FOVARGUE STEPHEN

A NEW CATALOGUE OF VULGAR ERRORS

Stephen Fovargue

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Fovargue S.

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Содержание

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PREFACE

To explain the Use of Education, no Method can be more effectual, than to shew what dull Mistakes and silly Notions Men are apt to be led into for Want of it. These Mistakes are so numerous, that if we were to undertake to divulge all the Errors that Men of no Knowledge in the Sciences labour under, the shortest Way would be to publish a compleat System of Natural Philosophy, which Learning, as it may be acquired by reading the different Books, which have already been wrote upon that Subject, in this Æra of the Sciences, such an Undertaking would be quite needless at this Time, even supposing the Author capable of that laborious Work.

If the following Sheets do but serve to divest Men of some of those unreasonable Obstinacies with which they and their Forefathers have long been prepossessed, the Time will be well laid out, both of the Writer and Reader.

Be not affronted, gentle Reader, at my taxing thee with Error, with Obstinacy, or the like; thou mayest not be one of that Stamp; for any Thing I know you may have studied the Sciences, you may be well versed in Mechanics, Optics, Hydrostatics, and Astronomy; you may have made the Tour of Europe, if not, you may soon do it in Post-Chaises, and be almost as wise as you was when you went out; or you may be one of those whom bountiful Nature has blessed with a most excellent Understanding, a quick Apprehension, and a discerning Judgment, and yet not have been so fortunate, or unfortunate, which you think proper to term it, as to have been brought up a Scholar.

Scoff not when we dwell so much upon Scholarship; for I would have thee know, whether thou thinkest proper to believe me or not, that had it not been for the four Branches of Learning abovementioned, thou wouldest not have been smoaking that Pipe of right Virginia, which in all Probability (whether thou art a Farmer in the Country, or a Mechanic in London) thou art now most pompously blowing to Ashes: Neither would that charming Bowl of Rum and Brandy Punch mixed, have waited at thy Elbow to inspire thee with generous Sentiments (which Punch, let me tell thee, if thou drinkest in Moderation, may keep thee from the Ague, if thou livest in the Hundreds of Essex.) – Nay, thou wouldest not even have known what it was to have tasted a Plumb-Pudding, which, tho' now, thy Palate being vitiated with salt Pork and Mustard, and bottled Beer, thou hast no Relish for, yet thou mayest remember the Time when thou didst think it most delicious Food. To Philosophy art thou beholden for all these Dainties and Comforts of Life, which if thou dost contradict, and dost still obstinately persist in thy own Opinion, and wilt not be convinced of thy Errors, know, Dust and Ashes, that thou art not sensible whether thou movest or standest still; and dost imagine, that the glorious Sun is an extempore Whirligig.

Wonder not, Reader, if thou art a Man of Sense, that thou shouldest be mistaken in many Things: For what Mortal can pretend to such Knowledge as never to be mistaken? Truth is more difficult to be found out than is generally imagined: Error is easily fallen into; by so much the easier as the Odds are against us: For in the Disquisition of any Point, there are numberless Wrongs, but there is only one Right. Numberless Falshoods and Errors may be raised about any Thing, but Truth is invariable, and remains the same to all Eternity.

The following Sheets will not contain many philosophical Terms; we shall rather avoid such a Step as would hinder a great Part of our Readers from understanding us, and shall endeavour to explain ourselves by such Methods as the meanest Capacity will be able to comprehend. Moreover, all such Subjects will be avoided as may interfere with any religious Tenets, it not being the Intention of this Pamphlet to deprive Men of their Rest, by tearing from their Consciences those fixed

Protestant Principles of Religion (let them be what they will) which they and their Ancestors have long and peaceably enjoyed. But our Disquisitions will be chiefly confined to natural Objects, and the Phænomena which daily present themselves to our View. We shall likewise endeavour to rectify some of those Mistakes in the common Arts of Life, whether of Business or Pleasure, which Men by an accustomed Tradition are apt most obstinately to persevere in.

INTRODUCTION

The third Error is one which Sir Thomas Brown has taken Notice of; and it must be acknowledged, that the inserting of it here was a Mistake. However, we hope that it will be excused, since it is seven Years since the Author of this little Pamphlet had the Pleasure of reading *a Part* of Dr. Brown's Vulgar Errors, and then he did not see that Error; it being not regularly placed among the others, but in a separate Detachment from the main Body. Notwithstanding the general Perspicuity of this Author, we are apt to think that he never heard a Bittern himself, but only went by Hearsay with respect to the Noise which is made by that Bird, however skilled he shews himself in the Anatomy of it. He says, that it differs but little from the croaking of a Raven. We can assure the Reader, that neither the Noise it makes when it draws in the Air, nor the Sound it gives when it throws it out again, have the least Resemblance to the Croaking of a Raven, as he calls it.

