Wordplay based on Roman Numeral Letters (RNLs) is not new to Word Ways. Here, however, I attempt an overview of the subject, as well as introducing a variety of new RNL wordplay. As a whole, RNL wordplay can be divided conveniently into 2 types: non-numerical and numerical. The RNLs in non-numerical wordplay do not take on their RN values; RNLs in numerical wordplay are given their RN values. CIVIC is an example of the former, a word made of RNLs which is also a palindrome. ACTIVE can be used as an example of the latter when viewed as containing the RN for 104 (CIV).

The RNLs used here are, in alphabetical order, C, D, I, L, M, V and X. Medieval Roman Numerals (WW87155 and 95183) are not admitted. A few hyphenated designations are offered where no solid words were found; phrases are not admitted. Unreferenced words can be found in the Oxford English Dictionary, Second Edition. Locations are taken from the United States Board on Geographic Names and are populated places unless stated otherwise. Other references appear at the end.

**NON-NUMERICAL RNL WORDPLAY**

Non-numerical RNL wordplay can be sub-divided into:

A. that in which the RNLs form part of the word
   B. that in which RNLs account for the entire word.

**A. RNLS FORM PART OF THE WORD**

1 **Singularly Imperfect Romans (SIRs)**
   Only a single letter prevents certain words from being full RNL words. Here is a list of SIRs, not necessarily the longest ones. They encompass, in alphabetical order, one each of the 19 non-RNLs: CLIMAX, CLIMB, MIDDLED, FILMIC, VIGIL, CICHLID, JILDI (quick), CLICK, DICLINIC, CODICIL, LIMPID, IQLID (in Iran), IRIDIC, SILICIC, ILLICIT, MILIUM (millet), WILLI (type of nocturnal spirit), IDYLLIC, IZIM (a 17th century Hebrew word for goats - singular Ez).

A satirical columnist for The (London) Times newspaper and author of The Calligrapher, Edward DOCX has a most unusual SIR name.

2 **Single Romans**
   By way of contrast, here is a selection of long words which contain only a single RNL. The first five can be found in Stedman’s MD or are inferred from words therein. ESOPHAGOGASTROSCOPES (20 letters), PHOTOROENTGENOGRAPHED (21), STEREOENTGENOGRAPHING (23), TELEOROENTGENOGRAPHY (20), ESOPHAGOJEJUNOGASTROSTOMOSES (28), OVERBOUNTEOUSNESS (17 - Web2), EXTRANEOUSNESSES (16 - Web2)

3 **Roman Strings**
   In Colloquy of the May 1999 issue of Word Ways, I offered ARMADILLIDIIDAE (pill bugs), a word with an uninterrupted string of 9 RNLs.
4 Roman Doubles

It is not difficult to find words which contain a doubled RNL and no other RNLs:
ACCOUNT, ADD, HAWAII, FULL, SUMMER, NAVY, WAXXEN (wax)

On the other hand, words with tripled and quadrupled RNLs and no other RNLs are rare:
IIIJE (see skillel 1. 1519 citation), WALLLESS (Web2)
III (sleepless - Tahitian), HMMM (ats), JXXX and AJJAXXX (WW2001294)
The following words have different pairings of adjacent doubled RNLs and no other RNLs.
IIDDA (Somalia) QUASILLNESS (Web2) ANTI-IMMUNE
ALLCCANJA (Peru) ROTTBOELLINAE (gg)

Philip Cohen found the personal name REDDDLL in A.E. Vogt’s The Battle of Forever, Ace, 1971 (81155).

5 Roman Repeats

Certain words contain a preponderance of one particular letter. Here, I search for solid words with as many of a particular RNL as possible but which contain no other RNLs.

C CHROOOCOCCEAE has 5 Cs
I INHIBITIONIST has 5 Is
M MAMMOMONOGAMUS (a nematode worm - nz) has 5 Ms
V VERTYOYS (vertuous) has 3 Vs

Some locations and tribes boast even more Roman repeats:
CHANCACACCACCA (a mountain in Peru) has 7 Cs (and a 10-letter C+A string)
WAPIJWISIBIWININIWAK (‘Swan creek men’, a band of Chippewa - Hod) has 8 Is
HULLLOOCELLEL (either a Chinookan or a Salishan tribe - Hod) has 7 Ls.
NOVOVARVAROVKA (Russia) has 4 Vs.

