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BAILEY'S HEXAMETERS

By Jeremiah Farrell and Al Shapiro

Presented by Al Shapiro
to honor Martin Gardner at G4G8

Nat. Bailey was the most important English lexicographer before Samuel Johnson. His first *An Universal Etymological English Dictionary*, published in 1721, went through several editions and included expressions from Spenser, Chaucer, Shakespeare and others. The eventual inclusion of proverbs made his dictionaries very popular. The folio edition of 1730 entitled *Dictionarium Britannicum . . .*was in fact used by Johnson as a "guide and repository" for the notes for his own dictionary. A reproduction of the title page is shown overleaf (reduced from its 21.5cm x 34cm size).

Very little is known about the life of Bailey. In fact it is not known whether his given name was Nathan or Nathaniel, only appearing as Nat. in the preface to the dictionary. He died in 1742 and was buried by the Seventh-Day Baptists at the Mill Yard Church in White Chapel (see *British Authors before 1800*, H.W. Wilson, 1952). His birth year is not available but he had been admitted to membership in the Baptists in 1691. In his 1721 dictionary he had advertised: "Youth boarded and taught the Hebrew, Greek, and Latin language. . ." so perhaps he was a schoolmaster.

Our interest in this essay is to report on some of the 1730 dictionary's entries for the "Entertainment of the Curious". For instance "Magick" squares are included with the example that has magic sum 18.

5	10	3
4	6	8
9	2	7

We searched for puzzles throughout the dictionary and were surprised by the definitions:

A PUZZLE (prob. of poesele, Du) a dirty slut
and
SLUT (prob. of Lutum, L) a nasty Housewife

More interesting are Bailey's methods of constructing Latin verses by using fixed tables. These are word game exercises that remind us of the modern Oulipo group's efforts as reported several times by Martin Gardner in his columns (see Chapters 6 and 7 in *Penrose Tiles to Trapdoor Ciphers*, 1989, W.H. Freeman and Company, Oxford, England.)

Bailey illustrated his technique on both pentameter and hexameter verse. His complete hexameter description follows.

DICTIONARIUM BRITANNICUM :

Or a more COMPLEAT

UNIVERSAL ETYMOLOGICAL

ENGLISH DICTIONARY

Than any EXTANT.

CONTAINING

Not only the Words, and their Explication; but their Etymologies from the *Antient British, Teutonick, Low* and *High Dutch, Saxon, Danish, Norman* and *Modern French, Italian, Spanish, Latin, Greek, Hebrew, Chaldee,* &c. each in its proper Character.

ALSO

Explaining hard and technical Words, or Terms of Art, in all the *ARTS, SCIENCES,* and *MYSTERIES* following. Together with *ACCENTS* directing to their proper Pronuntiation, shewing both the *Orthography* and *Orthoepia* of the *English Tongue,*

VIZ. IN

AGRICULTURE, ALGEBRA, ANATOMY, ARCHITECTURE, ARITHMETICK, ASTROLOGY, ASTRONOMY, BOTANICKS, CATOPTRICKS, CHYMISTRY, CHYROMANCY, CHIRURGERY, CONFECTIONARY, COOKERY, COSMOGRAPHY, DIALLING, DIOPTRICKS, ETHICKS, FISHING, FORTIFICATION, GARDENING, GAUGING, GEOGRAPHY, GEOMETRY, GRAMMAR, GUNNERY, HANDICRAFTS, HAWKING, HERALDRY, HORSEMANSHIP, HUSBANDRY, HYDRAULICKS, HYDROGRAPHY, HYDROSTATICKS, LAW, LOGICK, MARITIME *and* MILITARY AFFAIRS, MATHEMATICKS, MECHANICKS, MERCHANDIZE, METAPHYSICKS, METEOROLOGY, NAVIGATION, OPTICKS, OTACOUSTICKS, PAINTING, PERSPECTIVE, PHARMACY, PHILOSOPHY, PHYSICK, PHYSIOGNOMY, PYROTECHNY, RHETORICK, SCULPTURE, STATICKS, STATUARY, SURVEYING, THEOLOGY, *and* TRIGONOMETRY.

Illustrated with near Five Hundred **CUTS**, for Giving a clearer Idea of those Figures, not so well apprehended by verbal Description.

LIKEWISE

A Collection and Explanation of WORDS and PHRASES us'd in our antient Charters, Statutes, Writs, Old Records and Processes at Law.

ALSO

The Theogony, Theology, and Mythology of the *Egyptians, Greeks, Romans,* &c. being an Account of their Deities, Solemnities, either Religious or Civil, their Divinations, Auguries, Oracles, Hieroglyphicks, and many other curious Matters, necessary to be understood, especially by the Readers of *English* POETRY.

To which is added,

A Collection of Proper Names of Persons and Places in *Great-Britain,* with their Etymologies and Explications.

The Whole digested into an Alphabetical Order, not only for the Information of the Ignorant, but the Entertainment of the Curious ; and also the Benefit of Artificers, Tradesmen, Young Students and Foreigners.

