy, pony, parlor. VERBS, ETC.—Put, play, please, pull, poured-out, pick, point, push. ADJECTIVES, ETC.—Pretty, poor. ALL OTHER WORDS.—(For) pity's (sake).
- Q, R. NOUNS, ETC.—Ribbon, rocking-chair, room, ring, rose, rice, roll, rooster, rope, rag. VERBS, ETC.—Rock, ring, ride, run-away (one word), read, rock. ADJECTIVE.—Rough. ADVERBS, ETC.—Ready, right-away, quickly, round.
- S. NOUNS, ETC.—She, sacque, sash, sister, steps, sky, sun, song, sword, stove, sheep, sugar, string, street, [shoe, shoes], stick, spool, stairs, smoke, saucer, supper, scissors, stockings, stone, shirt, soap, shawl, spoon, spectacles, sir, shoulder, shelf, somebody, supper, skin (of an apple), shadow, side, something, soup, Struve (to a picture), slate. VERBS, ETC.—Show, [sit, sat], sing, see, smoke, shut, show, smack, swing, stand-up (one word), suck, sew, stay. ADJECTIVES, ETC.—Sick, sore. ADVERBS, ETC.—So, sleepy, still. ALL OTHER WORDS.—Shocking! (as an exclamation).
- T. NOUNS, ETC.—Tongue, teeth, tail, toes, thumb, table, tick-tick (for a watch or clock), tea, tree, towel, to-day, thimble, trunk, them, table, toast. VERBS, ETC.—Tear, take, touch, tumble-down,\* tie, trot, turn, tie it off (= untie), taste, tickle. ADJECTIVES, ETC.—Two, three, this, that, there. ADVERBS, ETC.—Two, to and fro, † together. ALL OTHER WORDS.—Thank you, the, to.
- U, V. NOUN.—Veil. ADVERB.—Very. ALL OTHER WORDS.—Under, up, upon.
- W. NOUNS, ETC.—Wagon, Willie, water, watch, window, wall, would, wind, wheel, wrapper. VERBS, ETC.—Wants, wake-up,\* walk, wash, won't, wet, wrap, wag-his-tail (one word), wise, write-ing. ADJECTIVES, ETC.—Warm, wet. ADVERB.—Where. ALL OTHER WORDS.—What, with.
- Y. NOUNS, ETC.—Yard, your-s. ALL OTHER WORDS.—Yes.

## SUMMARY.

|    | Nouns, etc. | Verbs, etc. | Adjectives, etc. | Adverbs, etc. | Miscellaneous. | Sum. |
|----|-------------|-------------|------------------|---------------|----------------|------|
| A. | 4           | 1           | 3                | 4             | 2              | 14   |
| B. | 37          | 10          | 1                | 4             | 1              | 53   |
| C. | 38          | 8           | 3                | 1             | 1              | 51   |
| D. | 13          | 5           | 3                | 1             | ..             | 22   |
| E. | 3           | 1           | 1                | ..            | ..             | 5    |
| F. | 9           | 5           | 1                | ..            | 1              | 16   |
| G. | 10          | 3           | 1                | ..            | 1              | 15   |
| H. | 15          | 8           | 2                | 2             | 2              | 29   |
| I. | 3           | ..          | ..               | ..            | 2              | 5    |
| J. | 1           | 2           | ..               | ..            | ..             | 3    |
| K. | 4           | 4           | ..               | ..            | ..             | 8    |
| L. | 6           | 9           | 1                | ..            | ..             | 16   |

\* Inseparable.

† Thoroughly understood and used correctly.

|          | Nouns, etc. | Verbs, etc. | Adjectives, etc. | Adverbs, etc. | Miscellaneous. | Sum. |
|----------|-------------|-------------|------------------|---------------|----------------|------|
| M.       | 24          | 4           | 2                | 1             | 1              | 32   |
| N.       | 10          | ..          | 3                | 2             | 2              | 17   |
| O.       | 4           | 1           | 1                | 2             | 4              | 12   |
| P.       | 23          | 8           | 2                | ..            | 1              | 34   |
| Q. R.    | 10          | 6           | 1                | 4             | ..             | 21   |
| S.       | 41          | 13          | 2                | 3             | 1              | 60   |
| T.       | 16          | 10          | 5                | 3             | 3              | 37   |
| U. V.    | 1           | ..          | ..               | 1             | 3              | 5    |
| W.       | 10          | 10          | 2                | 1             | 2              | 25   |
| X, Y, Z. | 2           | ..          | ..               | ..            | 1              | 3    |
| Sum,     | 285         | 107         | 34               | 29            | 28             | 483  |

Total number of words, 483.

