# The Quantitative Study of Style，Using Grammatical Tags： Short Stories of W．S．Maugham 

## Koumei Wada and Ken’ichi Yoshioka

## 1 Introduction

The objective of our research is to see if there is any difference among the short sto－ ries of W．Somerset Maugham（1874－1965）from the view points of grammatical tag，that is，＇part－of－speech＇．Maugham is said to have written over one hundred and twenty short stories．Most of them were published in the collected form．We picked up two stories from each book of collected stories．The titles of the books or magazines，the titles of the sto－ ries，their notations，and their tokens are shown below ：

Orientations（1899）

The Punctiliousness of Don Sebastian（DON）
Daisy（DAI）
Unknown Magazines 1
Lady Habbart（1900）（HAB）9，999 words
The Fortunate Painter（1906）（PAI）3，095 words
The Trembling of a Leaf（1921）
Rain（RAI）$\quad 15,305$ words
Red（RED）
8，931 words
The Casuarina Tree（1921）
Before the Party（BEF）10，144 words
The Letter（LET）
Ashenden（1928）
Giulia Lazzari（GIU）
His Excellency（EXC）
7，013 words
13，298 words
The Gentleman in the Parlour（1930）
Mabel（MBL）1，641 words
Marriage of Convenience（MRR）5，352 words
First Person Singular（1931）
Jane（JAN）9，574 words

The Creative Impulse (IMP) 13,482 words

| Ah King(1933) |  |
| :--- | ---: |
| The Book-Bag (BAG) | 14,850 words |
| Neil MacAdams (NEL) | 17,925 words |
| Cosmopolitans(1936) | 2,156 words |
| The Portrait of a Gentleman (GTL) | 1,837 words |
| Home (HOM) |  |
| The Mixture as Before (1940) | 9,401 words |
| Lion's Skin (LIO) | 6,255 words |
| Treasure (TRE) |  |
| Creatures of Circumstance(1947) | 7,188 words |
| The Colne's Lady (COL) | 9,852 words |
| Sanatorium (SAN) |  |

## 2 Methodorogy

1) We assigned a grammatical (part-of-speech) tag to every word appearing in the 22 texts, using CLAWS 7 , which is an automatic part-of-speech tagging system and has

Table 1 The revised tagset

| AP | APPGE |
| :--- | :--- |
| AT | AT, ATI |
| B | BCL |
| C | CC, CCB, CS, CSA, CSN, CST, CSW |
| D | DA, DA 1, DA 2, DAR, DAT, DB, DB 2, DD, DD 1, DD 2, DDQ, DDQGE, DDQV |
| EX | EX |
| FO | FO |
| FU | FU |
| FW | FW |
| GE | GE |
| I | IF, II, IO, IW |
| J | JJ, JJR, JJT, JK |
| M | MC, MC 1, MC 2, MCGE, MCMC, MD, MF |
| NN | ND 1, NN, NN 1, NN 2, NNA, NNB, NNL 1, NNL 2, NNO, NNO 2, NNT 1, NNT 2, NNU, |
|  | NNU 1, NNU 2 |
| NP | NP, NP 1, NP 2, NPD 1, NPD 2, NPM 1, NPM 2 |
| P | PN, PN 1, PNQO, PNQS, PNQV, PNX 1, PPGE, PPH 1, PPHO 1, PPHO 2, PPHS 1, PPHS |
|  | 2, PPIO 1, PPIO 2, PPIS 1, PPIS 2, PPX 1, PPX 2, PPY |
| R | RA, REX, RG, RGQ, RGQV, RGR, RGT, RL, RP, RPK, RR, RRQ, RRQV, RRR, RRT, RT |
| TO | TO |
| UH | UH |
| VB | VB 0, VBDR, VBDZ, VBG, VBI, VBM, VBN, VBR, VBZ |
| VD | VD 0, VDD, VDG, VDI, VDN, VDZ |
| VH | VH 0, VHD, VHG, VHI, VHN, VHZ |
| VM | VM, VMK |
| VV | VV 0, VVD, VVG, VVGK, VVI, VVN, VVNK, VVZ |
| X | XX |
| Z | ZZ 1, ZZ 2 |

been developed by UCREL at Lancaster University. The tagset to be used with CLAWS 7 contains 137 tags. The CLAWS 7 tagset is shown in Appendix A. And a part of our tagged text is also shown in Appendix B. For our study, however, we summed up 137 tags to 26 . We thought it would be better to classify the 137 tags into such groups as traditional parts of speech. Table 1 is the tagset we have revised for our research.


Fig. 1 (a) Frequency Polygon of Texts


Fig. 1 (b) Frequency Polygon of Part-of-Speeches


Fig. 2 Dendrogram Using Euclid Distance of Ward's Method
2) We counted the occurrences of grammatical tags in each text. Appendix $C$ is the frequency distribution of grammatical tags (shown in percentage).
3) On the basis of the frequency distribution of grammatical tags in each text (Appendix C), we constructed frequency polygon of grammatical tags in each text (Figure 1).
4) Using grammatical tags as variables and the 22 texts as cases, we constructed a dendrogram to see if there appear some clusters of texts. In this case we made use of Euclid distance of Ward's method. The dendrogram is shown in Figure 2.

## 3 Results

1) It can be seen that there are three groups in the way the grammatical tags occur in the texts (see Figure 1): the first group's frequency is more than $10 \%$, that of the second between 5 and $10 \%$, and that of the third less than $5 \%$. P (pronouns), VV (lexical verbs), and NN (nouns) belong to the first group, $I$ (prepositions), $R$ (adverbs), $C$ (conjunctions), AT (articles), and J (adjectives) to the second group, the remaining 18 tags to the third group. The tag with the highest frequency is NN, followed by P, VV, I, respectively and AT. FO (formula) and Z (alphabet) do not occur in any text. As for FU(unclassified words), it occurs in two texts with the frequency of $0.1 \%$.
2) Judging from the dendrogram (Figure 2), the 22 texts can be classified into three groups. In order to speculate the features each group has, we constructed three frequency polygons (Figure 3, a, b, c).


