The Charles Baker Collection

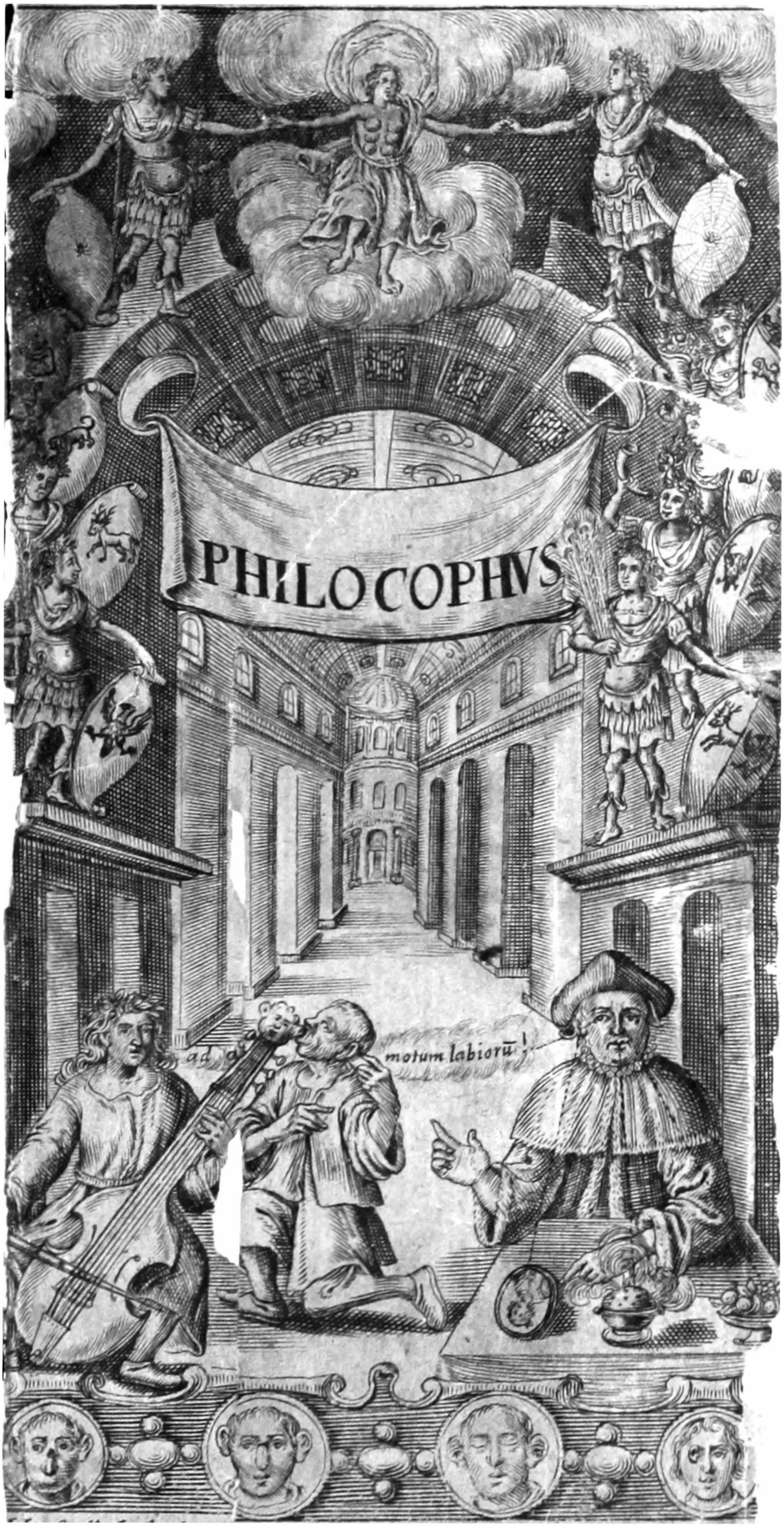


LIBRARY

COLUMBIA INSTITUTION
FOR THE DEAF

CLASS B371.922.

BOOK B87


PHILOCOPHVS
motum labiorū

A Reflection of the ſence and minde of the Frontiſpiece.