### VOCABULARY OF M. M. H.,

*Comprising only words USED by her in every-day speech during the twenty-fourth month of her life, December, 1876.*

- A. NOUNS, ETC.—Auntie, Annic, apple, arm, apron, apple-sauce, anything. VERBS, ETC.—Asleep, ate, are. ADJECTIVES, ETC.—A, another, afraid. ADVERBS, ETC.—All, away, again, around. ALL OTHER WORDS.—And.
- B. NOUNS, ETC.—Broom, breakfast, [baby, babies], book, bonnet, block, bed and bedstead, babyhouse, bread, butter, bureau, brush, bell, bottle, boots, boy, button, box, bath-tub, bundle, beef, BessieChew\* (proper name), basket, bracelet, bubble-s, biscuit, bucket, buttonhook, (a little) bit,\* bow-wow, bosom. VERBS, ETC.—Burn, bite, break, brush, button, brought, been, bump, bark. ADJECTIVES, ETC.—Bad, bare, busy, beautiful. ADVERB.—(Give it) back. ALL OTHER WORDS.—Because, (to get) by (an obstacle).
- C. NOUNS, ETC.—Cold (= influenza), Caroline, corner, cat, carpet, chicken, chair, crib—cradle (two different articles), collar, clock, curtain, cotton, Charlotte, moo-cow, closet, comb, condensed-milk,\* coal, cake, cup, curls, chariot, cracker, candle (meaning lucifer match), capitol, chocolate, cracked-wheat,\* corner. VERBS, ETC.—Come, cry, crying, cut, can, (take) care, carry. ADJECTIVES, ETC.—Cold, clean, comfortable (meaning uncomfortable), charming.
- D. NOUNS, ETC.—Door, dear (as "you are a"), dress, dog, darling, drawers, doll, dustpan, dining room. VERBS, ETC.—[Do, did, don't], dance, drunk. ADJECTIVES, ETC.—Dear, down.
- E. NOUNS, ETC.—Eye-s, ear-s, egg. VERB.—Eat. ADJECTIVE.—Enough.
- F. NOUNS, ETC.—[Foot, footies], finger, flower, floor, fire, Frankie, fork, feeding-apron, fan, (naughty-)fellow,\* flag, fountain. VERBS, ETC.—Fall, find. ADJECTIVES, ETC.—Fat, funny. ADVERB.—Further. ALL OTHER WORDS.—For.
- G. NOUNS, ETC.—Grandma, girlie, goose, garters, (looking) glass, glove, gas, glasses (= spectacles). VERBS, ETC.—Go, gone, give, get, got. ADJECTIVE.—Good. ALL OTHER WORDS.—Good-bye.

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\* Inseparable.



- H. NOUNS, ETC.—Holden, hair, hammock, house, hat, horse, handkerchief, her, head, herself, hand. VERBS, ETC.—Hurt-s, have, hanging-down,\* hold, hug. ADJECTIVES, ETC.—Hot, high, heavy.
- I. NOUNS, ETC.—I, it. VERB.—Is. ALL OTHER WORDS.—If, in.
- J. VERB.—Jump-ing.
- K. NOUNS, ETC.—Knife, knee. VERBS, ETC.—Kiss, know, kick.
- L. NOUNS, ETC.—Lap, looking glass, legs, lunch, leggings, Louise Chew.\* VERBS, ETC.—Love, lie (down), look, [let, let's], like, leave, lost, laugh, light. ADJECTIVES, ETC.—Lame, little.
- M. NOUNS, ETC.—Mabel, mainma, match,† mouse, meat, milk, mouth, man, money, morning, moon, my, mine, myself, me, music, Mrs. Singleton, mitten, Mary, mat, mantelpiece, map. VERBS, ETC.—Make and make-up (a bed), mend, move. ADJECTIVE.—(Too) much. ADVERB.—More.
- N. NOUNS, ETC.—Nightgown, nose, needle, neck, Ned, (finger) nails, napkin, necklace. ADJECTIVE.—Naughty. ADVERBS, ETC.—Now, new. ALL OTHER WORDS.—No, never mind.
- O. NOUNS, ETC.—Oatmeal, observatory. ADJECTIVE.—Open. ADVERBS, ETC.—(Go) out, off. ALL OTHER WORDS.—Oh! on, over, one, of, (my) own.
- P. NOUNS, ETC.—Papa, pussy, picture-s, piano, pillow, potato, piece, pocket, pin, pincushion, petticoat, pipe, plate, paper, pencil, pig-s, parlor, pop (of a bottle), pitcher, pantaloons. VERBS, ETC.—Put, play, please, pull, point, pin, pinning, pare (an apple). ADJECTIVES, ETC.—Pretty, precious.
- Q. NOUN.—Quadruped.
- R. NOUNS, ETC.—Ribbon, rocking-chair, room, Rose, rice, roll, remedy, rubbers. VERBS, ETC.—[Rock, rocking, rock over], ring, roll, read, reading. ADVERBS, ETC.—Ready, round. ALL OTHER WORDS.—Right-there, right-back.
- S. NOUNS, ETC.—Story, sofa, Santa-Claus, sack, sash, sister, sky, sun, song, stove, sugar, shoe-s, stairs, saucer, supper, scissors, shirt, stockings, soap, shawl, spoon, St. Louis, sleeves, shadow, stone, side, soup. VERBS, ETC.—Slipped, show, sit, sing, see, swing, stand, sneeze, sew-ing, spill, step. ADJECTIVES, ETC.—Sick, sore, some, strong, sleepy, sorry. ADVERB.—Shocking.
- T. NOUNS, ETC.—Tiptoes, tongue, teeth, tail, toes, thumb, table, tick-tick (= watch), tea, tree, towel, thimble-s, trunk, tumbler, tea-cup, toast, (nice) time. VERBS, ETC.—Take, turn, taste, tie, thread (a needle), throw, tell, trod. ADJECTIVES, ETC.—This, that. ADVERBS, ETC.—Too, there. ALL OTHER WORDS.—The, to, two.
- U. Up, until.
- W. NOUNS, ETC.—Water, window, wall, (this) way, wrapper, window-seat. VERBS, ETC.—Walk, [wake, woke], want, wet, [won't, will], wipe, writing, whip, wait, wind (a watch). ADJECTIVES, ETC.—Warm, wet. ADVERB.—Where. ALL OTHER WORDS.—What.
- Y. NOUN.—You. ALL OTHER WORDS.—Ycs, your-s.