6 Roman Beginnings and Endings

Words which begin and end with the same RNL are easy to find. However, when we require that the word contains no other RNLs it becomes difficult to find long words. Most of the longer words which begin and end with C, for example, end in -IC which disqualifies them.

COENOSARC DESEGREGATED
INTERPRETARI LAUGHTERFUL
MAGNETOGRAM VENOV (venue)
XANTHONYX (a crustacean - nz)

VOROBJEV is the surname of the joint author of Advanced Coal Mining, 1961.

Certain words begin and end with a doubled RNL, either the same or different. Some of these words have extraneous RNLs.

Same doubled RNLs: CCAMPATUYOCC (Peru), CCARCCOLLACHAYOCC (a locality in Peru) has 3 x CC, an LL, and 7 Cs in total.
DDOFYDD (see ‘ovate’) III (sleepless - Tahitian) LLALL (Welsh: another) MMM (rt)

Different doubled RNLs: LLANFAREDD (Powys, Wales) VVALL (enter 1590 cit = wall)
VVVEDENSKII (alternate surname of Wedensky, Nikolai E. - Stedman’s MD)

7 Invariant Romans

The RNLs in these words appear in their correct alphabetical positions within each word. They are invariants.

ENCOURAGINGLY, NECESSARIORUM

The RNLs in each of these words appear in their correct alphabetical positions in relation to each other only. They are local invariants.

ANECDOTARIAN CONGENITAL CRATERIFORM COUNTERROLMENT
DAUNITONGLY HYDROPHTHALMY BIPALMATE KALMASHBASHEVO
VEX (Russia)

The RNLs in these words are reverse local invariants.
MARGINATED, HAMLETISH, PLENIPOTENCE, GLUTINATED, XAVANTE
8 Alphabetically-ordered Romans
The 5 different RNLs in each of these words occur in alphabetical order.
CARDIOPALMUS, CARDIO-OMENTOPEXY (both St), CHADILEUVU (stream-Argentina)
DIPLOMYSTAX (a fish)
The 5 different RNLs in each of these words occur in reverse alphabetical order.
EXEMPLARIC, OXALIDACEOUS, GOVERNMENTALIZED, MULTIDECK,
VENYMLICHE (*venomly)

9 Hidden Romans
Rearranged, the letters of these 10-letter parent words make two 5-letter offspring. One of these is a RNL word, the other contains no RNLs.

| DISSOLVING | SICCATIVES | VICARIANCE | CLAVIERIST |
| LIVID SONGS | CIVIC TESSA | CIVIC ARENA | CIVIL STARE |

In MERISMATIC and NUMISMATIC below, the letters of the RNL word MIMIC occur in the correct order in the parent word. In NONMIMETIC the letters of both offspring, MIMIC and the non-RNL NONET, appear in the correct order in the parent word. Alternatively, using TENON instead of NONET, the letters of MIMIC and TENON can be read forwards and backwards respectively.

| MERISMATIC | NUMISMATIC | NONMIMETIC | NONMIMETIC |
| MIMIC STARE | MIMIC AUNTS | MIMIC NONET | MIMIC TENON |

In MILLENNIA, MILLI and ANNE can be read forwards and backwards respectively.

In ENMILDEN (enmingle) the RNL MILD occurs unbroken inside the tautonymic non-RNL ENEN (old word for ‘can’). In several words, the letters of MILD occur in order but not in one group. In each of MATILDA, MARIGOLDS, MISLEAD and MISELDEN (old word for ‘mistletoe’), MILD can be lifted to leave another offspring which does not include any RNLs.

M I L D
M I L D
M I L D
M I L D
AT A
AR GO S
S EA
SE EN

Other RNL offspring can similarly be lifted from DISTALLY, MITRALLY, MISDOING and LIVERIED. In MIASMIC and MIOTHERMIC, MIMIC surrounds the non-RNL words AS and OTHER respectively.

| DI LL | MI LL | MI D I | LIV I D |
| STA Y | TRA Y | S O NG | ER E |
| MI MIC | MI MIC | AS | OTHER |

10 Half Roman
The letters in the first half of the word DIVISORS are RNLs, whilst those in its second half are not. Rearranging the letters of each half produces the RNL offspring VIDI and the non-RNL offspring ROSS. For more examples, see my Straight Down The Middle (2004125).

