

# MIAMI WORDS

SUSAN THORPE

Great Missenden, Buckinghamshire, England

In February 1970, Kickshaws editor David Silverman challenged the readers of Word Ways to find words such as ONION in which the letters preceding and succeeding a single core letter (in this case, the letter I) are the same. These were christened Heads 'n' Tails words by John Ferguson of Maryland. Silverman's idea was to find 26 of these words, each one having a different core letter. The exercise was duly completed, largely by Josepha Byrne in the May 1970 issue and Murray Pearce in the August 1971 one, using words of various lengths including ADA, EDGED, HOTSHOT and OUTSPOUTS.

Here, I set out to explore five-letter examples and these I have called Miami words. Each consists of a pair of identical bigrams separated by a single core letter. My aim has been to discover as many Miami words as possible, from a variety of sources. How many potential Miami words are there? There exist 676 different bigrams. These, in conjunction with the 26 possible different core letters, provide  $676 \times 26 = 17,576$  potential Miami words. The 436 Miami words I found are listed below. They represent 2.5% of the 17,576 possibles. I include neither possessives such as ES-ME'S nor hyphenated words such as UH-HUH and AH-HAH. The five-letter examples which appear in the lists of Byrne and Pearce are marked with an asterisk.

References are given at the end. Words not assigned a reference can be found in the Oxford English Dictionary (Second Edition) as head words, variant forms or text words, including citations.

AALAA (Manx), AASAA (ad), ABWAB (web2), ABYAB (tig), ADEAD, ADRAD, AEGAE (ecd), ÆRÆ, AGGAG, AIRAI (tig), AKIAK (tig), ALCAL, ALGAL\*, ALKAL, AMPAM (tig), AMRAM, ANDAN, ANGAN, ANIAN, ANJAN\* (web2), ANNAN, ANSAN (tig), ANTAN, ANYAN, ANZAN, AOPAO (tig), ARBAR (tig), ARDAR, AREAR\*, ARHAR (web2), ARKAR, ARMAR, ARNAR, AROAR, ARTAR\* (web2), ASIAS, ASKAS (cd), ASPÁS (tig), ASSAS, ATHAT, AUFAU AUHAU (Haw), AZZAZ\* (la)  
43 words... 16 different bigrams... 21 different core letters

BAABA (taw), BABBA (lcd), BAIBA (a Christian name), BAMBA, BANBA (web2), BARBA, BEEBE, BEGBE (ad), BEMBE (tig), BERBE, BILBI (web2), BIMBI, BOGBO (tig), BOMBO\*, BONBO (web2), BUMBU (Malay), BYDBY.  
17 words... 6 bigrams... 10 core letters

CADCA (tig), CAECA, CALCA, CAMCA (Malay), ÇARÇA, CASCA, CAUCA, CEACE, CENCE, CEOCE, CERCE, CHACH, CHECH, CHICH, CHUCH, CIRCI, COCCO\*, COECO, COPCO, COUÇO (tig), CSECS (Hung), CSÚCS (Hung), CUCCU  
24 words... 7 bigrams... 13 core letters

DADDA\*, DÆDA, DAGDA\* (web2), DANDA, DDYDD (Wel), DEADE, DEDDE, DEEDE, DEFDE, DEIDE, DELDE, DEMDE, DERDE, DESDE, DEYDE, DIDDI (tig), DINDI, DONDO (tig), DOODO (tig), DOUDO, DUGDU  
21 words... 6 bigrams... 14 core letters

ECLEC, EDGED\*, EDMED (ds), EDRED, EEBEE (p), EEGEE (trade name), EELEE (fw), EENEE, EEPEE (p), EEZEE (trade name), ELBEL (ds), ELIEL, ELLEL (tig), ENDEN, ENGEN, ENTEN, ERBER\*, ERLER (ds), ERMER, ERRER, ERTER, ESCES, ESHES, ESNES (tig), ESPES, ESSES, ESTES\*, ETLET, EXLEX, EXTEX  
30 words... 9 bigrams... 14 core letters

FAIFA (tig), FARFA, FAYFA (tig), FEEFE, FEFFE, FEOFE, FIMFI  
7 words... 3 bigrams... 7 core letters

GAGGA, GALGA, GANGA, GARGA, GEDGE, GEGGE, GEIGE, GENGE, GERGE (ds), GHEGH, GIDGI (tig), GONGO, GORGO, GUNGU (tig)  
14 words... 6 bigrams... 7 core letters