Fig. 3 (a) Frequency Polygon of Part-of-Speeches


Fig. 3 (b)

There seems a general tendency that the works in group A (Figure 3, a) have higher frequency in almost all the tags than those of the other two groups. The difference between group B (Figure 3, b) and group C (Figure 3, c) can be seen in that the disparity between the highest and the lowest frequency of each tag in the texts of group $B$ is


Fig. 3 (c)


Fig. 4 Coefficiency of Variation
smaller than that in the texts of group C. Though the frequency of each tag is generally low in group C, the disparity between the highest and the lowest frequency of each tag is wider than the other two groups. We worked out the coefficient of variation to know the
disparity between the highest and the lowest frequency of each grammatical tag (Figure 4). LET and RED are much alike in their frequency spectra.

## 4 Discussion

It had been our original expectation that we would be able to confirm the first four stories (DON, DAI, HAB, and PAI) would group together when we carried out cluster analysis on the basis of the grammatical tags. These four stories were written in the first part of Maugham's apprenticeship, from 1897 to $1907^{2}$. R. A. Cordel wrote they are interesting only as the youthful work of one who later tried seriously to improve his style. The prose has little of the simplicity, suppleness, and rhythm of his later work ${ }^{3)}$. Maugham also stated "they are so immature. . . and are best forgotten.") But, in fact, there seems almost no difference between the stories written in his apprenticeship and all the rest of the stories, which were written after 1921, from the view-point of grammatical tags. As Figure 2 shows, almost all the grammatical tags are used at a fixed ratio in every text: the first group more than $10 \%$, the second group between 5 and $10 \%$, and the third group less than $5 \%$.

We had expected the chronological development of Maugham's style. However, in terms of grammatical tags, it can be seen that he did not vary his style from his early age to old age. For our further study, we think we have to use more detailed grammatical tags and his word habits as raw data so that we can see the broader picture of Maugham's style.

## Notes

1) CLAWS (the Constituent Likelihood Automatic Word-tagging System.)

The CLAWS tagging system consists of five separate stages applied successively to a text to be tagged. The first step is pre-editing where the text is cleaned and verticalised (one word is printed above another). This is followed by candidate tag assignment, where each possible tag that might apply to a word is assigned in descending order of likelihood. Thirdly, multi-word units such as idioms are tagged as single items. The fourth step is tag disambiguation : this stage inspects all cases where a word has been assigned more than one tag, and attempts to choose a preferred tag by considering the context in which the word appears, and assessing the probability of any particular sequence of tags. The final phase is manual post-editing, in which erroneous tagging decisions made by the computer are corrected by human editors. (Michael P. Oakes, Statistics for Corpus Linguistics (Edinburgh : Edinburgh UP.,1998), p. 81)
UCREL (Unit for Computer Research on the English Language) claims: CLAWS has consistently achieved $96-97 \%$ accuracy. The precise degree of accuracy varies according to the type of text. Judged in terms of major categories, the system has an approximate error-rate
of only $1.5 \%$, with c. $3.3 \%$ ambiguities unresolved, within the BNC (British National Corpus).
As to the works of Maugham, accuracy does not come up to $96-97 \%$. And it took more than six months to post-edit all his short stories
2) Forrest D. Burt, W. Somerset Maugham (Boston: Twayne Publishers, 1985), p. 18.

3 ) Richard A. Cordel, Somerset Maugham (Bloomington: Indiana U. P.), p. 166.
4 ) Maugham says in the preface of the first volume of The Complete Short Stories of W. Somerset Maugham Vols. 3 (1951): In my early youth I wrote a number, but they are so immature that I have preferred not to print them. A few are in a book that has long remained out of print, a few others are scattered in various magazines.
In 1969, four years after Maugham's death, Seventeen Lost Stories by W. Somerset Maugham was published in New York. This contains the 6 stories which made up his earliest book, Orientations (1899). This book, just as Maugham said above, refers to 'a book that has long remained out of print', and the remaining 11 stories refer to 'a few others. . . .'

## References

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## Appendix A: The C 7 tagset

| APPGE | possessive pronoun, pre-nominal (e.g. my, your, our) <br> AT |
| :--- | :--- |
| article (e.g. the, no) |  |


