

IX. *A Letter from Robert Southwell, Esq; to Mr. Henry Oldenburg, concerning some extraordinary Ecchoes, lately communicated to the Royal Society by the Reverend Henry Miles, D. D. & F. R. S.*

Read June 5. 1746. I MUST needs account myself very happy, in that I partake so constant and fresh Intelligence of the Matters of the World; and that from so active a Hand, as that I know no Example of greater Exactness and Industry any where than what is with you.

I am very much rejoiced at the happy Advancement of Learning in the *Royal Society*; and that the radiant Influence of His Majesty is like to smile upon it. And as to your Query concerning Sounds and Ecchoes, I do remember, that the Duke of *Tuscany* * has made rare Trials concerning the Velocity in the Motion of Sound; and I gave Mr. *Boyle*, in almost a Sheet of Paper, an Account and a Discourse upon those Experiments, and the Manner of them.

As for whispering Places, the best I ever saw was that at *Gloucester*: But in *Italy*, in the Way to *Naples*, two Days from *Rome*, I saw, in an Inn, a Room with a square Vault, where whispering, you could easily hear it at the opposite Corner, but not in the least manner at the side Corner that was nearer to you.

I saw another, in the Way from *Paris* to *Lyons*, in the Porch of a common Inn, which had a round Vault; but neither of these were comparable to that of

* See the Exp. of the Academy del *Cimento*.

of *Gloucester*; only the Difference between these two last was, that to this, holding your Mouth to the Side of the Wall, several could hear you on the other Side; the Voice being more diffused. But, to the former, it being a square Room, and you whispering in the Corner, it was only audible in the opposite Corner; and not to any Distance from thence, as to Distinction of the Words. And this Virtue was common to each Corner of the Room, and not confined to one.

As to Echoes, there is one at *Bruxelles* that answers fifteen times: But when I was at *Milan*, I took a Coach to go two Miles from thence to a Nobleman's Palace, now not in great Repair, and only a Peasant or Contadine living in one End of it. The Building is of some Length in the Front, and has two Wings jetting forward; so that it wants only one Side of an oblong Figure. About an hundred Paces before the House, there runs a small Brook, and that very slowly; over which you pass from the House into the Garden. We carried some Pistols with us; and, firing one of them, I heard 56 Reiterations of the Noise. The first twenty were with some Distinction; but then, as the Noise seemed to fly away, and answer at a great Distance, the Reiteration was so doubled, as that you could hardly count them all; seeming as if the principal Sound was saluted in its Passage by Reports on this and that Side at the same time.

There were of our Company that reckoned above 60 Reiterations when a louder Pistol went off; and indeed it was a very grateful Divertisement. But on the other Side the House, on the opposite Wing, it would

it would not found; and only (to this Advantage) in a certain Chamber here two Stories high from the Ground.

I continue as yet at *Kinfaile*; but shall shortly return to *Dublin*, where I shall hope to enlarge the Fraternity; but these Parts are most inspid, and void of Curiosity. I am,

Dearest Sir,

Your most affectionate Friend and Servant,

Kinfaile, Sept. 19.

1661.

Robert Southwell.

X. *A Letter from Mr. J. Durant to the Honourable Robert Boyle, Esq; F. R. S. concerning a Coal-Mine taking Fire near Newcastle upon Tyne; of the blue Well; and of a subterraneous Cavern in Weredale; lately communicated by the same Hand.*

S I R,

Read June 5.
*746.

THE Honour you were pleased to do me some Months ago, in the favourable Reception of an impertinent Visit, emboldens me to apologize for Non-performance of my Promise, which you accepted of, for sending you some of our Coal-Marcasites, and subterranean Sublimates, from the fired Coal-Mines near our Town; the Weather having been such, by Storms of Snow, violent Rains and Thaws, and keen Frosts, as it was not possible to gather the Evomitions of our *Vulcano's*;