A WORK useful for such as would UNDERSTAND *what they* READ *and* HEAR, SPEAK *what they* MEAN, *and* WRITE *true* ENGLISH.

Collected by several Hands,

The *Mathematical Part* by *G. GORDON,* the *Botanical* by *P. MILLER.*

The Whole Revis'd and Improv'd, with many thousand Additions,

By *N. BAILEY,* Φιλόλογος.

HEXAMETER [Gr, measure] consisting of six Feet.

The following Tables being a curious and admirable Contrivance, not doubting but that they will be acceptable to the curious Reader, I present them.

The Use of the Tables for making hexameter *Latin* Verses, and the manner of the Operation. Observe these several Directions following:

1. Every Verse made by these Tables, will be an hexameter Verse, and will be made of up just six *Latin* Words.

2. Every one of these six Words are to be produc'd out of these six Tables respectively, *viz.* the *first* Word out of the *first* Table, the *second* Word out of the *second* Table, the *third* out of the *third* Table; and so of the *fourth*, *fifth* and *sixth*.

4. When you are about to make any Verse by these Tables, you must on a piece of Paper write down any six of the nine Figures at pleasure.

4.[sic] That these six Figures are as so many respective Keys to the six Tables. The *first* Figure towards the left Hand is always to be applied to the *first* Table, the *second* Figure towards the right Hand to the *second* Table, and so every one of the six Tables.

So that the *first* Figure produces out of the *first* Table the *first* Word of the Verse, the *second* Figure by the *second* Table the *second* Word of the Verse; and so *every* Figure of the six, their respective Words out of their respective Tables.

5. When you have pitched upon six Figures to make your Set of; and written them down on a Paper, the Rule for the Operation is this: With the Figure that belongs to its proper Table, you must number on with the Squares on the said Table, till you come to nine in counting upon the Squares (always reckoning the first Square of the Table one more than the Figure, except it be nine; and then you are always to count the first Square or Letter of the Table one) at which ninth Square or Letter, you must make a Stop (for in the whole Operation you must never count past nine) and write that Letter down on a Paper, and that is to be the first Letter of the *Latin* word. From thence proceed, till you come to the ninth Square or Letter beyond, and set that down, and so on, till the Word is wrought out by the Table, which you will know by this, that when the Word is ended, if you number on till the ninth Square, you will find it a Blank. As for Example: Having chose the Number following, 1 3 2 4 3 6.

The *first* Figure towards the left Hand being (*1*) belongs to the first Table, and therefore I call the first Square or Letter of that Table 2, the second Square 3, the third 4 and so on till I come to 9, at which I stop, and the Letter being (*l*) I set it down; and because it is to be the *first* Letter of the *first* Word, I set it down in a great Letter; as follows.

Lurida Sistra, *puto producunt fœdera quœdam.*

Then the next Square, wherein I found that Letter (*l*) I reckon 1, and count till I come to the 9th square, again from the said (*l*) wherein I find the Letter (*u*) which I put down next to (*l*) as above, from thence I count to the 9th Square further, and find the Letter (*r*) which having set down, I count on to the 9th Square beyond, and find the Letter (*i*) which having set down, I count on again to the 9th Square farther, and find the Letter (*d*) which having set down, I count on again to the 9th Square, and there find the Letter (*a*) which having set down, I count on to the 9th Square further, and there find a Blank, by which I know the Word is ended. Which is *Lurida*, as in the Verse.

To work the *second* Word out of the *second* Table.

The *second* Figure being 3, I apply it to the *second* Table, and call the first Square thereof 4, the second 5, the third 6, and so reckon the Squares in Order, as in the first Table; and finding therein the Letter (*s*) which having written down on Paper in the same Line with *Lurida* at a convenient Distance, because it is to begin another Word, and beginning from the Square in which I found (*s*) I count the Squares onward, till I come to the 9th, and there finding the Letter (*i*) I write down, and then proceed to count on, till I come to the 9th Square, and finding the Letter (*t*) having set it down, I count on to the 9th Square and finding the Letter (*r*) which I set down, I count to the 9th Square, and finding the Letter (*a*) and counting on to the 9th Square, I find it a Blank, by which I find the Word is ended, which is *Sistra*.

To work the *third* Word out of the *third* Table.

I apply to it the 3rd Figure in Order, which is 2, and therefore call the first Square of that Table 3, the second Square 4, the third 5, and so orderly, till I number to the 9th Square, in which finding the Letter (*p*) having set down in the same Line at a convenient Distance; because it is to begin another Word, I count from that Square till I come to the 9th, and finding the Letter (*u*) I set that down and proceed to the next 9th Square, and finding the Letter (*t*) which have set down, I count from the Square to the next 9th, and finding the Letter (*o*) I set that down, proceeding thence to the next 9th find a Blank, by which I know the Word is finished, and is *Puto*.

To work out the *fourth* Word of the Verse out of the *fourth* Table.