HACHA, HAĪHA, HANHA, HASHA, HATHÄ, HAWHA, HECHE, HEGHE, HEIHE, HETHE, HEYHE, HISHI (tig), HOAHO, HOOHO (both Haw), HUCHU (tig)  
15 words... 5 bigrams... 10 core letters

IARIA (nz), IASIA, ICTIC\*, IEHIE, ILWIL, IMHIM (Scot), INDIN, INFIN, INGIN, INJIN, INNIN, INRIN, IORIO (ds), ISAIS (nz)  
14 words... 8 bigrams... 11 core letters

JAUJA, JUNJU (both tig)  
2 words... 2 bigrams... 2 core letters

KAEKA (Haw), KAFKA\*, KAIKA, KALKA, KAMKA, KANKA, KARKA, KASKA, KATKA, KAUKA, KAVKA (ds), KAZKA, KEAKE, KECKE, KERKE, KHAKH (tig), KIAKI, KILKI (tig), KINKI (tig), KIOKI (Haw), KIRKI (tig), KISKI (tig), KOEKO (Mao), KOKKO, KÓLKO (Pol), KONKO (tig), KRÁKR, KRÓKR, KUAKU (tig), KUNKU, KURKU, KVIKV  
32 words... 8 bigrams... 16 core letters

LACLA (tig), LAILA, LALLA (tig), LAULA (Haw), LAXLA (tig), LAYLA (tig), LEALE, LEILE, LESLE, LEYLE, LICLI, LIFLI, LILI (Haw), LIKLI, LILLI, LINLI (tig), LIULI (tig), LLALL (Wel), LLILL (Wel2), LLULL (a Catalan writer), LOLLO (edfc), LUILU (tig), LYFLY, LYKLY, LYLLY  
25 words... 7 bigrams... 11 core letters

MADMA, MAGMA\*, MAJMA (tig), MALMA, MAMMA\*, MANMA (tig), MARMA, MAUMA, MELMÉ (tig), MERME, MESME, MEYME, MIAMI, MINMI (tig), MMMMM, MORMO, MUMMU\* (web2)  
17 words... 6 bigrams... 11 core letters

NACNA (nz), NAGNÁ, NAHNA (tig), NAINA, NAMNA, NANNA, NARNA (lcd), NAUNA (tig), NEANE, NEFNE, NEINE, NEMNE, NENNE, NEYNE, NGANG (tig), NGONG (tig), NIJNI, NIMNI (tig), NINNI (ad), NIZNI (tig), NONNO, NUMNU, NUNNU, NYNNY  
24 words... 7 bigrams... 14 core letters

ODVOD (Czech), OENOE (lcd), OEROE, ONDON, ONFON, ONGON, ONION, ONOON, ONPON, ONYON, OOLOO, OONOO (Jam), OOPOO (Norf), OOROO (and), OOTOO, ORDOR, ORFÖR, ORROR, ÖSLÖS (tig), OUKOU (Haw)  
20 words... 7 bigrams... 13 core letters

PAIPA, PALPA (both tig), PAMPA\*, PAPPA, PEEPE, PEMPE, PEPPE, PEWPE, PHIPH, PIMPI (tig), PIPPI, POIPO (Haw), POOPO, POPPO, PUAPU (Haw)  
15 words... 6 bigrams... 8 core letters

RAGRA, RASRA (tig), REARE, REDRE, REERE, REFRE, RETRE, REYRE\* (pibr), RIPRI, RIRRI (both tig), RUDRU, RUIRU (tig)  
12 words... 4 bigrams... 11 core letters

SALSA, SAMSA, SANSA, SARSA, SASSA, SEASE, SEESE, SEISE, SENSE\*, SERSE, SESSE, SEWSE, SEYSE, SHASH, SHESH, SHISH, SHUSH\*, SIASI (tig), SILSI (ad), SIRSI (tig), SIUSI\* (web2), SORSO, SOSSO (both tig), SSESS (edd), SZÁSZ, SZÓSZ (Hung)