A Raven makes a much shriller Noise than any of the Crow Kind, notwithstanding it is a larger Bird. I make no Doubt but the Voice of a Raven is twelve or thirteen Notes higher than the Voice of a Rook; besides, he makes his Notes quick and sharp one after another; whereas a Bittern takes near five Seconds between every Sound, and (as will be affirmed) in as deep a Note as the fourth String of a double Bass.

ERROR I

That the more Ammunition is put into a Fowling Piece, the farther it will do Execution.

This Error is often of very dangerous and dreadful Consequence; I have known People so obstinate in it, that even ocular Demonstration would not convince them of their Mistake.

It proceeds from a Notion, that the more a Gun recoils, the better and stronger will be the Force with which the Shot fly out.

There is nothing which requires more Nicety and Exactness than the finding out the proper Charge of a Gun; it is something similar to finding out the Tone of a musical Instrument; of which more in its Place.

It will be sufficient here to say, that every Gun has a certain fixed Quantity of Ammunition, with which it does the most Execution. I have seen Lectures in the Art of Gunnery, which come under the Science of Mechanics, and even the Author himself, though a Man of Learning and Abilities, seems to have been ignorant of the Art of charging a Gun, when he says, "If you put in a Gun, a Ball upon a Quantity of Powder as (1), it will throw the Ball to such a Distance; if you put in a Quantity as (2), it will throw it as far again." This seems to be a Mistake; because, if that was the Case, a Person would have nothing to do but to put Powder enough into his Gun, and have the Barrel made strong enough, and he need not fear killing at any Distance. As to the Recoil it would give, if the Gunner was a strong Country Gentleman, and a keen Sportsman, and an Englishman, it would be the least of his Thoughts whether it struck him a great Blow or a small one.

But to the Point: There is no better Way of finding out the proper Charge of a Gun, than by the Report it gives. If there is too much Powder and too little Shot, the Report will be a kind of a deep Roar; if too little Powder and too much Shot, it will be an insignificant, short, narrow Smack; but if it is charged properly, the Report will be a smart, shrill Clap, something resembling Thunder.

This is the Reason why the Report of a Sportsman's Gun is so different from that of a Field-Keeper's. The Field-Keeper has, or ought to have, no Shot in his Piece; the Sportsman's is properly loaded.

In short, there is a Tone in the Barrel of a Gun, and the better the Temper of the Metal is, the more shrill will be the Report, and the farther it will do Execution.

I have dwelt the longer upon this Subject, because a Gun is an ugly Weapon in the Hands of those who are either ignorant or careless, or both.

II

That the Heron makes a Hole in the Bottom of her Nest, through which her Feet hang, when she sits upon her Eggs.

What seems to have led People into this Error, is, the Appearance which a Heron makes upon her Nest: You may sometimes see her Feet when she is sitting.

Now it seems unaccountable, how a Bird should sit upon her Eggs on a Tree, and yet her Feet appear to a Spectator below. For any Person who takes Notice of a Bird sitting upon her Eggs, will find that she doubles them up under her, and that they are hid among her Feathers and the Eggs; so that if this is the Case, there can be no other Way of seeing her Feet, but by a Hole through the Bottom of the Nest.

But this is not the Case with the Heron, nor the Bittern, another Bird resembling the Heron. When these Birds sit upon their Nests, their Legs lie straight out behind them, in a Line parallel to the Plain of the Horizon, in the same Posture as when they fly. This accounts for the Phœnomenon of the Feet appearing on the outside of the Nest.

These Birds have Legs of a remarkable Length, as every one must know, for they are a very common Bird; and when they sit, or rather lie, upon their Eggs in the abovesaid Posture, the Nest is unable to contain these long Legs, and by that Means they hang over the Side of it, and are seen by those who are under the Trees on which they build.

With regard to any Thing of a Hole through the Bottom of the Nest, nothing can be more fabulous: I once had the Sight of a large Tree, which had been blown down in a high Wind, and was full of Heron's Nests. They are built exactly in the Form of a Crow's Nest, and of the same Materials, only as the Nests were larger than those of Crows, so there were some larger Pieces of Sticks than Crows generally make Use of; and so far are they from having a Hole at the Bottom, that it was impossible to find a Passage through any Part of the Nest, with a stout walking Stick, so firm was the Texture of them.

If any one doubts of this, if he will take the Trouble to climb any Tree in a Heronry, he will be convinced of the Truth of what has been said, by ocular Demonstration. But I would not advise him to do it when there are young ones.

As the Bittern has been mentioned in this Section, it will not be amiss to put in a Word or two concerning an Error, which passes very current in Countries where this Bird is found, and which we may venture to assert is equally fabulous with the former. It is,

III

That the Bittern puts his Bill or Beak into a Reed, and that the Reed gives, by the Breath and Motion of the Beak of the Bird, that deep and loud Note which we so frequently hear him make as he lies in a Fenn.

This Bird, on Account of the Noise he makes, which is much such a one as if a Person was to express the Word Bump in a deep Note, is in many Countries called a Butter-Bump: Nevertheless the true Name of him is Bittern, as may be seen in several Books.