NAture reliev'd by Arts new might,
Reaſons obnubilated ſight
Cleares up, and things which lay conceal'd,
Are to her doubtfull eyes reveal'd.
To make the *Deafe* and *Dumbe* amends,
Illuſtrious Nature heere deſcends
To dance the *Senſes Maſque*; a Ball,
Which we their *Anagram* may call:
On each Hand the Scene keeping *Tact*,
Without whom life can nought tranſact;
The other Senſes with this cloſe:
The *Right*, the *Foure tranſpos'd*, oppoſe,
Th' *impreſſe* of whole ſhield relate,
Which for the other doth officiate.
Terpander who with *Lyrique* Aire,
Could to the *Deafe* their loſſe repaire,
Directs them by his Muſick's ſound
To a late conſecrated ground;
Where the *Common-Senſe* a Gueſt,
They finde at an exchanging Feaſt,
Of objects where each Sence may taſt
The pleaſures of that *Sence* lyes waſt:
When lo! the *Genius* of the place,
Spake thus with a Majeſtique grace:
Sceptiques henceforth ſhall this repute,
The *Academy of the Muſe*.
(An Architectures higheſt grace)
Let there herein be no *Deafe place*!
Y'are welcome all: more would have ſayd,
When Nature thus her ſelfe diſplayd;
Heere I'le renounce my Scep-Dame part,
To honour ſo Divine an Art
That lends me crutches when I hault,
Downright, into a *ſenſile* fault.

LIBRARY OF

Philocophus:

OR,

THE DEAFE AND Dumbe Mans Friend.

EXHIBITING THE Philosophicall verity of that subtile Art, which may inable one with an *observant Eie*, to *Heare* what any man speaks by the moving of his lips.

UPON THE SAME Ground, with the advantage of an Historicall Exemplification, apparently proving, That a Man borne Deafe and Dumbe, may be taught to *Heare* the sound of *words* with his *Eie*, & thence learne to speake with his Tongue.

By *I. B.* sirnamed the *Chirosopher*.

Sic canimus Surdis —

London, Printed for *Humphrey Moseley*, and are to be sold at his shop in Pauls Church-yard 1648.

For the Right VVorpll Sir *Edward Goſlwicke*, of *Willington*, in the County of Bedford, Baronet,

And M. *William Goſlwick* his yongeſt Brother: and all other intelligent and ingenious Gentlemen,

who as yet can neither heare nor ſpeake.

To be communicated unto them that can, and have acquaintance or alliance with any whom it may concerne.



Among the portentous and prodigious Titles of the King of Binga (ſo called by the Portugalls, but by the learned Wri-

ters, Narsinga) Hee stiles himselfe, *Master of those which know not how to speake.* And the *Grand Signiour*, or Emperour of the Turks, would take it for no disparagement, to be called *Great Master* of the *Deafe and Dumbe*; with whom *fifty* of your Tribe are alwayes in *Delitiis*, and he holds it a great part of his state and magnificence, that he hath such sacred persons as you dayly to converse with as his Companions: And although somewhat understand not the mystery of your condition, looke upon you as *misprisions* in nature; yet to me who have studied your perfections, and well observed the strange recompences Nature affords you, I behold nothing in you but what may be a just object of admiration! For even your *Privative Qualification* is such, that the extent of our apprehension when it is most excessive, is but a

ble

ble to afford an expreſſion thereof our minde being much put to it to take a nominall ſcantling of your Quality, and it argues an admirable power in our ſoule, that it is ſo notable an Engin, that it can raiſe a poſitive notion out of privative: For *Deafeneſſe* and *Dumbeneſſe* being *privations* and *Negatives*, wee can eaſier ſay what you cannot doe, then what you can: For, that is beyond our reach, poſitively to ſtate your abilities, which may be ranked with *honour*, *praiſe*, and *glory*, which although they have ſo great an influence upon us; yet wee know not where to finde their ſubſiſtance, or a ſufficient notion to define them by.

What though you cannot expreſſe your mindes in thoſe verball contrivances of mans invention; yet you want not *ſpeech*, who have your *whole Body*, for a *Tongue*, having a

language more naturall and ſignifi cant, which is common to you with us, to wit *geſture*, the generall and *univerſall language* of *Humane nature*, which when wee would have our *ſpeech* to have life and efficacy wee joyne in commiſſion with our wordes; and when wee would ſpeak with more ſtate and gravity, wee renounce wordes and uſe *Nods* and other naturall ſignes alone.