| DDQ | wh-determiner (which, what) |
| :---: | :---: |
| DDQGE | wh-determiner, genitive (whose) |
| DDQV | wh-ever determiner (whichever, whatever) |
| EX | existential there |
| FO | formula |
| FU | unclassified word |
| FW | foreign word |
| GE | germanic genitive marker-('or' s) |
| IF | for (as preposition) |
| II | general preposition |
| IO | of (as preposition) |
| IW | with, without (as prepositions) |
| JJ | general adjective |
| JJR | general comparative adjective (e.g. older, better, stronger) |
| JJT | general superlative adjective (e.g. oldest, best, strongest) |
| JK | catenative adjective (able in be able to, willing in be willing to) |
| MC | cardinal number, neutral for number (teo, three. .) |
| MC 1 | singular cardinal number (one) |
| MC 2 | plural cardinal number (e.g. sixes, sevens) |
| MCGE | genitive cardinal number, neutral for number (two's, 100's) |
| MCMC | hyphenated number (40-50, 1770-1827) |
| MD | ordinal number (e.g. first, second, next, last) |
| MF | fraction, neutral for number (e.g. quarters, two-thirds) |
| NDI | singular noun of direction (e.g. north, south-east) |
| NN | common noun, neutral for number (e.g. sheep, cod, headquarters) |
| NN 1 | singular common noun (e.g. book, girl) |
| NN 2 | plural common noun (e.g. books, girls) |
| NNA | following noun of title (e.g. M.A.) |
| NNB | preceding noun of title (e.g. Mr., Prof.) |
| NNL 1 | singular locative noun (e.g. Island, Street) |
| NNL 2 | plural locative noun (e.g. Islands, Streets) |
| NNO | numeral noun, neutral for number (e.g. dozen, hundred) |
| NN 02 | numeral noun, plural (e.g. hundreds, thousands) |
| NNT 1 | temporal noun, singular (e.g. day, week, year) |
| NNT 2 | temporal noon, plural (e.g. days, weeks, years) |
| NNU | unit of measurement, neutral for number (e.g. in, cc) |
| NNU 1 | singular unit of measurement (e.g. inch, centimetre) |
| NNU 2 | plural unit of measurement (e.g. ins, feet) |
| NP | proper noun, neutral for number (e.g. IBM, Andes) |
| NP 1 | singular proper noun (e.g. London, Jane, Frederick) |
| NP 2 | plural proper noun (e.g. Browns, Reagans, Koreas) |
| NPD 1 | singular weekday noun (e.g. Sunday) |
| NPD 2 | plural weekday noun (e.g. Sundays) |
| NPM 1 | singular month noun (e.g. October) |
| NPM 2 | plural month noun (e.g. Octobers) |
| PN | indefinite pronoun, neutral for number (none) |
| PN 1 | indefinite pronoun,singular (e.g. anyone, everything, nobody, one) |
| PNQO | objective wh-pronoun (whom) |
| PNQS | subjective wh-pronoun (who) |
| PNQV | wh-ever pronoun (whoever) |
| PNX 1 | reflexive indefinite pronoun (oneself) |
| PPGE | nominal possessive personal pronoun (e.g. mine, yours) |
| PPH 1 | 3 rd person sing. neuter personal pronoun (it) |
| PPHO 1 | 3 rd person sing. objective personal pronoun (him, her) |
| PPHO 2 | 3 rd person plural objective personal pronoun(them) |
| PPHS 1 | 3 rd person sing. subjective personal pronoun (he, she) |
| PPHS 2 | 3 rd person plural subjective personal pronoun (they) |
| PPIO 1 | 1 st person sing. objective personal pronoun (me) |
| PPI 02 | 1 st person plural objective personal pronoun (us) |
| PPIS 1 | 1 st person sing. subjective personal pronoun (I) |
| PPIS 2 | 1 st person plural subjective personal pronoun (we) |
| PPX 1 | singular reflexive personal pronoun (e.g. yourself, itself) |
| PPX 2 | plural reflexive personal pronoun(e.g. yourselves, themselves) |
| PPY | 2 nd person personal pronoun (you) |
| RA | adverb,after nominal head (e.g. else, galore) |


| REX | adverb introducing appositional constrauctions (namely, e.g.) |
| :--- | :--- |
| RG | degree adverb (very, so, too) |
| RGQ | wh-degree adverb (how) |
| RGQV | wh-ever degree adverb (however) |
| RGR | comparative degree adverb (more, less) |
| RGT | superlative degree adverb (most,least) |
| RL | locative adverb (e.g. alongside, forward) |
| RP | prep. adverb, particle (e.g. about, in) |
| RPIC | prep. adv., catenative (about in be about to) |
| RR | general adverb |
| RRQ | wh-general adverb (where, when, why, how) |
| RRQV | wh-ever general adverb (wherever, whenever) |
| RRR | comparative general adverb (e.g. better, longer) |
| RRT | superlative general adverb (e.g.best, longest) |
| RT | quasi-nominal adverb of time (e.g. now, tomorrow) |
| TO | infinitive marker (to) |
| UH | interjection (e.g. oh, yes, um) |
| VB 0 | be, base form (finite i.e. imperative, subjunctiontive) |
| VBDR | were |
| VBDZ | was |
| VBG | being, |
| VBI | be, infinitive (To be or not. . . It will be) |
| VBM | am |
| VBN | been |
| VBR | are |
| VBZ | is |
| VDO | do, base form (finite) |
| VDD | did |
| VDG | doing |
| VDI | do, infinitive (I may do. . . To do. . .) |
| VDN | done |
| VDZ | does |
| VH 0 | have, base form (finite) |
| VHD | had (past tense) |
| VHG | having |
| VHI | have, infinitive |
| VHN | had (past particle) |
| VHZ | has |
| VM | modal auxiliary (can, will,would, etc) |
| VMK | modal catenative (ought, used) |
| VV 0 | base form of lexical verb (e.g. give, work) |
| VVD | past tense of lexical verb (e.g. gave, worked) |
| VVG | -ing particle of lexical verb (e.g. giving, working) |
| VVGK | -ing particle catenative (going in be going to) |
| VVI | infinitive (e.g. to give. . It will work. .) |
| VVN | past participle of lexical verb (e.g. given, worked) |
| VVNK | past participle catenative (e.g. bound in be bound to) |
| VVZ | -s form of lexical verb (e.g. gives, works) |
| XX | not, n't |
| ZZ | singular letter of the alphabet (e.g. A,b) |
| plural letter of the alphabet (e.g. A's, b's) |  |

Appendix B: A part of a tagged text
<BAG>__NULL
^ Some_DD people_NN read_VV 0 for_IF instruction_NN 1 ,_, which_DDQ
is_VBZ praiseworthy_JJ ,_, and_CC some_DD for_IF pleasure_NN 1 ,_, which_DDQ
is_VBZ innocent_JJ ,_, but_CCB not_XX a_AT 1 few_DA 2 read_VV 0
from_II habit_NN 1
,_, and_CC I_PPIS 1 suppose_VV 0 that_CST this_DD 1 is_VBZ
neither_RR innocent_JJ
nor_CC praiseworthy_JJ ._.
^ Of_IO that_DD 1 lamentable_JJ company_NN 1 am_VBM I_PPIS 1 ._.
^ Conversation_NN 1 after_II a_AT 1 time_NNT 1 bores_VVZ me_PPIO 1 ,_, games_NN 2
tire_VV 0 me_PPIO 1 ,_, and_CC my_APPGE own_DA thoughts_NN 2 ,_, which_DDQ
we_PPIS 2 are_VBR told_VVN are_VBR the_AT unfailing_JJ
resource_NN 1 of_IO a_AT 1
sensible_JJ man_NN 1 ,_, have_VH 0 a_AT 1 tendency_NN 1 to_TO
run_VVI dry_JJ ._.
^ Then_RT I_PPIS 1 fly_VV 0 to_II my_APPGE book_NN 1 as_II the_AT opium-smoker_NN 1 to_II his_APPGE pipe_NN 1 ._.
^ I_PPIS 1 would_VM sooner_RRR read_VVI the_AT catalogue_NN 1 of_IO the_AT
army_NN 1 and_CC navy_NN 1 stores_NN 2 or_CC Bradshaw_NP 1 's_GE guide_NN 1
than_CSN nothing_PN 1 at_RR 21 all_RR 22 ,_, and_CC indeed_RR