*26 words... 7 bigrams... 12 core letters*

TÆTA, TAHTA (tig), TAITA, TANTA, TAOTA (tig), TAQTA\* (hai), TARTA, TASTA, TATTA, TAUTA, TEATE, TECTE, TEETE, TEHTE, TEITE, TELTE, TENTE, TESTE, TETTE, TEXTE, TEYTE, THATH, THETH, THOTH, TIATI (tig), TIÉTI (tig), TIUTI (Mao), TOITO, TOKTO (both tig), TONTO, TORTO, TOSTO, TOUTO, TUATU (Mao), TUKTU, TURTU, TUTTU (Finn), TYSTY

*38 words... 7 bigrams... 16 core letters*

UDBUD (Dan), UGGUG (dblc), UGRUG (pull), UMYUM (? source), UNJUN (Malay), UNNUN, UNRUN, ÜNSÜN, UPSUP, URHUR, UROUR, USOUS (nz), USTUS (sted)

*13 words... 7 bigrams... 10 core letters*

VÄFVA, VAIVA (tig), VALVA, VARVA (tig), VEEVE (Scot), VEIVE, VELVE, VERVE\*, VEUVE, VOLVO

*10 words... 3 bigrams... 6 core letters*

WALWA, WARWA (tig), WASWA, WEDWE, WEIWE, WELWE, WNIWN (Wel), WÒNWÒ (Yor)

*8 words... 4 bigrams... 6 core letters*

YAHYA, YARYA (tig), YENYE (Swah), YNGYN (Manx)