One particular Proof that Bittern is the true and ancient Name, may be seen in Stephens's Monasticon. The Author is giving us an Account of some Expenses which the Abbey of Peterborough was at, and among others there is a Bill made of the Expences for the Supper at the Funeral of one of the Abbots of that Convent, in which, among a great Number of other costly Dishes, and a Hogshead or two of Wine, which were drank, and an incredible Quantity of other Things too tedious to mention, there is a Sum set down for a great Number of Bitterns; from which we may venture to conclude, that they were esteemed very delicate eating amongst those Connoisseurs.

I hope the Reader will pardon this Digression from the Point in Hand, when I take Occasion to observe, that here is another vulgar Error, which supposes, that the present Times are more luxurious than the past. For to convince us of this Mistake, we need go no farther than the aforesaid Book, and there we shall find, that as much Money was laid out, (in Proportion to the Scarcity of Coin in those Times) upon the Funeral of one of those Abbots, as in the present Age will pay the Expences of a whole College for a Twelvemonth.

But to return to our Bitterns: That they were esteemed very delicate eating at that Time, is plain, by their being served up at so splendid an Entertainment; and we think it may be called another vulgar Error, in a Farmer to suffer so fine a Bird to lie upon his Dunghill, while he and his Wife and Family are regaling upon restie Bacon; which, as great an Error as it is, I have known done, and a Person who knew the Value of the Bird, has taken the Bittern from off the Dunghill, and dressed it, and made a delicious Meal.

But it is now Time to say something concerning the Error about the Noise it makes.

It is very absurd to suppose it possible, that this deep Note can proceed from the Bird's putting his Beak into a Reed, even if it's Beak was formed for the Purpose. Every one who knows of what vast Dimensions an Organ-Pipe must be, to give such a loud, deep, bass Note as the Noise of a Bittern, knows also, that a Reed is incapable of making such a Noise as that. It must be something with a hollow Tube of a much larger Diameter than a Reed, and the Wind must be thrown in with the greatest Exactness, both in regard to the Quantity of the Wind, and the Manner in which it is let in; and moreover the Tube must have a proper Aperture made towards the End of it, of an exact Dimension according to the Size of the Tube, before it will give any thing like a Tone at all. But here is a Sound as deep as the fourth String of a double Bass, given by an Animal, that may be heard four or five Miles off, in a still Evening.

The most probable Conjecture is, that the Noise is made by the Animal itself, with the Assistance of Nature alone; and we shall have the more Reason to be of that Opinion, if we examine the Throat of the Bird, which is of so uncommon a Size, that a moderate Hand would go down it.

Now a Sound given from the Windpipe into such a Cavern as this, may very probably be the Cause of this deep Tone. It acts upon the same Principle as when a Person closes his Lips, and sounds a deep Note with his Voice. Perhaps after the Reader has made the Experiment, (as in all Probability he will do) he may be convinced that it is a vulgar Error, to suppose that a Bittern puts his Beak into a Reed, when he makes that remarkable Noise Which is heard in a Fenn.

It may not appear foreign to the Purpose, when I say that I have heard a Bittern make the Noise abovementioned, and that I have gone to the Spot, which was coarse Grass or Flags, just mowed, where there were no Reeds; and the Bird rose up before me.

Here I must beg Leave to put in a Word or two, by way of corroborating what has been said about the Heron and the Bittern lying flat upon their Nests, with their Legs parallel to the Plain of the Horizon.

When the aforesaid Bittern rose up, I shot, and wounded him slightly, and marked him down again in the same Kind of Grass or short mowed Flags. As the Grass was not higher than one's Shoes, and it was wounded, I was in Hopes of having the Pleasure of seeing him lie on the Ground very plain. However I let my Pointer go first, knowing that he would stand at the Place. Accordingly made a dead Point at it. I came up as silent as possible, to take a View of it, but to my great Surprize, nothing was to be seen.

There was indeed something which appeared long, like two green Weeds lying among the Grass, and there was something like a large Spot of dryed Grass or Flags a little before them.

While I was looking at the Place, the Dog, being out of Patience, seized Hold of this Phœnomenon, which proved to be no other than the Bittern itself. Those Things which seemed to be green Weeds, were it's Legs extended at the full Length, behind the Bird, as it lay quite flat upon it's Belly; and that broad Spot of brown or dried Grass was the Body, with the Wings extended to their full Stretch, quite flat upon the Ground, which, I believe, formed as compleat a Deceptio Visus as any Thing in Nature.

Thus we see how wonderfully these Animals are formed for their Self-Preservation; so wonderfully, that though they are near as large as a Heron, and much of the same Shape, it must be a keen Eye that distinguishes their long green Legs from Weeds, and their brown Backs from dried Grass; but this Deceptio Visus is so notorious in Partridge, and many other Species of Game, that there is no Occasion to dwell any longer upon that; only what has been said may serve to convince the Reader of the Truth of what has been observed in the foregoing Section, concerning the Posture of a Heron and a Bittern on their Nests.