Appendix C: A frequency distribution of grammatical tags

| BAG |  |  | (17) R | 806 | (7.8\%) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| ( 1) AP | 322 | (2.1\%) | (18) TO | 210 | (2.0\%) |
| (2) AT | 943 | (6.2\%) | (19) UH | 19 | (0.2\%) |
| (3) B | 2 | (0.0\%) | (20) VB | 462 | (4.5\%) |
| (4) C | 1051 | (6.9\%) | (21) VD | 105 | (1.0\%) |
| ( 5) D | 375 | (2.5\%) | (22) VH | 232 | (2.3\%) |
| (6) EX | 39 | (0.3\%) | (23) VM | 171 | (1.7\%) |
| ( 7) FO |  | (0.0\%) | (24) VV | 1429 | (13.9\%) |
| ( 8) FU | 0 | (0.0\%) | (25) X | 127 | (1.2\%) |
| (9) FW | 7 | (0.0\%) | (26) Z | 0 | (0.0\%) |
| (10) GE | 43 | (0.3\%) |  |  |  |
| (11) I | 1288 | (8.5\%) | COL |  |  |
| (12) J | 897 | (5.9\%) | ( 1) AP | 168 | (2.3\%) |
| (13) M | 133 | (0.9\%) | (2) AT | 547 | (7.4\%) |
| (14) N | 1883 | (12.4\%) | ( 3) B | 0 | ( $0.0 \%$ ) |
| (15) NP | 251 | (1.7\%) | (4) C | 432 | (5.8\%) |
| (16) P | 2504 | (16.5\%) | (5) D | 205 | (2.8\%) |
| (17) R | 1297 | (8.5\%) | (6) EX | 26 | (0.3\%) |
| (18) TO | 284 | (1.9\%) | ( 7) FO | 0 | (0.0\%) |
| (19) UH | 60 | (0.4\%) | ( 8) FU | 0 | (0.0\%) |
| (20) VB | 752 | (4.9\%) | ( 9) FW | 0 | (0.0\%) |
| (21) VD | 170 | (1.1\%) | (10) GE | 30 | (0.4\%) |
| (22) VH | 312 | (2.1\%) | (11) I | 658 | (8.8\%) |
| (23) VM | 301 | (2.0\%) | (12) J | 442 | (5.9\%) |
| (24) VV | 2030 | (13.3\%) | (13) M | 71 | (1.0\%) |
| (25) X | 266 | (1.7\%) | (14) N | 1066 | (14.3\%) |
| (26) Z | 1 | (0.0\%) | (15) NP | 216 | (2.9\%) |
|  |  |  | (16) $P$ | 1077 | (14.5\%) |
| BEF |  |  | (17) R | 530 | (7.1\%) |
| ( 1) AP | 296 | (2.9\%) | (18) TO | 125 | (1.7\%) |
| ( 2) AT | 642 | (6.2\%) | (19) UH | 34 | (0.5\%) |
| (3) B | 6 | (0.1\%) | (20) VB | 369 89 | (5.0\%) |
| (4) C | 628 | (6.1\%) | (21) VD | 89 197 | (1.2\%) |
| (5) D | 237 | (2.3\%) | (22) VH | 197 | (2.6\%) |
| (6) EX | 27 | (0.3\%) | (24) VV | 1319 | $\begin{gathered} (1.8 \% \\ (12.3 \%) \end{gathered}$ |
| ( 7) FO | 0 | (0.0\%) |  | 919 110 | (12.3\%) $(1.5 \%)$ |
| ( 8) FU | 0 | (0.0\%) | (26) Z | 110 | (1.5\%) |
| ( 9) FW | 5 | (0.0\%) | (26) Z | 0 |  |
| (10) GE | 38 | (0.4\%) |  |  |  |
| (11) I | 883 | (8.6\%) | DAI |  |  |
| (12) J | 612 | (5.9\%) | ( 1) AP | 311 | (2.8\%) |
| (13) M | 64 | (0.6\%) | (2) AT | 734 | (6.7\%) |
| (14) N | 1417 | (13.7\%) | (3) B | 4 | (0.0\%) |
| (15) NP | 431 | (4.2\%) | (4) C | 629 | (5.7\%) |
| (16) P | 1459 | (14.2\%) | (5) D | 275 | (2.5\%) |