*4 words... 3 bigrams... 4 core letters*

ZADZA (Pol), ZANZA, ZARZA, ZZYZZ (a surname), ZZZZZ

*5 words... 2 bigrams... 5 core letters*

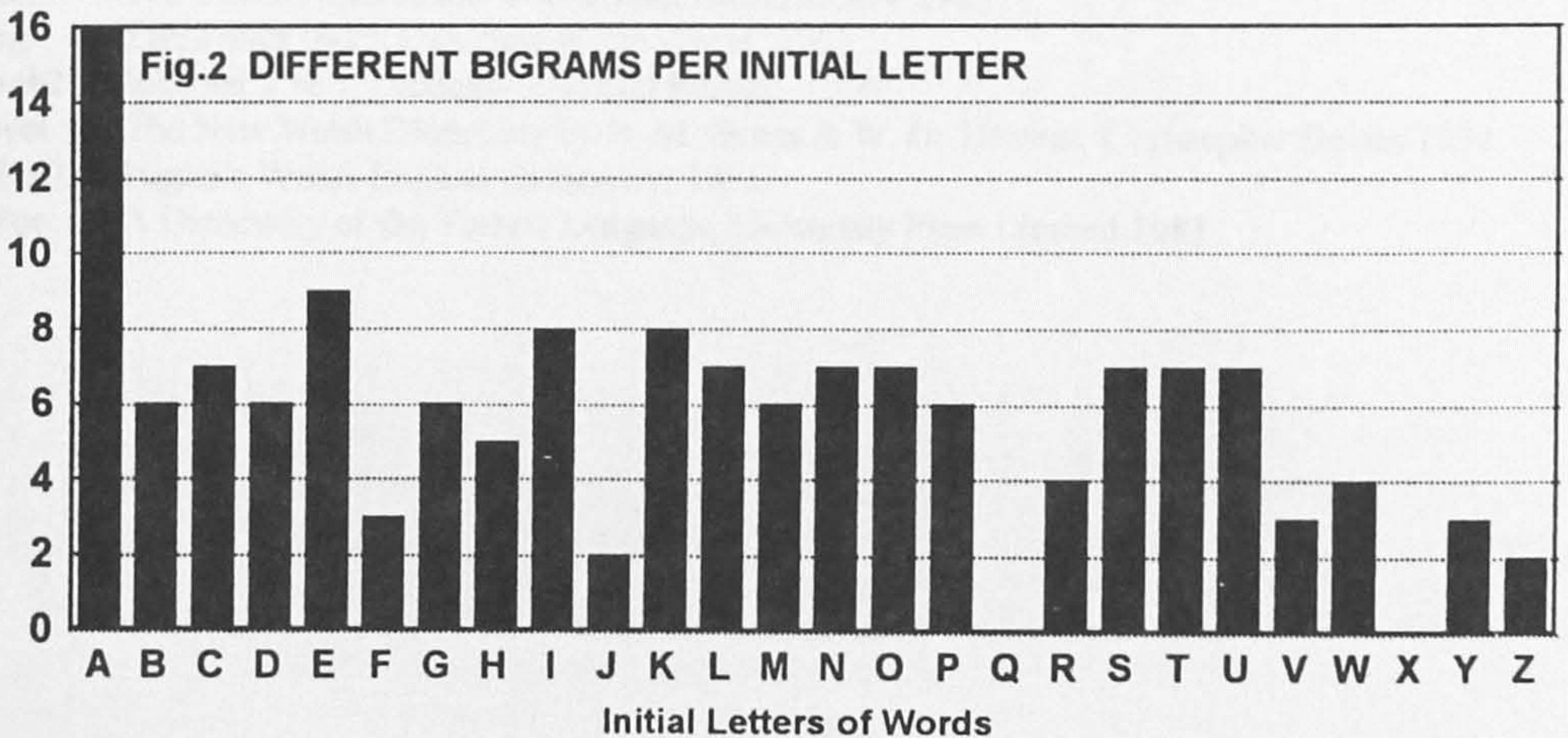
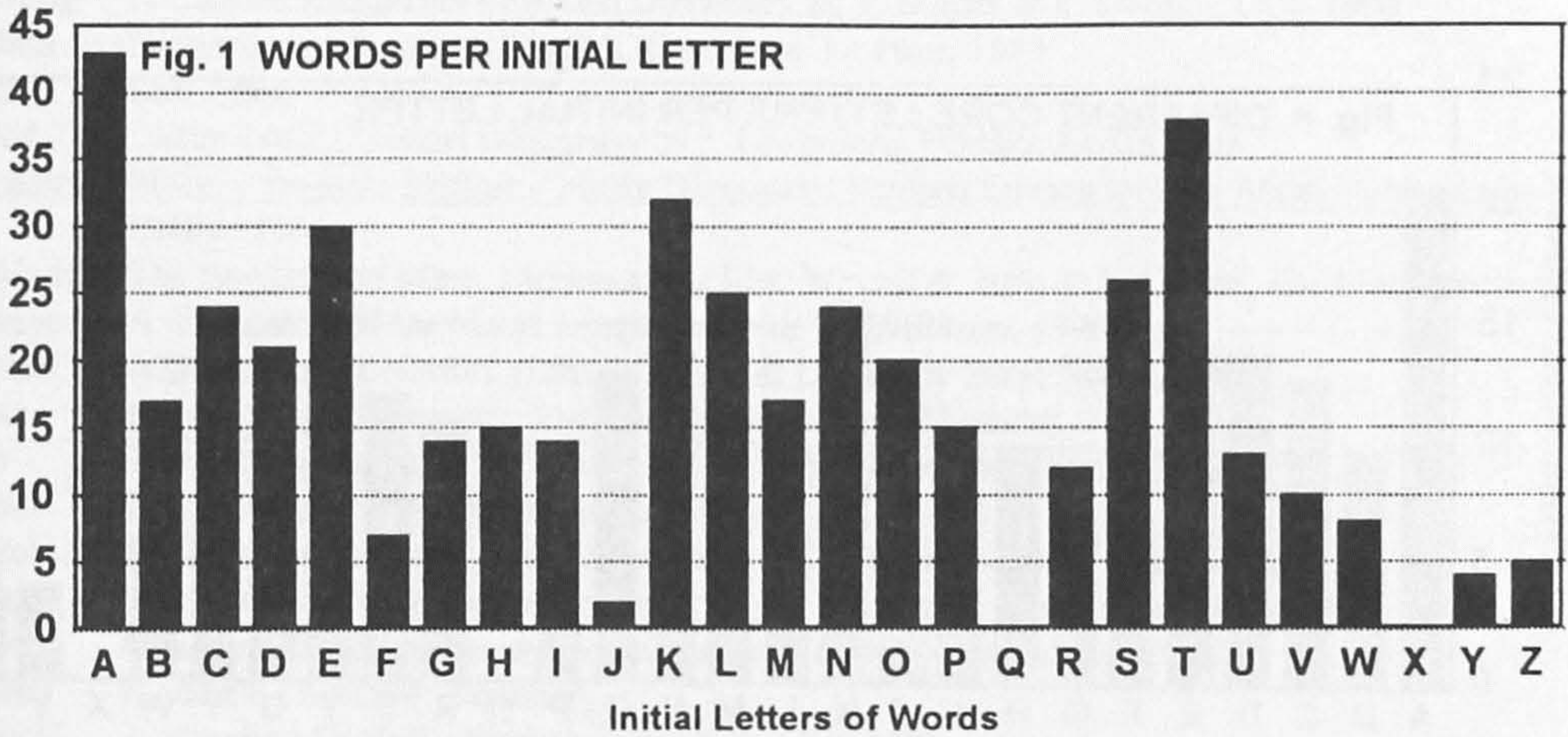
The above list includes examples of Miami words beginning with all the letters of the alphabet except Q and X. 43 of the 436 words, almost 10% of them, begin with the letter A, more than any other (Figure 1).