11 Roman Records
Under the title Roman Numerology (99059), Dave Morice listed potential records for various classes of word containing RNLs. In response to his EXTRAVEHICULAR (14), as the Longest word with 5 different RNLs used once, I offered EXTRAVENTRICULAR which has 16 letters (99104).

Here are more improvements:
Longest word with 6 different RNLs used once
LEVOCARDIOGRAM (14) from Stedman’s MD - to replace HEXADECIMAL (11)
All 7 different RNLs used once
In the August 2003 Colloquy, I mentioned CERQUEX-DE-MAULEVRIER, a location in France - to replace Dave’s coined OVERCLIMAXED

First and last names with greatest ratio of RNLs
In WW97055, Jed Martinez tells how he spotted the Roman name VIC VIDI, a resident of Coral Springs, on the local TV news - to replace IDI AMIN

Longest word with RNLs in odd positions only
MALACOCYCHLA (a bird 12-nz) - to replace MOLECULE (8)

12 Silent Romans
RNLs are sometimes seen but not heard, as in these words:
C in MUSCLE, D in HANDSOME I in BUSINESS L in WALK M in MNEMONIC V in FIVEPENCE (pronounced ‘f’) X in BILLET-DOUX
In RIEVAULX (Abbey), the I, L and X are all silent.

B. RNLs ACCOUNT FOR THE WHOLE WORD
There are only a few well-known words made exclusively of RNLs, especially of more than three letters: CIVIC, CIVIL, DILL, DIVI, LIVID, MIDI, MILD, MILL, MIMI, MIMIC, VILLI, VIVID.

1 Long Roman Words
For longer examples, it is necessary to turn to lesser-known words: CILDLIC (childly), CIMICIC (cimicic acid) and CIMICID (pertaining to insects of the Cimicidae - Dor). DIVIDIVI, with 8 letters, would appear to be the longest RNL word which has appeared in Word Ways. It is the name of a leguminous tree, and also the name of its pods, used in tanning and dyeing. I can now add eight more 8-letter RNL words, all locations. Five of these are tautonyms: DILIDILI (locality in Somalia), LIVILIVI (Bolivia), MIDI-MIDI (DR Congo), MILIMILI (Uganda), and VILIVILI (stream - Kenya); the remaining three are MILICICI (Bosnia-Herzegovina), and CIMCIMILI and XILMILLI (both in Azerbaijan). XILMILLI is also a Century word (assigning a=1, b=2 etc., its letter total = 100). However, there exist two 10-letter RNL tautonymic locations: LLIVILLIVI (a mountain in Chile) and XIMIM-XIMIM (Igarape Ximim-Ximim is a stream in Brazil).

2 Roman Transposals
Perhaps the most familiar of these is MID - DIM, which is also a reversal. Longer examples are found mostly amongst locations.

5 letters
These groups of 5-letter transposals each consist of three or more words.
CILMI (Somalia) - CIMIL (locality in Somalia) - MILIC (Bosnia-Herzegovina)
DIVIL - DIVL (Afghanistan) - LIVID
DIVCI (Yugoslavia) - DIVIC (ridge in Yugoslavia) - VIDIC (Croatia)
LIVIL (Ginny Livil is a resident of California) - LIVLI (stream - Peru) - VILIL (Guatemala) - VILLI (part of the small intestine; Villi Villi is a mountain in Bolivia)
DIDIM (stream - Cameroon) - IDMID (mt. - Lebanon) - IMDID (Timmay al Imid - Egypt)

CIVIL - CIVLI (Turkey) - VICLI (Vietnam) - VILCI (Vilci Izvor - Bulgaria) - VILIC

DILDI (Ethiopia) - DILID - IDDIL (Nigeria) - IDLID (Admin. district - Syria) - LIDDI

ILLIM (hill in Kenya) - IMLIL (Morocco) - LILIM (island in Papua NG) - LIMLI (Turkey) - LLIMI (Llimi Kwan - wadi in Egypt) - MILLI
DILIM (Kirk Dîlim Liman - bay in Turkey) - DILMI (Sidi Dilmi - shrine in Algeria) -
DIMIL (stream - Papua NG) - DLIMI (El Bachir Dlimi - Morocco) - IDLIM (pond - Sudan) -
LIMDI (India) - MILIL - MILDI (Cameroon)