\* Inseparable.

† Used correctly, and also to mean a candle.

SUMMARY.

|          | Nouns, etc. | Verbs, etc. | Adjectives, etc. | Adverbs, etc. | Miscellaneous. | Sum. |
|----------|-------------|-------------|------------------|---------------|----------------|------|
| A.       | 7           | 3           | 3                | 4             | 1              | 18   |
| B.       | 31          | 9           | 4                | 1             | 2              | 47   |
| C.       | 29          | 6           | 4                | ..            | ..             | 39   |
| D.       | 9           | 3           | 2                | ..            | ..             | 14   |
| E.       | 3           | 1           | 1                | ..            | ..             | 5    |
| F.       | 12          | 2           | 2                | 1             | 1              | 18   |
| G.       | 8           | 3           | 1                | ..            | 1              | 13   |
| H.       | 11          | 5           | 3                | ..            | ..             | 19   |
| I.       | 2           | 1           | ..               | ..            | 2              | 5    |
| J.       | ..          | 1           | ..               | ..            | ..             | 1    |
| K.       | 2           | 3           | ..               | ..            | ..             | 5    |
| L.       | 6           | 9           | 2                | ..            | ..             | 17   |
| M.       | 20          | 3           | 1                | 1             | ..             | 25   |
| N.       | 8           | ..          | 1                | 2             | 2              | 13   |
| O.       | 2           | ..          | 1                | 2             | 6              | 11   |
| P.       | 20          | 7           | 2                | ..            | ..             | 29   |
| Q.       | 1           | ..          | ..               | ..            | ..             | 1    |
| R.       | 8           | 5           | ..               | 2             | 2              | 17   |
| S.       | 27          | 11          | 6                | 1             | ..             | 45   |
| T.       | 17          | 8           | 2                | 2             | 3              | 32   |
| U.       | ..          | ..          | ..               | ..            | 2              | 2    |
| V.       | ..          | ..          | ..               | ..            | ..             | ..   |
| W.       | 6           | 10          | 2                | 1             | 1              | 20   |
| X, Y, Z. | 1           | ..          | ..               | ..            | 2              | 3    |
| Sum,     | 230         | 90          | 37               | 17            | 25             | 399  |

Total number of words, 399.

