

# Draft Letter from Newton to John Wallis, c. July 1695

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Sir

I am very much obliged to you for the pains in transcribing my two Letters of 1676 & much more for your kind concern of right being done me by publishing them. I have perused your transcripts of them & examined the calculations & corrected some few places which were amiss. The chief was in pag. 13 lin 29 where  $\theta + 1 = r$  was written for  $\frac{\theta+1}{n} = r$ . Which mistake made the examples in the next page seem faulty, tho they were not so. In the end of the 20<sup>th</sup> page & beginning of the next, it may be convenient to print the words after this manner

Possum utique cum sectionibus conicis Geometrice comparare curvas omnes (numero infinities infinitas) quare ordinatim applicatae sunt

$$\begin{aligned} &\frac{dz^{\eta-1}}{e+fz^{\eta}+gz^{2\eta}} \quad \text{vel} \quad \frac{dz^{2\eta-1}}{e+fz^{\eta}+gz^{2\eta}} \quad \&c \\ &\frac{dz^{\frac{1}{2}\eta-1}}{e+fz^{\eta}+gz^{2\eta}} \quad \text{vel} \quad \frac{dz^{\frac{3}{2}\eta-1}}{e+fz^{\eta}+gz^{2\eta}} \quad \&c \\ &\frac{d}{z} \sqrt{e+fz^{\eta}+gz^{2\eta}} \quad \text{vel} \quad dz^{\eta-1} \times \sqrt{e+fz^{\eta}+gz^{2\eta}} \quad \&c \\ &\frac{dz^{\eta-1}}{\sqrt{e+fz^{\eta}+gz^{2\eta}}} \quad \text{vel} \quad \frac{dz^{2\eta-1}}{\sqrt{e+fz^{\eta}+gz^{2\eta}}} \quad \&c \end{aligned}$$

The explications of the two sentences which were concealed in letters set out of order pag 13 & pag 24 will be best set in the margin. And in pag 13 over against the words [quam solertissimus Slusius ante annos duos tresve tecum coomunicavit, de qua tu (suggerente Collinio) rescripsisti eandem mihi etiam innotuisse] may be set in the margin this Note. Hoc intellexit Newtonus ex Epistola Collinij, die 18 Junij 1673, ad ipsum data, cujus hæc sunt verba , As to Slusius metho{d} of Tangents it was by him well understood when he published h{is} book De Mesolabio but he did not then divulge it because he wou{ld} not prevent his friend Riccio who afterwards declining mathema{ti}cal studies desired Slusius to divulge it, who not obtaining leisu{re} to write of it at large promised to send it to M<sup>r</sup> Oldenb{urgh} to publish in the Transactions. Before it arrived I writ to you {to} understand what you knew of it & having received the An{swer,} imparted it to M<sup>r</sup> Oldenburgh to send to Slusius to let him {know} that it was understood in England tho perchance not so lo{ng or} so soon as himself had attained it.

As to the time of my finding the method of conv{ex} series, the exactest account I can give of it is this, T{illeg} the 1664 michaelemas & Christmass I {illeg} read your works & found the intercalation of your series that winter. {illeg} in the notes I then look {on} {illeg} {illeg} infinitorum I {illeg}ala{illeg} <1v> quanties into converging series by division & extraction of roots & thereby of squaring all curves. And then (that is in the beginning of the year 1666) I retired from the University into Lincolnshire to avoijd the plague.

To Dr Wallis

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