I apply the 4th Figure in Order, which is 4 to the 4th Table, and count the first Square of it 5, the second 6, and so proceeding to the 9th Square, where finding the letter (*p*) I write it down in the same Line at a convenient Distance because it is the first Letter of a Word, and proceeding to the next 9th Square, I find the Letter (*r*) which having written down, I proceed to the next 9th Square, and find the Letter (*o*), and in the next 9th Square the Letter (*d*), in the next 9th the Letter (*u*), in the next 9th (*c*), in the next 9th (*u*), in the next 9th (*n*), in the next 9th (*t*) and in the next a Blank, by which I find the Word is ended, and is *Producunt*.

To work out the *Fifth* Word of the Verse out of the fifth Table.

The fifth Figure 3 I apply to the first Square of the 5th Table, calling it 4, and counting to the 9th Square, as before I find (*f*), and thence to the 9th (*æ*), and thence to the 9th (*d*), and thence to the 9th (*e*), and thence to the 9th (*r*), and thence to the 9th (*a*), and thence to the 9th finding a Blank, I perceive the Word finished, which is *Fœdera*.

To work the *sixth* Word of the Verse out of the *sixth* Table.

The sixth and last Figure of the set being 6, I apply it to the first Square of the 6th Table, and counting it 7, count to the 9th Square, I find (*q*) which being set down as before, I proceed to the next 9th and find (*u*), and in the next 9th (*æ*), in the next (*d*), in the next (*a*), in the next (*m*), and in the next a Blank, by which I know the Word is ending and is *quædam*, and the whole Line is:

Lurida Sistra, puto, producunt fœdera quædam.

Accordingly these following Numbers made choice of, and wrought out by the Tables, according to the foregoing Method, will produce the following Verses.

The Number 1, 1, 1, 1, 1, 1, will produce.

Lurida Scorta palam prænarrant criminanigra.
The Number 2, 2, 2, 2, 2, 2 will produce.
Barbara castra, puto, caufabunt agmina dira.
The Number 3, 3, 3, 3, 3, 3 will produce.
Martia Sistra, patet, monsirabunt fœdera multæ.
The Number 4, 4, 4, 4, 4, 4, will produce.
Aspera vincla domi producunt lumina prava.
The Number 5, 5, 5, 5, 5, 5, will produce.
Horrida bella tuis portendunt verbera acerba.
The Number 6, 6, 6, 6, 6, 6, will produce.
Pessima damna pati promittunt prælia quoedam.
The Number 7, 7, 7, 7, 7 ,7,
Ignea figna fortis proritant pocula sæpe.
The Number 8, 8, 8, 8, 8, 8,
Turbida fata sequi præmonstrant tempora dura.
The Number 9, 9, 9, 9, 9, 9,
Effera tela, serunt, promulgant sidera sæva.
The Number 1, 3, 2, 4, 3, 6,
Lurida Sistra, puti producunt fœdera quædam.
The Number 2, 4, 5, 6, 7, 9,
Martia vincla tuis promittunt pocula fæva.

And after the same Method, by transposing the Figures; may be wrought out of these Tables, as many different Verses, to the number of 300000, and upwards.

The Verfifying Tables for HEXAMETERS.

I.

t	i	p	h	a	m	b	l	e	u
g	e	o	s	a	a	u	f	r	n
s	r	p	r	r	r	f	b	e	s
r	e	t	b	i	e	i	a	i	i
r	i	a	d	r	d		m	d	a
a	r	æ	a	a	e	a	a		
a			e				e	e	

II.

f	s	d	b	v	s	c	s	t	a
i	a	e	i	i	a	c	e	t	g
m	l	n	s	s	o	l	a	n	n
l	e	t	t	r	a		a	a	a
l	r	r	t		e				a
a	a	a	e	e	e	e	e		

III.

s	i	p	t	d	p	p	p	f	e
o	æ	u	o	a	u	a	e	q	r
t	i	m	t	t	l	r	u	i	i
s	i	e	o	a	u	i	s		
	t		m	n			s	s	t
	t		t	s	t	t	s	s	t
t	t								

IV.

p	p	p	p	p	m	c	p	p	r
r	r	o	r	o	a	r	r	æ	o
o	r	o	n	u	æ	o	m	r	m
t	d	s	s	n	m	o	i	i	e
u	t	a	a	u	n	t	t	n	c
r	b	r	l	s	a	t	d	u	a
u	r	g	t	n	u	u	n	b	n
a	a	r	t	n	n	t	u	t	n
n	a		t	t		n		t	t
n	t			s	t	s			t
s	s	t	s		s	t	s		

V.

t	p	p	v	l	f	a	c	s	e
o	r	e	u	æ	g	r	i	m	e
æ	r	m	d	m	i	d	p	u	l
b	i	e	i	m	e	o	l	i	e
n	r	n	i	r	r	a	a	r	a
a	a	n	a	a			a		
a				e	e		e	e	e

VI.

d	s	q	a	p	m	d	n	s	u
æ	u	e	r	u	i	i	æ	r	p
æ	e	a	l	r	g	v	a	e	d
r	v	t	a	r	a			a	b
a	a		a		e	e	m	a	
	e		e	e	e				