| ( 6) EX | 13 | (0.1\%) | (14) N | 2033 | (15.2\%) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| ( 7) FO | 0 | (0.0\%) | (15) NP | 336 | (2.5\%) |
| ( 8) FU | 16 | (0.1\%) | (16) $P$ | 1671 | (12.5\%) |
| (9) FW | 0 | (0.0\%) | (17) R | 899 | (6.7\%) |
| (10) GE | 47 | (0.4\%) | (18) TO | 276 | (2.1\%) |
| (11) I | 944 | (8.6\%) | (19) UH | 32 | (0.2\%) |
| (12) J | 548 | (5.0\%) | (20) VB | 617 | (4.6\%) |
| (13) M | 62 | (0.6\%) | (21) VD | 97 | (0.7\%) |
| (14) N | 1641 | (15.0\%) | (22) VH | 286 | (2.1\%) |
| (15) NP | 497 | (4.5\%) | (23) VM | 249 | (1.9\%) |
| (16) P | 1454 | (13.3\%) | (24) VV | 1639 | (12.3\%) |
| (17) R | 822 | (7.5\%) | (25) X | 158 | (1.2\%) |
| (18) TO | 179 | (1.6\%) | (26) Z | 6 | (0.0\%) |
| (19) UH | 93 | (0.8\%) |  |  |  |
| (20) VB | 440 | (4.0\%) | GIU |  |  |
| (21) VD | 106 | (1.0\%) |  |  |  |
| (22) VH | 212 | (1.9\%) | ( 1) AP | 337 | (2.3\%) |
| (23) VM | 206 | (1.9\%) | (2) AT | 1106 | (7.7\%) |
| (24) VV | 1569 | (14.3\%) | ( 3) B | 4 | (0.0\%) |
| (25) X | 156 | (1.4\%) | ( 4) C | 963 | (6.7\%) |
| (26) Z | 2 | (0.0\%) | (5) D | 306 | (2.1\%) |
|  |  |  | ( 6) EX | 41 | (0.3\%) |
|  |  |  | ( 7) FO | 0 | (0.0\%) |
| DON |  |  | ( 8) FU | 3 | (0.0\%) |
| ( 1) AP | 203 | (3.4\%) | ( 9) FW | 31 | (0.2\%) |
| ( 2) AT | 630 | (10.5\%) | (10) GE | 39 | (0.3\%) |
| ( 3) B | 4 | (0.1\%) | (11) I | 1403 | (9.7\%) |
| (4) C | 479 | (8.0\%) | (12) J | 727 | (5.0\%) |
| (5) D | 119 | (2.0\%) | (13) M | 120 | (0.8\%) |
| ( 6) EX | 6 | (0.1\%) | (14) N | 2016 | (14.0\%) |
| ( 7) FO | 0 | (0.0\%) | (15) NP | 447 | (3.1\%) |
| ( 8) FU | 1 | (0.0\%) | (16) P | 2059 | (14.3\%) |
| (9) FW | 11 | (0.2\%) | (17) R | 969 | (6.7\%) |
| (10) GE | 20 | (0.3\%) | (18) TO | 280 | (1.9\%) |
| (11) I | 665 | (11.1\%) | (19) UH | 47 | (0.3\%) |
| (12) J | 331 | (5.5\%) | (20) VB | 648 | (4.5\%) |
| (13) M | 45 | (0.8\%) | (21) VD | 157 | (1.1\%) |
| (14) N | 1115 | (18.6\%) | (22) VH | 269 | (1.9\%) |
| (15) NP | 236 | (3.9\%) | (23) VM | 318 | (2.2\%) |
| (16) P | 536 | (9.0\%) | (24) VV | 1970 | (13.6\%) |
| (17) R | 365 | (6.1\%) | (25) X | 174 | (1.2\%) |
| (18) TO | 75 | (1.3\%) | (26) Z | 1 | (0.0\%) |
| (19) UH | 5 | (0.1\%) |  |  |  |
| (20) VB | 211 | (3.5\%) | GTL |  |  |
| (21) VD | 19 | (0.3\%) |  |  |  |
| (22) VH | 82 | (1.4\%) | ( 1) AP | 50 | (2.3\%) |
| (23) VM | 58 | (1.0\%) | ( 2) AT | 202 | (9.4\%) |
| (24) VV | 733 | (12.2\%) | (3) B | 4 | (0.2\%) |
| (25) X | 39 | (0.7\%) | (4) C | 176 | (8.2\%) |
| (26) Z | 0 | (0.0\%) | (5) D | 55 | (2.6\%) |
|  |  |  | ( 6) EX | 3 | (0.1\%) |
|  |  |  | ( 7) FO | O | (0.0\%) |
| EXC |  |  | (8) FU | 0 | (0.0\%) |
| ( 1) AP | 387 | (2.9\%) | (9) FW | 0 | (0.0\%) |
| ( 2) AT | 938 | (7.0\%) | (10) GE | 2 | (0.1\%) |
| ( 3) B | 8 | (0.1\%) | (11) I | 250 | (11.7\%) |
| (4) C | 1009 | (7.6\%) | (12) J | 160 | (7.5\%) |
| (5) D | 287 | (2.2\%) | (13) M | 22 | (1.0\%) |
| ( 6) EX | 33 | (0.2\%) | (14) N | 443 | (20.7\%) |
| ( 7) FO | 0 | (0.0\%) | (15) NP | 22 | (1.0\%) |
| (8) FU | 0 | (0.0\%) | (16) P | 163 | (7.6\%) |
| (9) FW | 41 | (0.3\%) | (17) R | 113 | (5.3\%) |
| (10) GE | 38 | (0.3\%) | (18) TO | 38 | (1.8\%) |
| (11) I | 1314 | (9.8\%) | (19) UH | 0 | (0.0\%) |
| (12) J | 897 | (6.7\%) | (20) VB | 105 | (4.9\%) |
| (13) M | 97 | (0.7\%) | (21) VD | 13 | (0.6\%) |