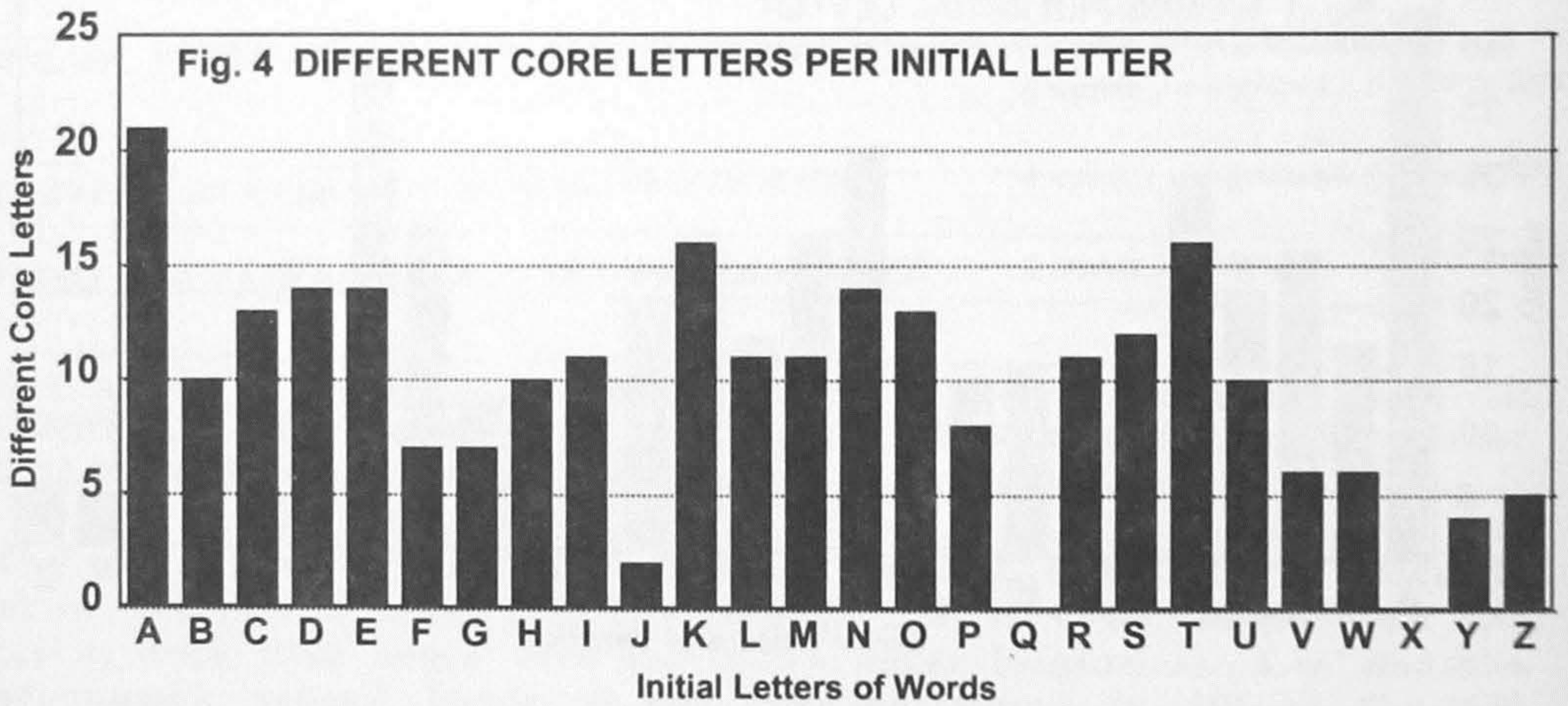
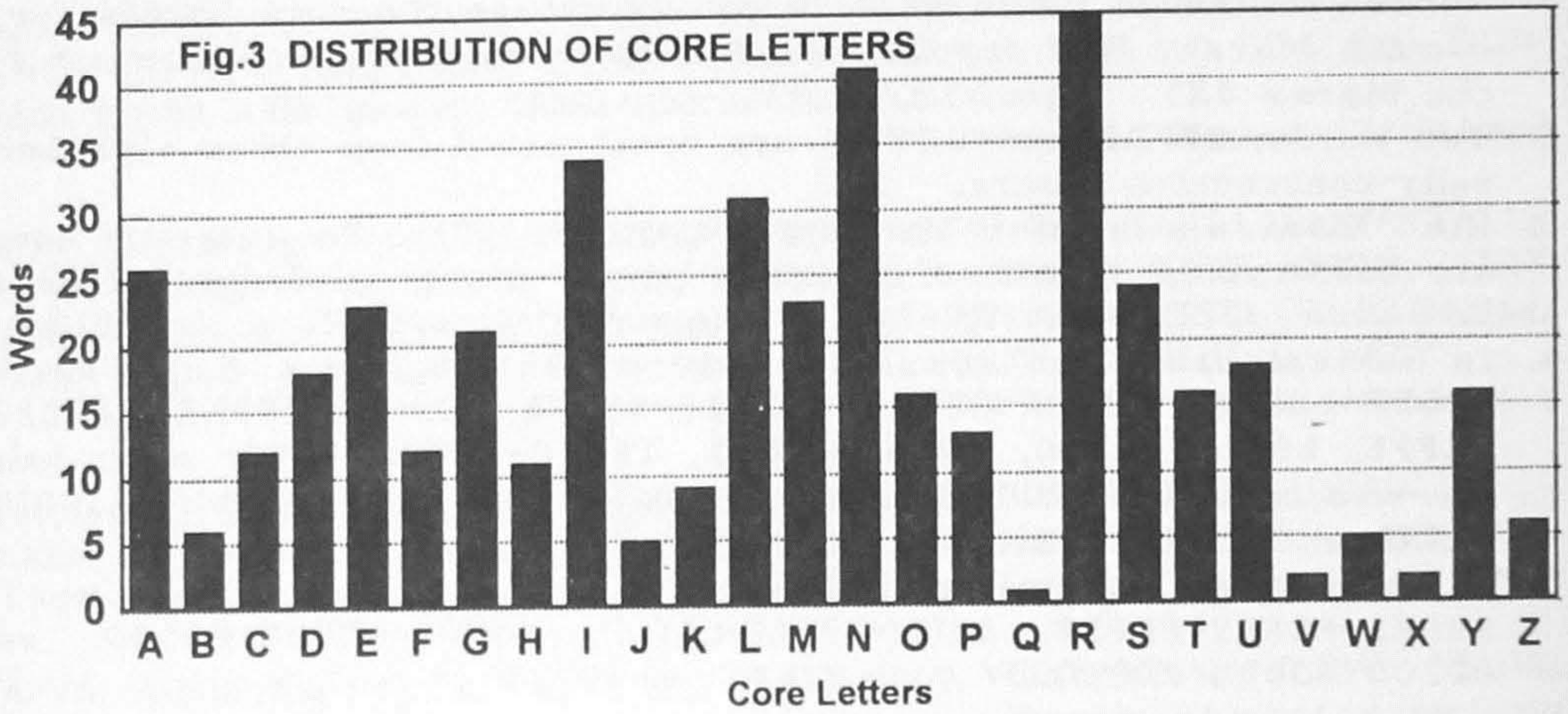
The 436 words employ 146 different bigrams, 21.6% of the possible total of 676. 16 of these bigrams, almost 11% of them, begin with the letter A, more than begin with any other letter (Figure 2). A is also the most common second letter of the bigrams, found in 102 of the 436 words, 23.4% of them. It is closely followed by E, in 97 words. No other letter approaches A and E in this context. KA is the most common bigram, appearing in 12 words. TE appears in 11 words, DE and TA each in 10, AN and AR each in 9, MA, NA and SE each in 8, CA, LI and ON each in 7, and BA, EE, HA, IN, KI, LA, NE, RE and TO each in 6 words.

