

*Notes from Sylvia leading towards the construction of the Geometrical Figure for Shakespeare's King Lear*

**KING LEAR – Deducing the Figure from Basic Numbers**

8<sup>th</sup> November 1991

			Sub-Totals	
ACT I	=	<b>899 lines</b>		
ACT II	=	↑2286 <b>671 lines</b>	1570	
ACT III	=	↑1615 <b>539 lines</b>	2109	
ACT IV	=	↑1076 <b>644 lines</b>	2753	
ACT V	=	<b>432 lines</b>	3185	
		<b><u>3185 lines</u></b>		<b>Total Number of Lines in Play</b>

Small circles (*Act Circles, ed*) must be smaller than 432. 400 convenient.

If 400, Act I probably has 2 circles.

Try out

			<i>(Lines left over ed)</i>	<i>(Sub total of lines left over ed)</i>
		899 - 2 x 400 =	99	
$1210 = 11^2 \times 10$	{	671 - 400 =	271	370
		539 - 400 =	139	509
		644 - 400 =	244	753
		432 - 400 =	32	
			<b><u>785</u></b>	

Is there a simple ratio between 785 or 784 and 400 ?

$$\begin{aligned}
 784 &= 49 \times 16 \\
 400 &= 25 \times 16 \\
 \therefore 784 : 400 &= 49 : 25
 \end{aligned}$$

Suppose we take  $\frac{1}{4}$  inch as unit

$$\begin{aligned}
 49 \times \frac{1}{4} &= 12\frac{1}{4} = \text{Diameter of Great Circle} \\
 25 \times \frac{1}{4} &= 6\frac{1}{4} = \text{Diameter of Small Circles}
 \end{aligned}$$

∴ Figure can be constructed and drawn on a convenient scale.

Can one make a calibrated circle with 785? Esp. a circle overlapping one?

$$785 = 784 + 1$$

$$784 = 49 \times 16 = 7^2 \times 4^2$$

16 is easy to subdivide by progressive bisection.

The 49 points to a 7-pointed star. The later can be constructed to a nearly perfect degree of accuracy. In the C17th it was probably regarded as perfect.

∴ Construct 7-pointed star and subdivide each of the divisions into 16 parts. Then each part will measure 7 lines.

Can one make a calibrated circle with 400 ?

$$400 = 40 \times 10$$

$$= 80 \times 5$$

∴ One can construct a pentagram and subdivide each part into 8, giving steps of 10 lines – and further, into 16, giving steps of 5 lines.

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**KING LEAR – looking at the drawing.**

8<sup>th</sup> November 1991

Diameter of the Great Circle  $12\frac{1}{4}$  inches =  $49 \times \frac{1}{4}$  inch. Radius =  $6\frac{1}{8}$  inches.

Diameter of Small Circles =  $6\frac{1}{4}$  inches =  $25 \times \frac{1}{4}$  inch.

Total of units in Great Circle = 784 (+1)

Total of units in each Small Circle = 400

$$784 + 6 \times 400 + 1$$

$$= 784 + 2400 + 1$$

$$= 3185 = \text{TOTAL NUMBER OF LINES IN THE PLAY}$$

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**KING LEAR - From notes: 'King Lear figure details for Rose company'.** 9<sup>th</sup> December 1991

$$\text{ACT II} = \mathbf{671 \text{ lines}} = 400 + (2 \times 135.5 \text{ [wing length]})$$

$$\text{ACT III} = \mathbf{539 \text{ lines}} = 400 + (2 \times 69.5 \text{ [wing length]})$$

Therefore each small circle must be entered on half-line – awkward

But  $671 + 539 = 1210 = \underline{11^2 \times 10}$ . Is there a 121 rhythm throughout both Act? Yes! (*see King Lear notes Nov 25th to Dec 26th 1991 ed.*).

Could Act II lend one line to Act III in the geometry?

$$\text{ACT II} = \quad \mathbf{671 - 1 \text{ lines}} \quad = \quad 670 \quad = \quad 400 + (2 \times 135 \text{ [wing length]})$$

$$\text{ACT III} = \quad \mathbf{539 \text{ lines} + 1 \text{ line}} \quad = \quad 540 \quad = \quad 400 + (2 \times 70 \text{ [wing length]})$$

Both Text and Figure seem to support this.