| (22) VH | 26 | (1.2\%) | IMP |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (23) VM | 41 | (1.9\%) |  |  |  |
| (24) VV | 230 | (10.8\%) | (1) AP | 365 | (2.7\%) |
| (25) X | 21 | (1.0\%) | ( 2) AT | 1043 | (7.7\%) |
| (26) Z | 0 | (0.0\%) | ( 3) B | 12 | (0.1\%) |
|  |  |  | (4) C | 975 | (7.2\%) |
| HAB |  |  | (5) D | 329 | (2.4\%) |
|  |  |  | ( 6) EX | 46 | (0.3\%) |
| ( 1) AP | 334 | (3.3\%) | ( 7) FO | 0 | (0.0\%) |
| ( 2) AT | 549 | (5.4\%) | ( 8) FU | 0 | (0.0\%) |
| ( 3) B | 0 | (0.0\%) | ( 9) FW | 10 | (0.1\%) |
| (4) C | 580 | (5.7\%) | (10) GE | 46 | (0.3\%) |
| (5) D | 229 | (2.2\%) | (11) I | 1247 | (9.2\%) |
| (6) EX | 10 | (0.1\%) | (12) J | 862 | (6.3\%) |
| ( 7) FO | 0 | (0.0\%) | (13) M | 90 | (0.7\%) |
| ( 8) FU | 2 | (0.0\%) | (14) N | 2273 | (16.7\%) |
| ( 9) FW | 1 | (0.0\%) | (15) NP | 634 | (4.7\%) |
| (10) GE | 29 | (0.3\%) | (16) $P$ | 1502 | (11.0\%) |
| (11) I | 810 | (8.0\%) | (17) R | 972 | (7.1\%) |
| (12) J | 586 | (5.8\%) | (18) TO | 216 | (1.6\%) |
| (13) M | 69 | (0.7\%) | (19) UH | 17 | (0.1\%) |
| (14) N | 1360 | (13.4\%) | (20) VB | 580 | (4.3\%) |
| (15) NP | 257 | (2.5\%) | (21) VD | 97 | (0.7\%) |
| (16) P | 1578 | (15.5\%) | (22) VH | 286 | (2.1\%) |
| (17) R | 899 | (8.8\%) | (23) VM | 255 | (1.9\%) |
| (18) TO | 187 | (1.8\%) | (24) VV | 1577 | (11.6\%) |
| (19) UH | 71 | (0.7\%) | (25) X | 164 | (1.2\%) |
| (20) VB | 446 | (4.4\%) | (26) Z | 0 | (0.0\%) |
| (21) VD | 122 | (1.2\%) |  |  |  |
| (22) VH | 208 | (2.0\%) | JAN |  |  |
| (23) VM | 244 | (2.4\%) |  |  |  |
| (24) VV | 1451 | (14.2\%) | ( 1) AP | 242 | (2.5\%) |
| (25) X | 162 | (1.6\%) | (2) AT | 606 | (6.2\%) |
| (26) Z | 0 | (0.0\%) | ( 3) B | 0 | (0.0\%) |
|  |  |  | (4) C | 620 | (6.3\%) |
| HOM |  |  | (5) D | 216 | (2.2\%) |
|  |  |  | ( 6) EX | 20 | (0.2\%) |
| ( 1) AP | 53 | (2.8\%) | ( 7) FO | 0 | (0.0\%) |
| ( 2) AT | 119 | (6.4\%) | ( 8) FU | 0 | (0.0\%) |
| ( 3) B | 0 | (0.0\%) | ( 9) FW | 1 | (0.0\%) |
| (4) C | 138 | (7.4\%) | (10) GE | 29 | (0.3\%) |
| (5) D | 41 | (2.2\%) | (11) I | 814 | (8.3\%) |
| (6) EX | 4 | (0.2\%) | (12) J | 631 | (6.5\%) |
| ( 7) FO | 0 | (0.0\%) | (13) M | 75 | (0.8\%) |
| ( 8) FU | 0 | (0.0\%) | (14) N | 1314 | (13.5\%) |
| (9) FW | 0 | (0.0\%) | (15) NP | 306 | (3.1\%) |
| (10) GE | 5 | (0.3\%) | (16) $P$ | 1482 | (15.2\%) |
| (11) I | 152 | (8.1\%) | (17) R | 775 | (7.9\%) |
| (12) J | 121 | (6.5\%) | (18) TO | 178 | (1.8\%) |
| (13) M | 31 | (1.7\%) | (19) UH | 35 | (0.4\%) |
| (14) N | 277 | (14.8\%) | (20) VB | 485 | (5.0\%) |
| (15) NP | 65 | (3.5\%) | (21) VD | 106 | (1.1\%) |
| (16) P | 271 | (14.5\%) | (22) VH | 192 | (2.0\%) |
| (17) R | 122 | (6.5\%) | (23) VM | 188 | (1.9\%) |
| (18) TO | 25 | (1.3\%) | (24) VV | 1304 | (13.4\%) |
| (19) UH | 10 | (0.5\%) | (25) X | 147 | (1.5\%) |
| (20) VB | 93 | (5.0\%) | (26) Z | 1 | (0.0\%) |
| (21) VD | 8 | (0.4\%) |  |  |  |
| (22) VH | 59 | (3.2\%) |  |  |  |
| (23) VM | 22 | (1.2\%) |  |  |  |
| (24) VV | 231 | (12.4\%) | ( 1) AP | 389 | (2.9\%) |
| (25) X | 19 | (1.0\%) | ( 2) AT | 1028 | (7.7\%) |
| (26) Z | 0 | (0.0\%) | ( 3) B | 10 | (0.1\%) |
|  |  |  | (4) C | 791 | (5.9\%) |
|  |  |  | (5) D | 311 | (2.3\%) |
|  |  |  | (6) EX | 40 | (0.3\%) |