6 letters
Here are some pairs of 6-letter transposals.
CILCIM (Turkey) - MILCIC (Croatia)  CILICI (Bosnia-Herzegovina) - ILICIC
DIMICI (Yugoslavia) - IMIDIC  DIMILI (Turkey) - MILIDI (wadi - Algeria)
DIVICI - VIDICI (both Bosnia-Herzegovina)  ILLILI (Guinea) - LILLII (msp)
VILCII (wadi - Egypt) - VILICI (Yugoslavia)  VILIVI (stream - Mozambique) - VIVILI (Fiji)
The palindromic DIVVID (edd) transposes to the tautonymic VIDVID (Ukraine)
This group of 3 transposals consists of two tautonyms and a palindrome.
LIMLIM (wadi - Egypt) - MILMIL (stream - Ecuador) - MILLIL (F&W)

7 letters
DILIMLI (Turkey) - MIDILLI (island - Greece)

8 letters
LIVILIVI (Bolivia) - VILIVILI (stream - Kenya)

3 Roman Palindromes
6 letters
DIVVID (edd), ILLILI (a settlement in Samoa), IVIIVI (‘small hills’ - Mangareva),
MILLIM (F&W), MIMMIM (a firm in Toronto)

7 letters
CILDLIC (childly); ILLILLI (‘disease’ - Choctaw), IMILIMI (a school in Kenya)

4 Roman Tautonyms
6 letters
DILDIL (Eritrea), LICLCIC (spur - Peru), MVIMVI (stream - Gabon), LIMILIM (wadi - Egypt),
MILMIL (stream - Ecuador) and VIDVID (Ukraine)

8 letters
DIVIDIVI, DILDILDI, LIVILIVI, MIDI-MIDI, MIMMIL, and VILIVILI. For these and the
10-letter LLIVILILLIVI and XIMIM-XIMIM see ‘Long Roman Words’ (1. above).

5 Roman Reversals
These RNL words make a different RNL word when read backwards. The sources of the
asterisked* words can be found in the list of Miami words (6. below).
DILDI* - IDLID*  IDDIL (Nigeria) - LIDD (stream - Cameroon)  ILLIL* - LILLI*
LIVID - DIVIL  MILL - ILLIM (hill - Kenya)
LIMILIM (wadi - Egypt) - MILMIL (stream - Ecuador)

6 Roman Miami Words
A Miami word is one with the pattern 2?2?2, where ? can be any letter of the alphabet (see
Miami Words 2000014).
CICCI Bosnia-Herzegovina  CIVCI Bosnia-Herzegovina  DIDDI river - Nigeria
DILDI Ethiopia  IDLID Admin. Dist. - Syria  IDMID mountain-Lebanon
ILLIL cove - Palau  LICI LI likely  LIIMLI Turkey
LLILL old Welsh word for a goat  LILLI a girl’s name  LIVLI stream - Peru
MIMMI stream - New Zealand  VIMVI farm - Zimbabwe

7 Roman Triangle Words
The letters of the RNL words DIDDIM and ILICIC occur in the ratio 3:2:1. When arranged
with like letters on the same row they make triangles.
8 Roman Word Squares

The words of both the LIXI and MILLI squares below can be read in row order, from L to R, to produce a palindromic sequence of letters: LIXI XILI ILIX IXIL and MILLI ILLIL LLILL LILLI ILLIM respectively. Having an odd number of rows, the MILLI square also produces a palindromic letter sequence when rows 2 and 4 are read from R to L: MILLI LILLI LLILL ILLIM. The VIDI square is not palindromic but it incorporates all the RNLs except C. Returning to the LIXI square, each word is composed of the letters I, I, L and X. Assigning a=1, b=2 etc., the letter total of each word divided by the number of letters 54/4 = 13.5. Constructed of 4 balanced words, this a balanced square as well as a palindromic one.

| L I X I (China) | M I L L I | V I D I |
| X I L I (Cape in Greece) | I L I L L | I X I L |
| I L I X (Ilex - oak) | L I L L L | D I V I |
| I X I L | I L L I | I L I M (Nigeria) |

9 Roman Pyramid

This RNL pyramid is constructed wholly from the names of locations.

