## VONEL SYMMETRY

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Arrange the letters of the alphabet in columns of two:

$$
\begin{array}{lllllllllllll}
A & c & E & g & I & k & m & O & q & s & U & W & Y \\
b & d & f & h & j & I & n & p & r & t & v & x & z
\end{array}
$$

All the vowels and quasi-vowels are in the top row; that is, they are all odd-numbered letters.

Now arrange them in columns of three:

$$
\begin{array}{ccccccccc}
A & d & g & j & m & p & s & v & Y \\
b & E & h & k & n & q & t & W & z \\
c & f & I & 1 & O & r & U & x & \&
\end{array}
$$

and we get an interesting symmetry. This symmetry persists when we arrange them boustrophedonically (rook's move in chess):

| $A$ | $f$ | $g$ | $l$ | $m$ | $r$ | $s$ | $x$ | $Y$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $b$ | $E$ | $h$ | $k$ | $n$ | $q$ | $t$ | $W$ | $z$ |
| $c$ | $d$ | $I$ | $j$ | $O$ | $p$ | $U$ | $v$ | $\&$ |

Going to the queen's move, we can get another symmetrical arrangement:

| A | $b$ | $k$ | $l$ | $m$ | $n$ | $\&$ | $z$ | $Y$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $c$ | $d$ | $I$ | $j$ | $O$ | $p$ | $U$ | $v$ | $\mathbf{x}$ |
| $E$ | $f$ | $g$ | $h$ | $q$ | $r$ | $s$ | $t$ | $W$ |

Using a rook's move on a five-by-five square

| $A$ | $b$ | $c$ | $d$ | $E$ |
| :---: | :---: | :---: | :---: | :---: |
| $r$ | $q$ | m | $n$ | $f$ |
| $s$ | $p$ | $O$ | $l$ | $g$ |
| $t$ | $y$ | $x$ | $k$ | $h$ |
| $U$ | v | w | $j$ | $I$ |

we can place four of the five vowels at the corners, with the fifth at the center.