| ( 7) FO | 0 | (0.0\%) | (15) NP | 67 | (4.0\%) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| ( 8) FU | 10 | (0.1\%) | (16) P | 215 | (13.0\%) |
| (9) FW | 2 | (0.0\%) | (17) R | 123 | (7.4\%) |
| (10) GE | 40 | (0.3\%) | (18) TO | 25 | (1.5\%) |
| (11) I | 1235 | (9.2\%) | (19) UH | 8 | (0.5\%) |
| (12) J | 751 | (5.6\%) | (20) VB | 92 | (5.5\%) |
| (13) M | 111 | (0.8\%) | (21) VD | 13 | (0.8\%) |
| (14) N | 2090 | (15.7\%) | (22) VH | 38 | ( $2.3 \%$ ) |
| (15) NP | 406 | (3.0\%) | (23) VM | 31 | (1.9\%) |
| (16) P | 1809 | (13.5\%) | (24) VV | 205 | (12.4\%) |
| (17) R | 872 | (6.5\%) | (25) X | 19 | (1.1\%) |
| (18) TO | 243 | (1.8\%) | (26) Z | 0 | (0.0\%) |
| (19) UH | 41 | (0.3\%) |  |  |  |
| (20) VB | 620 | (4.6\%) | MRR |  |  |
| (21) VD | 118 | (0.9\%) |  |  |  |
| (22) VH | 281 | (2.1\%) | ( 1) AP | 167 | (3.1\%) |
| (23) VM | 234 | (1.8\%) | ( 2) AT | 445 | (8.3\%) |
| (24) VV | 1756 | (13.2\%) | ( 3) B | 0 | (0.0\%) |
| (25) X | 163 | (1.2\%) | ( 4) C | 385 | (7.2\%) |
| (26) Z | 2 | (0.0\%) | ( 5) D | 119 | (2.2\%) |
|  |  |  | ( 6) EX | 17 | (0.3\%) |
|  |  |  | ( 7) FO | 0 | (0.0\%) |
| LIO |  |  | ( 8) FU | 0 | (0.0\%) |
| ( 1) AP | 248 | (2.6\%) | (9) FW | 108 | ( $2.0 \%$ ) |
| ( 2) AT | 673 | (7.0\%) | (10) GE | 12 | ( $0.2 \%$ ) |
| ( 3) B | 0 | (0.0\%) | (11) I | 465 | (8.7\%) |
| (4) C | 652 | (6.8\%) | (12) J | 336 | (6.3\%) |
| ( 5) D | 231 | (2.4\%) | (13) M | 55 | (1.0\%) |
| ( 6) EX | 15 | (0.2\%) | (14) N | 869 | (16.2\%) |
| ( 7) FO | 0 | (0.0\%) | (15) NP | 107 | ( $2.0 \%$ ) |
| ( 8) FU | 0 | (0.0\%) | (16) P | 673 | (12.5\%) |
| ( 9) FW | 6 | (0.1\%) | (17) R | 325 | (6.1\%) |
| (10) GE | 24 | (0.2\%) | (18) TO | 80 | (1.5\%) |
| (11) I | 807 | (8.4\%) | (19) UH | 8 | (0.1\%) |
| (12) J | 579 | (6.0\%) | (20) VB | 239 | (4.5\%) |
| (13) M | 83 | (0.9\%) | (21) VD | 42 | (0.8\%) |
| (14) N | 1335 | (13.9\%) | (22) VH | 97 | (1.8\%) |
| (15) NP | 288 | (3.0\%) | (23) VM | 108 | (2.0\%) |
| (16) P | 1366 | (14.2\%) | (24) VV | 636 | (11.9\%) |
| (17) R | 726 | (7.6\%) | (25) X | 74 | (1.4\%) |
| (18) TO | 181 | (1.9\%) | (26) Z | 0 | (0.0\%) |
| (19) UH | 36 | (0.4\%) |  |  |  |
| (20) VB | 475 | (4.9\%) | NEL |  |  |
| (21) VD | 82 | (0.9\%) |  |  |  |
| (22) VH | 264 | (2.7\%) | (1) AP | 467 | (2.5\%) |
| (23) VM | 180 | (1.9\%) | ( 2) AT | 1294 | (7.1\%) |
| (24) VV | 1199 | (12.5\%) | ( 3) B | 2 | (0.0\%) |
| (25) X | 157 | (1.6\%) | ( 4) C | 1198 | (6.5\%) |
| (26) Z | 0 | (0.0\%) | ( 5) D | 431 | (2.4\%) |
|  |  | (0.0\%) | ( 6) EX | 48 | (0.3\%) |
|  |  |  | ( 7) FO | 0 | (0.0\%) |
| MBL |  |  | ( 8) FU | 0 | (0.0\%) |
| ( 1) AP | 26 | (1.6\%) | ( 9) FW | 2 | (0.0\%) |
| ( 2) AT | 134 | (8.1\%) | (10) GE | 64 | (0.3\%) |
| ( 3) B | 0 | (0.0\%) | (11) I | 1724 | (9.4\%) |
| (4) C | 112 | (6.8\%) | (12) J | 1201 | (6.6\%) |
| ( 5) D | 35 | (2.1\%) | (13) M | 124 | (0.7\%) |
| ( 6) EX | 9 | (0.5\%) | (14) N | 2663 | (14.5\%) |
| ( 7) FO | 0 | (0.0\%) | (15) NP | 457 | ( $2.5 \%$ ) |
| ( 8) FU | 0 | (0.0\%) | (16) P | 2607 | (14.2\%) |
| (9) FW | 0 | (0.0\%) | (17) R | 1276 | (7.0\%) |
| (10) GE | 5 | (0.3\%) | (18) TO | 253 | (1.4\%) |
| (11) I | 172 | (10.4\%) | (19) UH | 70 | (0.4\%) |
| (12) J | 86 | (5.2\%) | (20) VB | 873 | (4.8\%) |
| (13) M | 20 | (1.2\%) | (21) VD | 208 | (1.1\%) |
| (14) N | 224 | (13.5\%) | (22) VH | 350 | (1.9\%) |


