LIGHTER AND HEAVIER

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The weight of a word is determined by assigning $A = 1, B = 2$ through $Z = 26$ and adding the letter values together. The density, or average letter value, of a word is found by dividing its weight by the number of letters in the word. Words with a low density are ‘lightweight’ words; those with a high density are ‘heavyweight’ words.

HISTORY

A number of items on this subject have appeared in Word Ways:

72226 Lightweights And Heavyweights in which Darryl Francis searched for the lightest and heaviest words of lengths 1 - 15 letters ‘to be found in major English dictionaries’.

74117 Word Weights by Charles Bostick in which he introduced the word term ‘density’.

95154 Leonard Gordon extended Darryl’s exercise to words of 16 - 24 letters. No sources given.

95253 New Lightweights And Heavyweights in which I extended the search to include names of animal genera and the names of two plant families. I did not include hyphenated examples. This resulted in improvements being offered for 13 of the 24 lightweights and for 12 of the 24 heavyweights.

In the above articles, all the examples are solid words.

98202 Word Densities in which Rex Gooch eased this restriction, extending the parameters to include hyphenated examples and multi-word designations. He also extended the overall search to encompass words of 25 - 31 letters. It is interesting to note that Rex introduced many medical and chemical terms into both of his lists.

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In the current article, I carry over the use of hyphenated examples, but do not admit phrases. All of my improvements are locations taken from The United States Board on Geographic Names (BGN). These are indicated by an asterisk*. pp = populated place.

OTHER SOURCES

DAS = Dictionary of American Slang by Wentworth and Flexner
nz = Nomenclator Zoologicus
Web2 = Webster’s Second Edition
WW = Word Ways
By introducing the names of locations, I managed to find lighter (less dense) examples for 21 of the 31 lengths of word in Rex Gooch's article of 98202. At least three of the above examples deserve a special mention for being particularly lightweight for their length:

the 16-letter BADILA-BEDDA-BEDDA with a density of 3.81
the 25-letter HAMMERISE BACH-BRGENBACH with a density of 7.56
the 28-letter GONDOLLO-CEGLEDBERCELLO-DOMBSAG with a density of 8.68

The 30-letter example is the only word with a density in excess of 10.00.

Two other words catch the eye. MABABABABA with its uninterrupted quadruple bigram BA; and CHANCACACCACCA with its A/C run of 10 letters which include the 7-letter palindromic sequence ACCACCA.
### THE HEAVYWEIGHTS

<table>
<thead>
<tr>
<th>Word Length</th>
<th>Density</th>
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<tbody>
<tr>
<td>8</td>
<td>24.25</td>
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<tr>
<td>14</td>
<td>18.71</td>
</tr>
<tr>
<td>26</td>
<td>15.38</td>
</tr>
<tr>
<td>31</td>
<td>15.52</td>
</tr>
</tbody>
</table>

The letter Z

- inflexional 'see'-Kent(OED)
- a flea (nz)
- pp Poland
- community in California
- a hymenopteran (nz)
- Ostrov U...= Is. in Russia
- pp Bulgaria
- a posy of flowers(OED)
- pp Poland
- pp Zaliv Z. Kuttuk pp Azerbaijan
- pp Kazakhstan.
- pp Wales
- pp Azerbaijan
- pp China
- pp Russia
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Heavier (more dense) examples were found for 16 of the 31 lengths of word. More than half of these are locations sited within the boundaries of the erstwhile USSR. I have replaced Rex’s ZZ, ZZZ and ZZZZ(!) but have not asterisked the replacements.

Five of the above examples are particularly heavy for their length:

- the 8-letter ZYZZYZUS with a density of 24.25
- the 10-letter TUZZY-MUZZY with a density of 22.90
- the 14-letter YSPYTTY-YSTWYTH with a density of 20.71
- the 26-letter COLPOCYSTOU R ETEROCYSTOTOMY with a density of 15.38

With its multiple hyphens, the 31-letter TZU-YUN-MIAO-TSU-PU-I-TSU-TZU-CHIH-HSIEN, with a density of 15.52, is exceptionally dense for its length.

None of the heavyweight examples have a density of less than 14.00.