IV

That the Tone of a Violin is to be brought out, by laying on like a Blacksmith.

Before we can convince such of our Readers as have no Knowledge in that Part of Pneumatics which is called Harmonics, of this Mistake, it will be necessary just to give a short Account of the Cause of Sound in stringed Instruments.

In the first Place, all Sound proceeds from Undulations in the Air, which is an elastic Fluid; and with regard to these Undulations, is much of the same Nature as Water, which is another Fluid, but differs from Air in many Respects. Now when a Person throws a Stone into Water, these Undulations or Waves are raised in the Fluid for some Distance, by the Force and Action of one Wave upon another. This is the Case with regard to Sound; only the Air being an elastic Fluid, these Undulations are more quick and brisk in their Motions than in Water. So much for Sound itself. Now for the Cause of this Sound, or of these Undulations.

These Undulations are caused by the Vibration of some elastic Body, which is put into Motion by a Stroke of another Body against it. It must be an elastic Body (take notice) for upon that Word depends the Truth of what is going to be alledged. To convince the Reader of the Truth of this, he has nothing to do but to take a Rolling Pin, and strike it against a Pound of Butter, and he will find very little or no Sound at all, because Butter has very little Elasticity or Spring in it; but if he strikes the aforesaid Implement against the Table, he will find Sound enough, because most Tables are made of Wood, which is a very elastic Body. If there is no Butter in the House, Wax will do as well or better, for it will prove that a Body may be hard without being elastic, and which will be very much to the Purpose. It will be necessary, before we can get any further, to explain what Vibration is, a Word very commonly made Use of among Musical Men, tho' but little understood.

To be as short as possible; a Piece of Lead hung upon the End of a String, which moves backwards and forwards of itself after being first put into Motion, is called a Pendulum, and that Motion backwards and forwards is called its Vibration; it is upon this Principle that elastic Bodies are the Cause of Sound. It will be best illustrated in a Musical Instrument, besides that is the Point in Hand; and to be more to the Point still, we will suppose it a Violin, though any other stringed Instrument would answer the same End.

Here we have four Strings stretched out upon a Bridge, or thin Piece of Wood, which communicates to the Belly of the Instrument, from which Belly the greatest Part of the Tone proceeds. Now a String drawn tight at both Ends, when it is struck, will have a Vibration or tremulous Motion, which Vibration, or tremulous Motion, acts upon the same Principle as a Pendulum does in a Cycloid, or, to speak as plain as possible, as a Pendulum does when it is put into it's proper Motion.

It is upon this Principle of Vibration then, or tremulous Motion, that the String of a Violin, being moved by the Bow, is to act: The String immediately communicates it's tremulous Motion to the Bridge, and the Bridge to the Belly of the Instrument, which Belly being made of a very elastic Wood, by it's Vibration and free Motion, acts upon the Air in the Manner abovementioned.

As it is the great Elasticity of the Wood which is to cause the Tone, it ought to have as little Confinement in it's Vibrations as is possible; the Weight of the Strings must indeed press against it, otherwise they could not communicate their Motion to it. We should therefore be careful not to over-string the Instrument, since it so plainly contradicts the Principles of Pneumatics.

It is easy to hear when an Instrument is over-strung; and sometimes an Octave in a Harpsichord, by it's additional Number of Strings, shall render the Tone of the Instrument so dead, that, though it gives a Sprightliness peculiar to an Octave, yet it sometimes hardly compensates for the Loss of Tone which it causes in the Unisons, by it's too great Pressure upon the Belly of the Instrument.

And yet notwithstanding all this, what is more common than to see a Performer, with his Waistcoat unbuttoned, laying Strokes on a Violin, heavy enough to fell an Ox.

The Truth is, managing the Bow is slight, and we must make Use of Art more than Strength in our Performance: moreover, it is an Art which cannot be wrote down upon Paper, nor explained in Words, but must be learned by the Example and Direction of some assiduous Master. However what has been said may serve to shew, from Philosophical Principles, the Error of leaning too hard upon the Instrument, which was the Thing intended to be done.

V

That the farther you go South, the hotter is the Climate.

Gentle Reader, as thou art a Person of Understanding, thou wilt pardon the Want of Connection and Form which thou findest in the different Subjects which are here started for thy Entertainment: It would be very easy, in the fair Copy which will be wrote over, to range them, in an Order, suitable to the different Branches to which they belong; but why should I pester thee with Form, when there is nothing so agreeable to a Man of Taste as an easy Variety? Therefore, though it is ten to one that, before I have done with thee, I shall have some more Discourse with thee about Musical Instruments, yet I shall not humour thee as a Critic so much as to give thee it now; well knowing, that if thou art determined to *Review* me, thou mayest find Abundance of other Opportunities for it in this Book: And likewise, that if thou dost approve of what is here discussed, thou wilt, if thou art a good-natured honest Fellow, pass by a little Incorrectness; for what else can a Man hope for in a Book which treats of nothing but Blunders? However the two following Sections may afford thee some Entertainment, if thou art a Man of Learning, and if thou art not a Man of Learning, they will give thee some Instruction; and to tell thee the Truth, the Subject of them is so Philosophical, that if we were not fully convinced of the Truth of what will be alledged, we should be afraid to undertake it.