| (23) VM | 322 | (1.8\%) | (2) AT | 822 | (9.1\%) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (24) VV | 2414 | (13.2\%) | ( 3) B | 0 | (0.0\%) |
| (25) X | 274 | (1.5\%) | (4) C | 663 | (7.4\%) |
| (26) Z | 0 | (0.0\%) | ( 5) D | 225 | (2.5\%) |
|  |  |  | (6) EX | 29 | (0.3\%) |
| PAI |  |  | ( 7) FO | 0 | (0.0\%) |
|  |  |  |  |  | ( 8) FU | 0 | (0.0\%) |
| (2) AT | 107 | (3.4\%) | (9) FW | 0 | (0.0\%) |
| ( 3) B | 0 | (0.0\%) | (10) GE | 15 | (0.2\%) |
| (4) C | 204 | (6.5\%) | (11) I | 855 | (9.5\%) |
| (5) D | 87 | (2.8\%) | (12) M | 629 83 | (7.0\%) |
| ( 6) EX | 6 | (0.2\%) | (14) N | 1490 | (16.6\%) |
| ( 7) FO | 0 | (0.0\%) | (15) NP | 135 | (1.5\%) |
| ( 8) FU | 0 | (0.0\%) | (16) P | 1104 | (12.3\%) |
| (9) FW | 6 | (0.2\%) | (17) R | 689 | (7.7\%) |
| (10) GE | 20 | (0.6\%) | (18)TO | 123 | (1.4\%) |
| (11) I | 302 | (9.6\%) | (19)UH | 13 | (0.1\%) |
| (12) J | 172 | (5.5\%) | (20)VB | 339 | (3.8\%) |
| (13) M | 20 | (0.6\%) | (21)VD | 37 | (0.4\%) |
| (14) N | 573 | (18.2\%) | (22) VH | 185 | (2.1\%) |
| (15) NP | 109 | (3.5\%) | (23) VM | 120 | (1.3\%) |
| (16) P | 344 | (10.9\%) | (24)VV | 1137 | (12.6\%) |
| (17) R | 190 | (6.0\%) | (25) X | 75 | (0.8\%) |
| (18) TO | 43 | (1.4\%) | (26) Z | 0 | (0.0\%) |
| (19) UH | 3 | (0.1\%) |  |  |  |
| (20) VB | 103 | (3.3\%) | SAN |  |  |
| (21) VD | 18 | (0.6\%) |  |  |  |  |  |
| (22) VH | 46 | (1.5\%) | ( 1) AP | 218 | (2.2\%) |
| (23) VM | 48 | (1.5\%) | ( 2) AT | 670 | (6.6\%) |
| (24) VV | 421 | (13.4\%) | ( 3) B | 2 | (0.0\%) |
| (25) X | 27 | (0.9\%) | (4) C | 747 | (7.4\%) |
| (26) Z | 0 | (0.0\%) | (5) D | 264 | (2.6\%) |
|  |  |  | (6) EX | 37 | ( $0.4 \%$ ) |
| RAI |  |  | ( 7) FO | 0 | (0.0\%) |
|  |  |  | ( 8) FU | 0 | (0.0\%) |
| (2) AT | 392 1232 | (2.5\%) $(7.9 \%)$ | (9) FW | 0 | (0.0\%) |
| ( 3 ) B | 1232 | (7.9\%) | (10) GE | 22 | (0.2\%) |
| ( 4) C | 989 | (6.0\%) | (11) I | 896 | (8.9\%) |
| ( 5) D | 337 | (2.1\%) | (12) J | 619 | (6.1\%) |
| (6) EX | 44 | (0.3\%) | (13) M | 111 | (1.1\%) |
| ( 7) FO | 0 | (0.0\%) | (15) N NP | 1404 309 | (13.9\%) |
| ( 8) FU | 0 | (0.0\%) | (16) P | 1381 | (13.7\%) |
| ( 9) FW | 0 | (0.0\%) | (17) R | 720 | (7.1\%) |
| (10) GE | 71 | (0.5\%) | (18) TO | 215 | (2.1\%) |
| (11) I | 1426 | (9.1\%) | (19) UH | 31 | (0.3\%) |
| (12) J | 882 | (5.6\%) | (20) VB | 480 | (4.8\%) |
| (13) M | 114 | (0.7\%) | (21) VD | 92 | (0.9\%) |
| (14) N | 2483 | (15.8\%) | (22) VH | 253 | (2.5\%) |
| (15) NP | 435 | (2.8\%) | (23) VM | 182 | (1.8\%) |
| (16) P | 2017 | (12.9\%) | (24) VV | 1294 | (12.8\%) |
| (17) R | 1103 | (7.0\%) | (25) X | 156 | (1.5\%) |
| (18) TO | 283 | (1.8\%) | (26) Z | 0 | (0.0\%) |
| (19) UH | 36 | (0.2\%) |  |  |  |
| (20) VB | 682 | (4.3\%) |  |  |  |
| (21) VD | 169 | (1.1\%) | TRE |  |  |
| (22) VH | 264 | (1.7\%) | ( 1) AP | 162 | (2.6\%) |
| (23) VM | 278 | (1.8\%) | ( 2) AT | 466 | (7.4\%) |
| (24) VV | 2221 | (14.2\%) | ( 3) B | 0 | (0.0\%) |
| (25) X | 226 | (1.4\%) | ( 4) C | 419 | (6.6\%) |
| (26) Z | 1 | (0.0\%) | ( 5) D | 170 | (2.7\%) |
|  |  |  | (6) EX | 17 | (0.3\%) |
| RED |  |  | ( 7) FO | 0 | (0.0\%) |
|  |  |  | (8) FU | 0 | (0.0\%) |
| (1) AP | 223 | (2.5\%) | (9) FW | 0 | (0.0\%) |


| (11) I | 542 | $(8.5 \%)$ |
| :--- | ---: | ---: |
| (12) J | 372 | $(5.9 \%)$ |
| (13) M | 51 | $(0.8 \%)$ |
| (14) N | 925 | $(14.6 \%)$ |
| (15) NP | 117 | $(1.8 \%)$ |
| (16) P | 928 | $(14.6 \%)$ |
| (17) R | 486 | $(7.7 \%)$ |
| (18) TO | 122 | $(1.9 \%)$ |
| (19) UH | 19 | $(0.3 \%)$ |
| (20) VB | 304 | $(4.8 \%)$ |
| (21) VD | 48 | $(0.8 \%)$ |
| (22) VH | 150 | $(2.4 \%)$ |
| (23) VM | 129 | $(2.0 \%)$ |
| (24) VV | 825 | $(13.0 \%)$ |
| (25) X | 71 | $(1.1 \%)$ |
| (26) Z | 0 | $(0.0 \%)$ |