M | M stream and M lagoon in Australia
MI | stream in Central African Republic
LIM | stream in Bosnia-Herzegovina
IMLI | railroad station in India
MILIC | mountain in Hungary
CICIM | Turkey
MILCICI | Croatia
CICIMCIMLI | Azerbaijan

10 Roman Word Ladder

This ladder of 6-letter locations has side branches (shown to the left of the main ladder):

Yugoslavia | MICICI
---|---
MILIMI | blowhole in Chad
MILIDI | wadi in Algeria
CILICI | Bosnia-Herzegovina
CICICI | Croatia
VICICI | Croatia
VIDICI | locality in Yugoslavia

stream in Mozambique | VILIVI
---|---
VILICI | Bosnia-Herzegovina
LILICI | Bosnia-Herzegovina
DILICI | Bosnia-Herzegovina
DIVICI | Romania

stream in Malawi | DIDIDI
---|---
DIDICI | Yugoslavia
DIMICI | Bosnia-Herzegovina
DIMILI | Turkey

11 Roman Shifts

By shifting the letters of certain words a given number of steps along the alphabet (wrapping round from Z to A), it is possible to convert words made with RNLs into shift words which contain no RNLs. The RNLs are given their alphabetical values (C = 3, D = 4 etc.).

DID + 12 = PUP
MID + 12 = YUP
ILL + 19 = BEE
VIM + 18 = NAE (north 'no')
VIV + 6 = BOB/VIV + 12 = HUH/VIV + 18 = NAN
IXIL + 7 = PEPS

In WW99290, Dave Morice pointed out that "...the letters in THREE shift four steps along
the alphabet to XLVII, the Roman numeral for 47. It's the only number that does this kind of
shift..." (a number to number shift). This prompted me to try shifting groups of RNLs which
are bona fide RNs rather than RNL words. The RNLs are given their alphabetical values.

| MDV +1 = NEW | DCL + 2 = FEN | MXV + 3 = PAY | MVI + 5 = RAN |
| LIV + 6 = ROB | CXXI + 7 = JEEP | LXXVI + 9 = UGGER | CDLI + 11 = NOWT |
| MDCCV + 12 = POOH | MCL + 15 = BRA | CDI + 16 = STY | CXX + 17 = TOO |
| XCV + 18 = PUN | DLII + 19 = WEBB | CIX + 22 = YET | MDCC + 23 = JAZZ |
| DCCV + 24 = BAAT |

The same length shift can be applied to different RNs to produce different words. For
example, DCC + 24 = BAA, DCI + 24 = BAG whilst DCV + 24 = BAT.
In this context, a shift length of 22 seems to be particularly productive. Below, 3 letters are
added, one at a time, and then 3 letters subtracted, again one at a time,

L I + 22 = H E
X LI + 22 = T H E
X L I I + 22 = T H E E
X L V I I + 22 = T H R E E
X V I I + 22 = T R E E
X I I + 22 = T E E
X I + 22 = T E

The letters of some RNL words can be shifted along the alphabet and the resulting letters
rearranged to form shiftgrams which contain no RNLs.

| MIX + 7 (TPE) = PET/MIX + 18 (EAP) = PEA |
| DIMID + 23 (AFJFA) = JAFFA | VIVID + 22 (REREZ) = REZER |
| CIVIL + 22 (YEREH) = HEYER (author Georgette Heyer) |

**NUMERICAL RNL WORDPLAY**

The RNLs which appear below are given their RN values, either as single-letter RNs (I = 1, V =
5, X = 10, L = 50, C = 100, D = 500, M = 1000) or as multi-letter RNs (IV = 4, CLX = 660 etc.)