For in this little Pamphlet, Philosophy will be avoided as much as possible, that is, it never will be introduced at all, unless it is absolutely necessary to call in it's Aid, in order to prove the Truth of any Thing which shall be asserted. But to the Point; which is, to rectify the vulgar Error, which supposes, that the farther a Person goes South, the hotter will be the Climate.

This is so well known to be an Error, by all Men of Science, and by all Navigators, that it is needless to say much about it, only just to relate the Truth, that those who are mistaken in their Way may be set in the right Road. But to proceed.

The two Poles of the Earth, that is, the two North and South Extremities of the Globe, are in such a Position, or are so inclined to the Sun, or to the Plain of the Ecliptic, as never to have any Rays fall directly over their Heads, or they never have him any higher than a little above their Horizon, or the Surface of the Earth; for which Reason it is always cold at the North and South Poles, which will naturally be the Case, as any one may experience by the different Position of the Sun, in Summer and Winter, in our own Climates.

The Case is exactly contrary at the Æquator, or on the Middle of the Globe, which is farthest from the two Poles, for there they have the Sun over their Heads at Noon all the Year round; for which Reason it is always hot under the Line, yet not always the hottest of any Part of the Globe, as has been sometimes philosophically supposed, and which shall be the Subject of the next Chapter, to introduce which this was principally intended.

VI

That exactly under the Æquator is always the hottest Climate on the Globe.

This Error by no Means ought to be called a vulgar one; because it is a Course of Philosophical Study, joined to a Want of Experience, which gives Occasion to it. It is the Result of a Knowledge of the general Cause of Heat and Cold, in different Degrees of Latitude upon the Surface of the Earth; which Knowledge is apt to apply the Rules of Astronomy, that explain the Phœnomena of Nature in general, to every Purpose that offers itself, in all Cases, without being able to search into the individual Parts of a System, on Account of the Distance of the Objects which are the Subjects of Enquiry. For though, as has been said before, for a just Astronomical Reason, the Position will hold good, that those Inhabitants who are under the Line, live in the hottest Climate in general, yet it is proved by the Experience of Navigators, that in several Parts under the Æquator there is a fine, mild, soft Climate, even excelling any of those in the temperate Zones; so happily are Things disposed for the Purposes of Animal Life, by the Author of Nature.

This is a Truth which we are constrained to believe, as we have so many living Witnesses in our own Country, who are ready to assert it.

We have one accurate Account in Anson's Voyage, where the Author reasons very Philosophically upon the Subject. This Author tells us, that the Crew of the Centurion were in some Uneasiness about the Heat of the Climate, which they expected they were to undergo, when they came to that Part of the Æquator which is near the American Coast, upon the South Sea; but that when they came under the Line, instead of those scalding Winds which sometimes blow in immensely hot Climates, they were agreeably surprized with the softest Zephyrs imaginable; and that, instead of being scorched by the perpendicular Rays of the Sun, they had a fine Covering of thin grey Clouds over their Heads, and just enough of them to serve for a Screen, without looking dark and disagreeable. Many other Beauties of the Climate the Author describes, which need not be mentioned here, as it is easy to see the Book.

He accounts for the extraordinary Mildness of the Climate in Words to this Purpose:

"There are Mountains on the Sea Coast of this Latitude, of an enormous Height and great Extent, called the Andes, the Tops and Sides of which are covered with everlasting Snow. These Mountains cast a Shade and Coolness round them, for several Leagues, and by their Influence it is, that the Climate is so temperate under that Part of the Line. But, says the Author, when we had sailed beyond the Æquator, into four or five Degrees of North Latitude, and were got out of the Influence of those Mountains covered with Snow, we then began to feel that we were near the Line, and the Climate was as hot as we could have expected to have found it at the Æquator itself."

There can be no Doubt of the Truth of this Account: No Man would have made such Assertions as these, if they had not been true, when there were so many living Witnesses to have contradicted such an idle, needless Falshood as this would have been. And indeed the Appearance of wise Design in the Author of Nature is no where more conspicuous than in these Instances of his Care for the Preservation of the animal System. What could we have expected more than Mountains of Snow in Greenland? And even in those frozen Regions we have as great Instances of the same Providence: When the Springs are all frozen up, in that severe Climate, they have sometimes, even in the middle of Winter, such mild South Winds as serve to thaw the Snow, so as to cause Water to settle in the Valleys, and to run under the Ice in Quantities large enough to serve the Purposes of animal Life; not to mention the great Quantities of Timber which the Surf of the Sea brings upon that Coast, from other Countries; without which the Inhabitants would have no Firing, nor Timber for their Huts, nor Shafts for their Arrows, as there are no Trees in that Country.

