

I. *An Account of the Analogy betwixt English Weights and Measures of Capacity, by the Rev<sup>d</sup> Mr. William Barlow of Plymouth.*

**T**HE Analogy betwixt antient *English* Weights and Measures seems for many Ages to have been intirely forgotten and unknown.

Our Forefathers supposed a cubic Foot of Water (assumed as a general Standard for Liquids) to weigh 62 Pound  $\frac{1}{2}$ ; the Exactness of which Supposition is confirmed by modern Observation: For in *Philosophical Transactions*, N<sup>o</sup> 169. we find the Weight of a Foot of Pump-water to be 62 Pound 8 Ounces. From a cubic Foot of Water multiplied by 32, is raised a Ton Weight, or 2000 Pound, luckily falling into large round Numbers, and for that Reason made Choice of.

Agreably hereto were liquid Measures accommodated, *viz.* 8 cubic Foot of Water made a Hoghead, and 4 Hogheads a Ton in Capacity and Denomination as well as Weight.

Dry Measures were raised on the same Model. A Bushel of Wheat (assumed as a general Standard for all sorts of Grain) was supposed to weigh 62 Pound  $\frac{1}{2}$ , equal to a Foot of Water; 8 of these Bushels a Quarter, and 4 Quarters a Ton Weight.

Coals were sold by the Chaldron, which was supposed to weigh a Ton or 2000 Pound. See *Chambers's Dictionary*.

Therefore, though the Measures containing a liquid Ton, 4 Quarters of Wheat, a Chaldron of Coals,

N n n

&c.

*&c.* be all of different Capacities; yet the respective Contents are every one of the same Weight: A Ton in Weight is the common Standard of all.

In After-times, through Ignorance of this Analogy, a Variety of Weights and Measures were introduced, incommensurate, and not reducible to any common Standard, or analogous Relation: Whereas, had the original Analogy been kept up, it would have prevented that Disorder and Confusion so justly complained of at present concerning the Subject of Weights and Measures.

From the foregoing Scheme it is reasonable to suppose, that Corn, and several other Commodities, both dry and liquid, were first sold by Weight; and that Measures, for Convenience, were afterwards introduced, bearing some Analogy to the Weights before made use of.

From the modern Experiment before-mentioned, (a cubic Foot of Water weighing 62 Pound 8 Ounces) it appears, that the Measure of a Foot, and the Weight of a Pound, are the same now as were in Use many Ages before the Conquest.

The foregoing Scheme assigns a Reason, why the word *Ton* is applied both to Weight and liquid Measure; *viz.* because the same Quantity of Liquor is a Ton both in Weight and Measure. Probably 4 Quarters of Grain had formerly the same Appellation, till the Significancy of it was lost in the Use of the *Avoirdupois* Ton.

The Word *Quarter*, as applied to Grain, is also hereby explained. Most Writers have supposed it the 4th Part of some Measure, but what that Measure was could never satisfactorily be made out. The learned

learned *Fleetwood* guessed nearest the Truth, supposing it the 4th Part—not of any Measure, but—of some Load or Weight [*Chron. Pretios.* p. 72.]. I wonder he stopped here, and did not observe what that Load of Weight was, *viz.* a Tun or 2000 Pound: But the *Avoirdupois* Ton, in Use at present for all gross Weights, threw such a Mist upon the Subject as could not easily be seen through.

From the original and natural Signification of the word *Hundred*, it plainly appears, that *Twenty hundred*, or a *Ton*, must be exactly Two thousand Weight.

II. *An Account of a Tract intituled, Jo. Friderici Weidleri Commentatio de Parheliis Mense Januario Anni 1736. prope Petroburgum Angliæ & Vitembergæ Saxonum visis. Accedit de rubore cœli igneo Mense Decembri Anni 1737. observato Corollarium. Vitembergæ, 1738. 4°. Drawn up by Tho. Stack, M. D. F. R. S.*

**T**HIS Tract is divided into 17 Sections. In the 1<sup>st</sup> and 2<sup>d</sup> the Author describes his own Observation of Two Mock-Suns at *Wittemberg*, on *Jan. 11. 1735-6, N. S.* In the 3<sup>d</sup> he gives a Meteorological Diary from *Jan. 1. to 18.* and in the 4<sup>th</sup> the Rev<sup>d</sup> Mr. *Neve's* Observation on <sup>*Dec. 31.*</sup>/<sub>*Jan. 11.*</sub> of Two *Parhelia* near *Peterborough*. But these Descriptions have been already communicated to the ROYAL SO-