VOCABULARY OF B. K.,

*Comprising only words used by him in every-day speech during the twenty-fourth month of his life.*

- A. NOUNS, ETC.—Apple, Artie, Ayre (proper name), Auntie, Alley. ADVERBS, ETC.—Again, asleep.
- B. NOUNS, ETC.—Bath, back, bit, Biddy, button, bell, box, boat, book, beads, boy, bread, Bernie. ADJECTIVE.—Black. ALL OTHER WORDS.—Bo! bye.
- C. NOUNS, ETC.—Cab, cough, car, cards, cart, cats, curl, coal, cup, cupboard, chocolate, cuckoo, chair, chain. VERBS, ETC.—Can and can't, come, cough. ADVERB.—Careful.
- D. NOUNS, ETC.—Desk, door, doll, Daw (referring to a picture). VERB.—Don't. ADJECTIVE.—Down. ALL OTHER WORDS.—(Oh!) dear.
- E. NOUN.—Egg.
- F. NOUNS, ETC.—Fan, Fanny, fire, fun, foot, fog, finger, flannel. VERB.—Fall. ADJECTIVES, ETC.—Funny, four.
- G. NOUNS, ETC.—George, girl, gas, grapes. VERBS, ETC.—Go, gone. ADJECTIVE.—Good. ALL OTHER WORDS.—Good morning, good night, good bye.

- H. NOUNS, ETC.—Ham, hair, Harry, hill, hole, Holden, house, hand, horse, handkerchief, Hilda. VERBS, ETC.—Have, hang. ADJECTIVES, ETC.—Heavy, high, hot.
- I. NOUN.—Ink. VERB.—Is.
- J. NOUNS, ETC.—Jig, Jimmy, Jack, Jill. VERB.—Jump.
- K. NOUNS, ETC.—King, kiss, knee, key. VERBS, ETC.—Kick, kiss.
- L. NOUNS, ETC.—Lot, leaves, lock.
- M. NOUNS, ETC.—Ma, May, Mary, Maud, moon, mouse, me, Margie, milk, mess. ADJECTIVE.—Mine. ADVERB.—More.
- N. NOUNS, ETC.—Nail, noise, note, nose. ADJECTIVE.—Naughty. ALL OTHER WORDS.—No, not.
- O. NOUN.—Ox. VERB.—Open.
- P. NOUNS, ETC.—Papa, pass, pump, pen, pocket, pony, poker. VERBS, ETC.—Pass, please, pinch, play, pull, practise, pop.
- Q. NOUN.—Queen.
- R. VERBS, ETC.—Run, roll, ride, rock. ADJECTIVE.—Red. ADVERBS, ETC.—Rainy, ready.
- S. NOUNS, ETC.—Spoon, sash, shoes, scissors, sugar, stool, side, sun, scratch, string. VERBS, ETC.—Sing, she, saw. ALL OTHER WORDS.—Six.
- T. NOUNS, ETC.—Tea, tray, toe, train, tongs. VERB.—Tumble. ALL OTHER WORDS.—Two.
- W. NOUNS, ETC.—Wood, water, watch. VERBS, ETC.—Won't, will, wash, write. ADJECTIVES, ETC.—Wet, white.
- Y. Yes.

## SUMMARY.

|      | Nouns, etc. | Verbs, etc. | Adjectives, etc. | Adverbs, etc. | Miscellaneous. | Sum. |
|------|-------------|-------------|------------------|---------------|----------------|------|
| A.   | 5           | ..          | ..               | 2             | ..             | 7    |
| B.   | 13          | ..          | 1                | ..            | 2              | 16   |
| C.   | 14          | 3           | ..               | 1             | ..             | 18   |
| D.   | 4           | 1           | 1                | ..            | 1              | 7    |
| E.   | 1           | ..          | ..               | ..            | ..             | 1    |
| F.   | 8           | 1           | 2                | ..            | ..             | 11   |
| G.   | 4           | 1           | 1                | ..            | 3              | 9    |
| H.   | 11          | 2           | 3                | ..            | ..             | 16   |
| I.   | 1           | 1           | ..               | ..            | ..             | 2    |
| J.   | 4           | 1           | ..               | ..            | ..             | 5    |
| K.   | 4           | 2           | ..               | ..            | ..             | 6    |
| L.   | 3           | ..          | ..               | ..            | ..             | 3    |
| M.   | 10          | ..          | 1                | 1             | ..             | 12   |
| N.   | 4           | ..          | 1                | ..            | 2              | 7    |
| O.   | 1           | 1           | ..               | ..            | ..             | 2    |
| P.   | 7           | 7           | ..               | ..            | ..             | 14   |
| Q.   | 1           | ..          | ..               | ..            | ..             | 1    |
| R.   | ..          | 4           | 1                | 2             | ..             | 7    |
| S.   | 10          | 2           | ..               | ..            | 1              | 13   |
| T.   | 5           | 1           | ..               | ..            | 1              | 7    |
| W.   | 3           | 3           | 2                | ..            | ..             | 8    |
| Y.   | ..          | ..          | ..               | ..            | 1              | 1    |
| Sum, | 113         | 30          | 13               | 6             | 11             | 173  |