All 26 letters of the alphabet appear as core letters in the 436 Miami words. R is the most common core letter, present in 45 of the words, more than 10% of them (Figure 3). Words beginning with the letter A employ the most different core letters, 21 of the possible 26. This is five more than words beginning with any other letter (Figure 4). Noteworthy are the seven words beginning with the letter F because each one of them employs a different core letter. Also on this theme, 11 of the 12 words beginning with R employ different core letters.

There are a number of Miami words of special interest:

1. CHACH, CHECH, CHICH, CHOCH and CHUCH are the only set of Miami words I found in which all five vowels act as the core letters for a common bigram. Can anyone find SHOSH to complete a similar set for the bigram SH?
2. Two words, DEFDE and USTUS, are constructed from three alphabetically-consecutive letters.
3. Most Miami words have the letter pattern 12312. However 76 words are constructed from two different letters of the alphabet: 12112 as in DADDA, 12212 as in UGGUG, or the palindromic 11211 as in EELEE.
4. In several cases the same two letters make different Miami words: DEDDE-DEEDE, EEGEE-GEGGE, EENEE-NENNE, ERRER-REERE, FEEFE-FEFFE, LOLLO-OOLOO, OOROO-ORROR, TEETE-TETTE. Other such pairs are also reversals: AGGAG-GAGGA, ANNAN-NANNA, ASSAS-SASSA, INNIN-NINNI, and NUNNU-UNNUN.
5. In other cases the same two letters make three different Miami words: EEPEE-PEEPE-PEPPE, LIILI-LILLI-LLILL, NONNO-ONNOON-ONNOO, and OOPPO-POOPO-POPPPO.





## REFERENCES

- ad An Archaic Dictionary by W. R. Cooper, 1876
- and The Australian National Dictionary
- cd Century Dictionary, 1889-91
- Czech A Czech - English, English - Czech Dictionary by Dr. Karel Hais, 1974
- Dan The Standard Danish Dictionary ed. Jens Axelsen, Cassell 1986
- dblc Dictionary of British Literary Characters, Facts on File 1993
- ds A Dictionary of Surnames by P. Hanks & F. Hodges, OUP 1996
- ecd Everyman's Classical Dictionary by J. Warrington, J.M. Dent 1961
- edd The English Dialect Dictionary, ed. J. Wright 1898
- edfc Everyman's Dictionary of Fictional Characters by W. Freeman, J. M. Dent 1973
- Finn English - Finnish Dictionary by the staff of the Berlitz Guides, 1989
- fw Funk & Wagnalls New Standard Dictionary, 1963
- hai Handbook of American Indians ed. F. W. Hodge, 1967
- Haw A Dictionary of the Hawaiian Language by Lorrin Andrews, Charles E Tuttle 1974
- Hung A Concise Hungarian - English Dictionary by T. Magay & L. Orzagh, OUP 1990
- Jam Dictionary of Jamaican English, Cassidy & Le Page, 1980
- la Life Atlas
- lcd Lamprière's Classical Dictionary by J. Lemprière, Bracken Books 1984
- Malay Malay - English, English - Malay Dictionary, Revised Edition by Haji Abdul Rahman bin Yusop, Collins 1986
- Manx The English and Manx Dictionary by Rev. W. Gill & Rev. J. T. Clarke, The Manx Society 1866
- Mao A Dictionary of the Maori Language by H. W. Williams, 1975
- Norf A Dictionary of Norfolk (Island) Words & Usages by Beryl Nobbs, 1986
- nz Nomenclator Zoologicus, The Zoological Society of London
- p The Palindromicon by Jeff Grant, Word Ways Monograph Series 3, 1992
- pibr Phillips' Index of Biographical Reference
- Pol Lagenscheidt's Pocket Polish Dictionary by Tadeusz Grzebieniowski
- pull The Complete Word Game Dictionary by T. Pulliam & G. Carruth, Facts on File 1984
- Scot Chambers Scots Dictionary by Alexander Warrack, Chambers 1975
- sted Stedman's Medical Dictionary
- Swah A Standard Swahili - English Dictionary, OUP 1996
- taw The Times Atlas of the World, John Bartholomew 1985
- tig The Times Index Gazetteer of the World, 1965
- web2 Webster's N. I. Dictionary Second Edition, 1950
- Wel The New Welsh Dictionary by H. M. Evans & W. O. Thomas, Christopher Davies 1970
- Wel2 Pughe's Welsh-English Dictionary, 1891
- Yor A Dictionary of the Yoruba Language, University Press Limited 1983