And now I hope it will not be thought too bold an Analogy if we presume to say, that as, contrary to all Expectation, at the Æquator (where intolerable Heat might be expected) the Inhabitants are provided with Mountains covered with Snow, to qualify their Atmosphere; why may not we suppose, that at the very Poles themselves there may be some Cause, unknown to us, which may render the Climate serene and mild, even in that supposed uninhabitable Part of the Globe? Why may there not be hot, burning Minerals in the Earth at the Poles, as well as snowy Mountains at the Æquator?

We have Reason to think that the Composition of the Earth, at that Part of the Globe, is of an extraordinary Nature; as the magnetic Quality of it is to be apprehended, from it's immediate Attraction of the Needle. We are entirely ignorant of the Soil, of the Place, and of the Constitution of the Inhabitants, if there are any. We are certain that, near Greenland, there are Sands of so extraordinary a Nature, that the Wind will carry great Clouds of them several Leagues to Sea, and they will fall into the Eyes and Mouths of Navigators, who are sailing past the Coast, at a great Distance. This Instance only serves to shew, that we may be quite ignorant of the Nature of the Soil which is under the Pole; we cannot tell whether it consists of Mountains or Caverns, fiery Volcanos or craggy Rocks, of Ice, Land, or Water, cultivated Fields or barren Desarts.

What has been laid will seem less strange, if we look back into the Notions which the Ancients had of the Torrid Zone. It is not long since it was thought, that only the Temperate Zone on this Side the Æquator was habitable; so far were they from attempting to find out another Temperate Zone beyond the Æquator, that nobody dare approach near the Line, for Fear of being roasted alive. This is the true State of the Case; and if it be so that the Ancients were, for such a vast Number of Years, under a mistaken Notion, concerning the Possibility of living under or near the Line, why may not we, who are neither more daring nor more ingenious than the old Romans, be likewise mistaken, or rather totally ignorant of the Climates at the Pole?

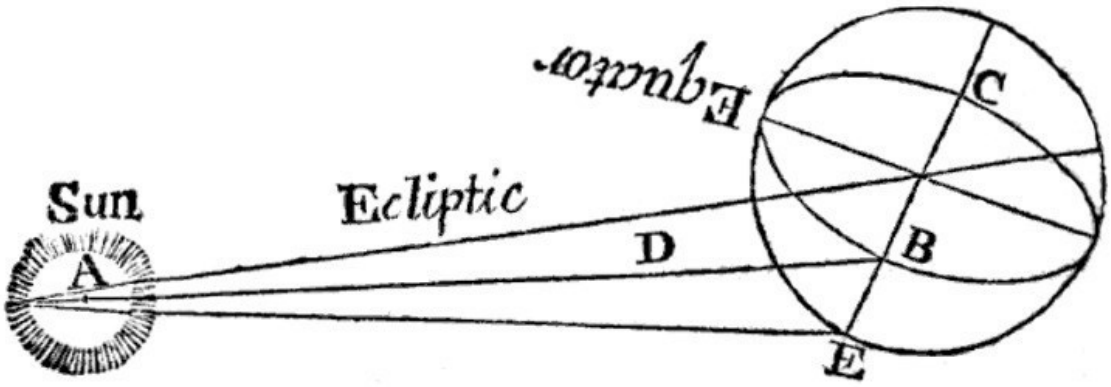
And here I beg Leave to offer a Philosophical Reason, why it should not, according to the Nature of Things, be any colder at the Poles themselves, than ten Degrees on this Side of them. Not that I by any Means insist upon the Truth of what I am going to say; I only just offer it as a Subject to be discussed by those who are more learned, and are able to take more exact Mensurations of the Phœnomena of Nature than myself.

What I would offer is, that there is no Reason to apprehend more Cold at the Extremities of the Poles than ten Degrees on this Side of them, on Account of the Figure of the Earth. The Figure of the Earth is found, by Observations which have been made, upon the Difference of the Vibrations of Pendulums at the Æquator and near the Poles, and by other Experiments, to be not a Sphere, but a Spheroid; it is not exactly round, neither is it oval, but (if I may make Use of the Comparison) more in the Shape of a Turnip.

Now the Climate is hotter at the Æquator than in high Latitudes, on Account of the Inclination of the Poles to the Sun, as has been said before: What I would urge is, that the Surface of the Earth, at ten Degrees on this Side of the Poles, is as much or nearly as much inclined to the Plain of the Ecliptic as the Poles themselves.

If that is the Case, no Reason can be given why the Poles should be colder than Greenland, where, if we may believe the Accounts of Navigators, though in the Winter the Cold is so intense as to freeze Brandy, yet, in the middle of Summer it is sometimes so hot, that People have been glad to strip off their Cloaths, for an Hour or two in a Day, in order to go through their Work. But to return to the Surmise, that the Poles are no colder than ten Degrees on this Side of them, on Account of the Spheroidical Figure of the Earth.

