



## **Philosophical Transactions**

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*An Account of a small Tract, entituled,*  
 THOMÆ HOBBS *Quadratura Circuli, Cubatio Sphæra, Du-*  
*plicatio Cubi, (secundò Edita,) Denuò Refutata, Auth.*  
 JOH. WALLIS. S. T. D. *Geom. Prof. Saviliano.*  
*Oxonia, 1669.*

Since Mr. *Hobbs* thought himself obliged to make some Reply to Dr *Wallis's* confutation of what he had, not long since, publish't upon this Argument; Dr. *Wallis* made no stay at all to return this Answer and second refutation. Concerning which we shall give you a brief account, suggested by Dr. *Wallis* himself, of Mr. *Hobbs's* fundamental mistake in his late Quadrature of the Circle, referring the Reader to the Tract itself for the Figure, which is therein the first.

Mr. *Hobbs*, considering, That, in case it should happen so luckily (which was not necessary) that  $QY$  (the base of a right-angled Triangle  $QYA$  equal to the Sector  $LCA$ , and consequently the Square  $QRST$  equal to the Circle  $BCDE$ ,) should, by the Arch  $CL$ , be cut just in the midst at  $P$ ; then would, not only (which to his purpose was necessary)  $QPL$ ,  $CPY$ , be equal each to other (because of  $ALPY$  common both to the Triangle and the Sector; ) but more-over (which was not necessary) each of them equal to the half of  $PAV$ , (supposing  $CAV$  taken equal, by construction, to  $LAP$ : ) all which is true, in case of such a lucky hap:

And finding then (which is true also) that this could not All happen, unless that intersection at  $P$ , were in the line  $AO$  (drawn from the Center  $A$  to the middle of  $CG$ ,) because this must needs pass through the middle of  $QY$ .

Concluded, That it must needs so happen, or else it was impossible for Any right-angled Triangle, as  $QYA$  (like to, and part of  $GCA$ ,) to be equal to the Sector  $LCA$ : because, in any other, as  $qyA$ , the intersection of  $CL$  and  $qy$  at  $p$ , would not be just in the midst of  $qy$ ; and therefore (which he suppos'd necessary, but was not)  $qpA$  not just the halfe of  $qyA$ .

Not considering (which is his fundamental mistake) that, if  $qPL$  and  $CPy$  be equal each to other (though neither of them be equal

equal to the halfe of  $P A V$ , or of  $p A v$ ; nor yet  $q p$  equal to the halfe of  $q y$ , nor  $q p A$  to the halfe of  $q y A$ ; (*the Triangle  $q y A$  will be equal to the Sector  $L C A$  (because  $A L p y$  is common to both ; ) and like to the Triangle  $G C A$ , and a part of it;* which he thought to have been impossible.

*Note*

**W**Hat in N<sup>o</sup>. 54. p. 1077. in the *Answ. to Qu. 1.* is said of the Observation of *Briners*, is to be understood, that the Workmen *think* so, that they make more Salt with the same quantity of brine, at the Full Moon, then at other times, though really they do not, as the Answerer Judgeth by his *Observ.* in N<sup>o</sup>. 53. p. 1064: Who hath since advertis'd, that 'tis possible at times, when the Pit hath been much drawn first, that then, if without intermission they go on *walling* till the *Full*, they may make at that time more Salt, than at another time, it being well known, that much drawing the Pit, strengthens the Brine.

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LONDON

Printed by T. N. for John Martyn, Printer to the Royal Society,  
and are to be sold at the Bell a little without Temple-  
Bar, 1670.