1 **Orderly RNs**

Each RNL in these words is treated as a single-letter RN, even when two or more occur
adjacently. Each RN is greater in value than the RN which precedes it in the word:

LACKEYDOM, IVANXOYUYLENG (mountain in Laos), XABAALCAD (wadi in Somalia),
and EVREUX-LE-COUDRAY (France) which has 5 of the 7 single-letter RNs.
By way of contrast, the value of each RN in these words is less than that of the RN which
precedes it. Each word has 5 of the 7 single-letter RNs:

MEGADACTYLIA (St), MACKELVIE, DECAL VATION

2 **Roman Numeral Transformations**

This is the title of a Kickshaws item by Dave Morice which appeared in the August 1990
issue of Word Ways. In his words "Pick a Roman Numeral, any Roman Numeral, and replace
the 'letters' by their positional values in the English alphabet. Add those values, and put the
sum back into Roman Numeral form (e.g. VI = 22+9 = 31 = XXXI). Repeat the process until
a previous sum appears". Beginning with a number between 1 and 100, Dave found that the
longest sequence began with the number 77 and used sixteen different numbers in total before
hitting on 30 for the second time:
77/LXXVII=100/C=3/III=27/XXVII=88/LXXXVIII=133/CXXXIII=102/CII=21/XXI=57/LVII=52/LII=30*/XXX=72/LXXII=78/LXXXVIII=109/CIX=36/XXXVI=103/CIII (=30* for the second time). For more of Dave’s item, see 90178.

3 Palindromic Roman Sandwiches
Repeating in the same way as above can be used to achieve a different end. Start off with the numerical palindrome II. Convert it into a RN - XI. Now add the alphabetical values of X and I (24+9) and, bingo, another numerical palindrome (33) is the result! Here are more:

22 = XXII = 66
33 = XXXIII = 99
1001 = MI = 22
2002 = MMII = 44
3003 = MMMIII = 66
4554 = MMMMDLIV = 99
5225 = MMMMMCCXXXV = 141
30 + 90178 = 90478

4 Replacing RNs with non-RNLs
A single-letter, or multi-letter, RN in a word is replaced by one or more non-RNLs having a total alphabetical value (a=1, b=2 etc.) equal to value of the RN (i = 1, V = 5 etc.). The numbers show the values of the RNs.

Single-letter RN replaced by a single non-RNL
Only words which involve I (I), V (5 = E) or X (10 = J) are eligible, because the RN values of L (50), C (100), D (500) and M (1000) each exceed 26.
1 IRE = ARE
2 V = VAT = EAT
3 I = SEE
4 = BABA
5 REV = REBAB
10 RAX = RABH
50 LONER = SPOONER
100 C = STRESSOR

Multi-letter RN replaced by a single non-RNL
Not possible with RNs III, IV or IX because they would have to be replaced by the other RNs C, D and I respectively (see 5. ‘Replacing RNs with a single RNL’)

1 HAWAI = HA WAB (mt. in Yemen)
2 VI = VI E
7 SHARVII (Bulgaria) = SHARG (Azerbaijan)
14 BUXVARA (India) = BUNARA (spring - Boznia-Herzegovina)
15 BOX-VAN = BOOAN
16 BOXVIKE Vette (hill - Sweden) = BOPKE (hill - Zimbabwe)
19 AXIXA (Brazil) = ASA (King of Judah-Bible)
20 EXXON = ETON
21 OXXIN (Scots. ‘oxen’) = OUN (own)

Multi-letter RN replaced by more than one non-RNL

2 BII (buy) = BAA
3 WAI’II (Papua NG) = WABA (Burma)
4 WAIVER = WABBER (Web2)
6 VI = G (vigor) = EAGER
7 SHARVII = SHAREB Mah (Iran)
9 XI = SHA (a goat-deer)
11 XISTER = FESTER
12 XIS (Somalia) = BEES
14 TXIVAR (Angola) = TAGFA (Morocco)
15 BOX-VAN = BOHEBAN (stream -
16 SEXVIR = SEKER (sicker)
19 AXIXA (Brazil) = ABOBA (Cameroon)
20 EXXON = EASON (a surname)
21 OXXIN (Scots. ‘oxen’) = OTAN (see Orang Otang 1802 cit.)
40 AXLE = ABRASE
41 AXLIR (a hill in Iceland) = AUGHER (collop 1641 cit - Siege of Augher)
51 SLIT = SOUTHD
54 LIVER = POWER
56 PELVIS = PEANUTS
59 FELIX = FEASTS
91 EXCITE = EROSTRATE (Botanical: not having a beak)
110 WACX (wax) = WATERWORKS
150 CLAN = UNPYTHAGOREAN
151 CLINE = THROUGH-STONE (a horizontal grave-stone over a tomb)

Two replacements in the same word
1 + 5 KIRVE (to undercut a seam in coal-mining) = KAREE (a S. African tree)
10 + 50 AXEL = AJERUK (Uganda)
5 Replacing RNs with a single RNL
3 WAI’II (Papua NG) = WAC (woke) 4 WAVE = WADE 9 TWIXT = TWIT

6 Roman Magic
In WW92051, Lee Sallows offered the following magic square made from number words.
The sums of the numbers are the same (216) for each row, each column and the two diagonals. The sums of the RNs within the words are also the same (15) for each row, column and diagonal.