I must trouble the Reader with a very plain Figure, in order to illustrate the Meaning of this.



By this Figure we may observe, that any Rays of the Sun A, which fall upon a Place situated ten Degrees on our Side of the Pole B, and Rays which fall on the Pole itself, do not make so large an Angle, as they would if the Form of the Earth was a Sphere; for if we extend the two Points B and C so far as to make a compleat Sphere, we must be obliged likewise to move the Line D along with it to the Point E, which would make a larger Angle, and in that Case the Surface of the Earth at the Pole B would be more inclined to the Plain of the Ecliptic than it is, and consequently it would be colder, as the Cause of Heat and Cold in different Parts of the Globe is owing to the Inclination of the Poles to the Plain of the Ecliptic, and not to the Distance of the Sun from the Earth at the different Seasons of the Year; for if that was the Case, we should have colder Weather in July than we have in December, the Sun being rather nearer to us in Winter than in Summer.

I hope that this little Philosophical Effort, which has been made here, will not be looked upon as unseasonably introduced in this Place; and I likewise hope, that while I gaze with Wonder on the stupendous Frame of the Universe, I shall not be thought presumptuous in having taken a little Survey of one of the Wheels which duly performs it's Revolutions in that glorious Machine, the Solar System; the exact and regular Movements of which inspire the curious Beholder with a more awful Idea of the Greatness of the Fabricator, than it is possible for any one to conceive, who is entirely ignorant of the Accuracy of the Construction.

VII

That the more Hay is dried in the Sun, the better it will be.

As Hay is an Herb which is dried in order to lay up all the Winter, when it cannot be found in the Fields, and as it is intended for the Food and Nourishment of Animals, that Nourishment must consist of such of the Juices as are left behind in the Herb.

It is very possible, by the Art of Chemistry, to extract from Hay all the separate Salts, Spirits, &c. of which it is composed. Now in a Chymical Preparation, there is always something left behind in the Still, out of which it is impossible to extract any more Juices; that the Chymists call Caput Mortuum. This Caput Mortuum is of no Service, and is entirely void of all those Salts and Spirits with which every other Substance on the Surface of the Earth abounds more or less.

The Sun acts upon Bodies much in the Nature of a Still. He, by his Heat, causes the Vapours of all Kinds, which any Substance contains, to ascend out of their Residences into the Atmosphere, to some little Height, from whence either the Wind carries them, if there is any, or if there is no Wind, they fall down again Upon the Earth by their own Weight, at Sun-set, and are what is called Dew.

Since this is the Case, and the Sun acts upon Bodies in the same Manner as a Still, we should take Care not to make Caput Mortuum of our Hay, by exposing it too long to his Rays; for by that Means we shall extract from it most of those Salts Spirits of which Food must consist, and of which all Animal Substance is composed.

The Botanists are sensible of this: When they dry their Herbs, they lay them in a Place where no Sun can come to them, well knowing that too much Sun would take off their Flavour, and render them unfit for their different Physical Uses. Not that Hay would be made so well without Sun, on Account of the Largeness of the Quantity, and at the same Time it ought to be dryed enough, and no more than enough; for it is as easy to roast Hay too much as a Piece of Meat.

VIII

That the Violin is a wanton Instrument, and not proper for Psalms; and that the Organ is not proper for Country-Dances, and brisk Airs.

This Error is entirely owing to Prejudice. The Violin being a light, small Instrument, easy of Conveyance, and withal much played upon in England, and at the same Time being powerful and capable of any Expression which the Performer pleases to give it, is commonly made Use of at Balls and Assemblies; by which Means it has annexed the Idea of Merriment and Jollity to itself, in the Minds of those, who have been so happy as to be Caperers to those sprightly English Airs, called Country Dances.

The Organ, on the other Hand, being not easily moved on Account of it's Size, and expensive on Account of the complicated Machinery which is necessary to the Construction of it, is not convenient for Country Dances; and at the same Time being loud, capable of playing full Pieces of Music, Choruses, Services, &c. is made Use of in most Churches where the Inhabitants can afford to purchase this fine Instrument.

Nevertheless, notwithstanding these great Advantages, two or three Violins and a Bass, are more capable of performing any solemn Hymn or Anthem than an Organ; for the Violin, as has been before observed, is capable of great Expression, but especially it is most exquisitely happy in that grave and resigned Air, which the common Singing-Psalms ought to be played with. When the Bow is properly made Use of, there is a Solemnity in the Strokes of it, which is peculiar to itself. And on the other Hand, on Account of the Convenience of Keys for the Readiness of Execution, nothing can be more adapted to the Performance of a Country-Dance, than an Organ. For the Truth of which Assertion I appeal to those who have been so often agreeably surprized with those sprightly Allegros, in the Country-Dance Style, with which many Organists think fit to entertain the Ladies, in the middle of Divine Service.

If Jack Latten is played at all, it is Jack Latten still, whether it be played in Church or in an Assembly Room; and I am only surprized, that People can so obstinately persist in the Denial of a Thing, concerning the Truth of which it lies in their Power to be convinced every Sunday.

IX

That the Organ and Harpsichord are the two Principal Instruments, and that other Instruments are inferior to them in a Concert.

Notwithstanding the great Advantage which these Instruments have of playing several Parts together, there is nevertheless one Imperfection which they have, or rather they want one, or more properly a thousand Beauties contained in one Word; which is no less material an Article than that of Expression.

There is no Word more frequently in the Mouths of all Sorts of Performers, than this of Expression; and we may venture to affirm, that it is as little understood as any one Term which is made Use of, in the Science of Music.

Above three Parts in four make Use of it, without having any Meaning of their own, only having heard some one else observe, that such or such a Person plays with great Expression, they take a Fancy to this new adopted Child, and become as fond of it, as if it was the legitimate Offspring of their own Brain. Some who are more considerate, think that the Meaning of it entirely consists in playing Staccato; and indeed these People come nearer the Mark than the others, but they have not picked up all the Meaning of the Word.

One who plays with Expression, is he who, in his Performance, gives the Air or Piece of Music (let it be what it will) such a Turn, as conveys that Passion into the Hearts of the Audience, which the Composer intended to excite by it. Dryden, in that masterly Poem, his Ode in Honour of St. Cecilia's Day, has given us a true Idea of the Meaning of the Word; the Beauties of which Poem, though they are enough to hurry any Man away from his Subject, shall not be discussed at present, not being to the Point in Hand. We shall only make Use of an Instance or two out of it, to illustrate what has been said.

Handel was so sensible of it's being capable, by the Help of Musical Sounds, of raising those very Passions in the Hearts of the Audience, which Dryden fables Alexander to have felt by the masterly Hand of Timotheus, that, by setting it to Music, he has himself boldly stepped into the Place of Timotheus.

In this Performance called Alexander's Feast, it may easily be discerned, that Expression does not consist in the Staccato only, or in any one Power or Manner of playing. For Instance this Air,

Softly sweet in Lydian Measures, &c.

would be quite ruined by playing it Staccato; and again,

Revenge, Revenge, Timotheus cries, &c.

requires to be played in a very different Style from the foregoing Air.

Passions are to be expressed in Music, as well as in the other Sister Arts, Poetry and Painting.

Having thus explained what is meant by Expression in Music, we will return to the Point, viz. that the Organ and Harpsichord, though they have many other Advantages, yet want that great Excellence of Music, Expression. Surely it may not be thought a Straining of the Meaning of St. Paul's Words too far, when I surmise, that he, who had a fine Education, and in all Probability knew Music well, might have an Eye to the Want of Meaning or Expression of the ancient Cymbal, when he says, "Tho' I speak with the Tongues of Men and of Angels, and have not Charity, I am become as a sounding Brass, and a tinkling Cymbal." That is, though I have ever so much Skill in Languages, and the Arts and Sciences, my Knowledge is vain if I am without the Virtue of Charity, and my Works will have no Force, and will in that Respect resemble the Cymbal, which, though it makes a tinkling, and plays the Notes, yet is destitute of the main Article Expression. For we must not suppose, that so refined a Scholar as St. Paul was, could have such a settled Contempt for the Science of Music,

as to make Use of it even as a Simile for what is trifling. We may venture to think, that the Apostle alluded to that Want of Power in the Cymbal to move the Passions, which other Instruments have.

This is the very Case with the modern Harpsichord; it is very pretty, notwithstanding it's Imperfections, with Regard to the Change of Keys, (of which more in it's Place.) But no one can say, that it speaks to his Passions like those Instruments which have so immediate a Connection with the Finger of the Performer, as to sound just in the Manner which he directs.

In that Case the Powers are great; you have the Numbers of Graces which have Names to them, and the still greater Number which have none; you have the Staccato and the Slur, the Swell and the Smotzato, and the Sostenuto, and a great Variety of other Embellishments, which are as necessary as Light and Shade in Painting.

To convince the Reader of this, let him hear any Master play Handel's Song, *Pious Orgies, pious Airs*, upon the Organ or Harpsichord, and he will find, that, though it will appear to be Harmony, yet it will want that Meaning, and (not to make Use of the Word too often) Expression, which it is intended to have given it by the Word Sostenuto, which Mr. Handel has placed at the Beginning of the Symphony.

Now a fine Performer upon the Violin or Hautboy, with a Bass to accompany him, will give it that Sostenuto, even with greater Strength than the human Voice itself, if possible.

I by no Means intend to debase that noble and solemn Instrument the Organ, nor the Wonders that are done upon it, nor the great Merit of the Performers who execute them, by what has been here said; only to discuss a little upon the Perfections and Imperfections of different Instruments, as the more the Imperfections of an Instrument are looked into, the more likely is the Ingenuity of Mechanics one Day or other to rectify them.

Конец ознакомительного фрагмента.