SIXTY-TWO + EIGHTY + SEVENTY-FOUR = 216  IX + I + V = 15
+ + +
EIGHTY-FOUR + SEVENTY-TWO + SIXTY = 216  I + V + IX = 15
+ + +
SEVENTY + SIXTY-FOUR + EIGHTY-TWO = 216  V + IX + I = 15
= = =
216 216 216 15 15 15
Again in 92051, Dave Morice pointed out that, not only do the consecutive numbers FIVE, SIX and SEVEN add to 18, but the RNs contained within them also add to 18 (IV + IX + V).
No other sequence of consecutive numbers does this but Dave found a non-consecutive example: ELEVEN + SEVENTEEN + THIRTY-THREE = 61 both ways (LV + V + I).
I found TWELVE + SEVENTEEN + THIRTY-TWO which also = 61 both ways, and four examples which use the minus sign, each = 8 both ways.

7 Roman Millennium
In The Roman Centurion (91182), Dave Morice mined Webster’s Second Edition to find words which embody the one hundred Roman Numerals from I (I) to 100 (C). The fifty words he offered do not contain any extraneous RNLs. For reference, here is Dave’s list:

The words SILK and HICK (above*) use IL for 49 and IC for 99 whereas these values should be represented by XLIX and XCIX (see below).
By exploring beyond Webster’s Second, I managed to fill 12 of the 50+2 gaps:

Extending this exercise, I searched for words embodying the RN values 101 (CI) to 1000 (M).
| 119 | CAXANIX (Hod) | 120 | COXXS | 121 | CAXUXI (Mexico) |
| 140 | CAXALÁ (Angola) | 141 | TCXXULIN (Hod) | 145 | CHAUX-LEZ-PASSAY (France) |
| 150 | CALF | 151 | NUCLEI | 152 | CLIPPING |
| 153 | COALITIONING | 154 | CULTIVATE | 155 | ENCLAVE |
| 156 | CLEAVING | 157 | CALVINIST | 158 | CALVINIZING |
| 159 | SPECULATRIX | 160 | SCOLEX | 161 | CATALEKSIS |
| 190 | CO-EXECUTOR | 191 | COXSACKIE | 196 | RESCUE-EXCAVATIONS |
| 199 | CO-EXECUTRIX | 200 | CUCKOO | |
| 201 | ACACIA | 202 | ZUCHINI | 203 | CONSCRIPTIONIST |
| 204 | CONCEIVE | 205 | CONCAVE | 206 | CONCAVITY |
| 207 | CONCAVITIES | 209 | CORRECTRIX | 210 | CACHEXY |
| 211 | CACOXENITE | 212 | SACRPERCOCITIS (Dor) | 240 | COCARBOXYLASE |
| 241 | SACROCOXALGIA (Dor) | 250 | ACCELERATE | 251 | OCCLUSION |
| 252 | CYCLOZINE | 254 | OCCLUSIVE | 255 | CONCLAVE |
| 256 | CONCLAVIST | 257 | CRYPTOCALVINIST | 259 | BUCCALATRIX |
| 260 | CYCLOHEXANNE | 261 | CYCLOHEXATRIENES | 290 | COCOAXCO (Mexico) |
| 300 | COCKROACH | |
| 301 | COCCI | 302 | COCCININ | 303 | COCTOPERCIPIITIN (Web2) |
| 304 | CONCOCTIVE | 305 | CRECY-COUVE (France) | 306 | CACCAJAV'RI (lake-Norway) |
| 309 | COCCIX | 310 | COCCYX | 340 | CHACHACUARTLE (Mexico) |
| 350 | COCCAL | 351 | COCCOLITE | 352 | COCA-COLONIZATION |
| 400 | CAD | 401 | CREDIT | 402 | CONDITION |
| 404 | SCREWDRIVER | 405 | CADAVER | 406 | CADAVERIZE |
| 407 | CADAVERIZING | 409 | COADJUTRIX | 410 | CARDEX |
| 411 | ARCHRODEXTRIN | 420 | CADOXTON-JUXTA-NEATH (a Welsh village) | |
| 450 | CREDULOUS | 451 | CHANDELIER | 452 | SCANDALISING |
| 454 | COD-LIVER | 455 | ZRACDOLOVA (Zradslova Hut' - Czechoslovakia) | 459 | CHADALEIX (France) |
| 456 | CHUYDELEYEVSKIY (Russia) | 460 | CANDLEWAX | 461 | CANDLEWAXING | 500 | WORD |
| 501 | ADHESION | 502 | DEFINITE | 503 | DIGITIZE |
| 504 | ADOPTIVE | 505 | ADVENT | 506 | ADVISE |
| 507 | ADVISING | 508 | DEVIATIONIST | 509 | ADJUTRIX |
| 510 | DESEX | 511 | DEOXYGENATION | 512 | DEOXYGENISING |
| 513 | DEXTROPOSITIONING | 515 | HYDROXYNERVONE (St) | 516 | DEOXYVIRUS (St) |
| 519 | DEXTROSTIX | 520 | ADNEXOPEXY | 521 | DEXTROTHYROXINE |
| 540 | DEXTRAL | 541 | DEXTRALISE | 542 | DESEXUALISATION |
| 545 | HYDROXYPHENYLPRUVATE (Dor) | |
| 551 | ADRENALIN | 552 | BOWDLEORIZING | 553 | DELATIZATION |
| 554 | DELIVER | 555 | DELVE | 556 | DELUVIAN |
| 557 | DELVINAKION | 559 | SPONDULIX | 560 | QUADRUPLEX |
| 561 | DEFLEXION | 562 | DEFLEXIONIZE | 563 | DEFLEXIONIZATION |
| 564 | DEFLUXIVE | 590 | DEOXYCORTONE | 591 | DE-EXCITE |
| 592 | DE-EXCITATION | 595 | DEEP-EXTRA-COVER | 600 | DUCT |
| 601 | ABDUCTION | 602 | DECISION | 603 | DESCRIPTIONIST |
| 604 | ADJECTIVE | 605 | UNDERCOVER | 606 | DECURVATION |
| 607 | ZEDA-CHKVISHI (Georgia) | 610 | ENDOCORTEX | 611 | HARDECOURT-AUX-BOIS (France) |
| 640 | DECARBOXYLASE | 641 | DECONTEXTUALISE | 642 | DECARBOXYLATION |
| 650 | DACTYL | 651 | DECENTRALISE | 652 | DECLASSIFIES |
| 653 | DECENTRALISATIONIST | 654 | DECLARATIVE | 655 | DECALVANT |
It only remains for me to remind readers that 666, the Number of the Beast is represented by six of the seven different RNs in descending order of their RN values - DCLXVI. The year 1666, on the other hand, uses all seven RNs, once, again in descending value order - MDCLXVI. Finally, the initial RN in the word CENTURY describes the whole word, making the rest of the word redundant; and I have it on good authority that the plant DILL has been seen growing over here in the nooks and crannies of HADRJANS WALL.

FURTHER READING

Topics which I have not covered include Chronograms (77214, 82143 and a variety of non-WW sources), Presidential Roman Numerals (2003141), Roman Windows (2003141, 2003221), 9-11 in Roman Numerals (2003138), Roman Numeral Cars (2000163), Romantic Squares (2003297).

NON-OED REFERENCES

ats = American Thesaurus of Slang by Berry and van den Bark, 1953
dfpf = A Dictionary of the Flowering Plants and Ferns by J.C Willis, CUP 1966
Dor = Dorland's Medical Dictionary
edd = English Dialect Dictionary
F&W = Funk & Wagnall
gg = Genera Graminum (Grasses of the World) by W.D. Clayton & S.A. Penvoize
Hod = Handbook of American Indians, edited by F.W. Hodge, 1907
msp = A World List of Mammalian Species by G.B. Corbet & J.E. Hill, 1991
nz = Nomenclator Zoologicus
rt = Roget's Thesaurus
St = Stedman's Medical Dictionary
Web2 = Webster's Second Edition