This language you ſpeak ſo purely, that I who was the firſt that made it my Darling ſtudy to interpret the naturall richneſſe of our diſcourſing geſtures, not onely to the diſtinguiſhing of all the Corporall and Nationall Dialects thereof, and regulating the naturall as Acceſſories and Adjuncts of Rhetoricall Elocution; but to the following of them downe to their ſpring-heads and originall, even to the finding out their *Radicall Derivations*

vations and *Muſcular Etymologies* by that thorough progreſſe of obſervation, am fully ſatisfied that you want nothing to be perfectly underſtood, your mother tongue adminiſtring ſufficient utterance upon all occaſions: Inſomuch as being ſollicited on your behalfe by a worthy Friend of yours (who had obſerved you not onely to be affected but ſeemingly edified upon the ſight of the Alphabets of my *Chirologia* or naturall language of the hand which hee had preſented you with, to an endeavour of accommodating them more to your uſe; I was enforced ingeniouſly to confeſſe, I could not improve them to any conſiderable advantage for you; ſince you already can expreſſe your ſelves ſo truely by ſignes, from a habit you have gotten by uſing alwayes ſignes, as wee doe ſpeech: Nature alſo recompencing your

want of ſpeech, in the invention of ſignes to expreſſe your conceptions: Yet a while after having well obſerved by your multiplying ſignes and geſtures, that you earneſtly deſired to unfold your lips to an *orall elocution*; ſeeming as if you accounted your *dumbeneſſe* to be your greateſt *unhappineſſe*; in tender pitty of your caſe, I began to caſt about which way as a *Motiſt* to be ſerviceable unto you, by ſupplying a *medium* of greater Diſcipline, whereby you might arrive nearer unto the intimate eſſences, of things, by apprehenſion, whereof your intellect might gaine ſomewhat a more proper perfection: When coaſting along the borders of *geſture*, and *voluntary motion*, I diſcovered a *community* among the *Senſes*, and that there was in the continent of *Humanity*, a *Terra incognita* of *Ocular Audition*; a treaſure reſerved for theſe

times,

times, which had eſcaped their privy ſearch, who guided by the illumination of their owne endeavours had in *ſudore vultus* ranſackt the boſome of nature, wherein wiſdome had hid it among other Arts and Sciences which have their foundation in Nature, and neither grow nor encreaſe but appeare when time and obſervation unlockt them unto us: Having well ſcanned this *Magnale naturæ*, I found it to be one of the ſubtleſt pieces of Recondit learning, and that it bordered upon other avenewes unto the braine, as *Orall* and *Dentall Audition*, of which wee have diſcovered ſufficient ground to raiſe a new Art upon, directing how to convey intelligible and articulate ſounds another way to the braine then by the eare or eye, ſhewing that a man may heare as well as ſpeake with his mouth Upon which and o-

other unlooked fo-

looked for diſcoveries, I began in Idea, to conceive the modell of a *new Academie*, which might be erected in favour of thoſe who are in your condition, to wit originally deafe and dumb, for which Edifice and Gymnaſium having provided all kinde of materialls requiſite, I ſoone perceived by falling into diſcourſe with ſome rationall men about ſuch a deſigne, that the attempt ſeemed ſo *paradoxicall*, *prodigious* and Hyperbolicall; that it did rather *amuſe* then *ſatisfie* their underſtandings, inſomuch as they tooke the tearmes and expreſſions this Art juſtly uſurpes for inſufferable violations of their reaſon, which they profeſſed they muſt renounce before they could have faith to credit ſuch an undertaking: For the ſatisfaction therefore of ſuch knowing men, who yet are incredulous, and too ſuperſtitiouſly devoted to the

received

received Phyloſophy, I thought good to hint the *Phyloſophicall verity* of this *Art*, which I doe with the greater aſſurance, having gained an unanſwerable Demonſtration from *matter* of *fact*; for other matters hinted they muſt expect credit upon the like ſucceſſe: Nevertheleſſe heerein I ſhall not deſcend to exact particulars, intending onely to preſent the Ichnography of this Art referring the inward contriving of accommodations, and the method of operation to our intended *Academy*: In the meane time for the enlarging of your *Charter*, and to bring you into a neerer incorporation of ſociety and communion with us: I heere commend unto you the *Accommodations* this Art holds out, wiſhing you all in good time a happy *metamſychoſis* or *tranſmigration* of your ſenſes, that ſo at leaſt by way of *Anagram* you may enjoy

enjoy them all: That learning firſt to write the *Images* of *words*, and to underſtand the conveyances of a *viſible* and *permanent ſpeech*; from that *Hand A. B. C.* you may proceed unto a Lip-Grammar, which may inable you to *heare with your eye, and thence learn to ſpeak with your tongue*; which benefits of Art when you have attained, and are become capable of peruſing this *tractate*, whoſe argument is ſo new and ſtrange, that there was never ſo much matter concerning you preſented under one object of the eye, containing a narrative of your originall eſtate with the ſupplementall advantages thereof, the novelty and inventive ſtraine of this booke may at once delight and profit you; which is the hopefull-wiſh of

Your officious Friend
and Philographer

AD SUBTILISSIMUM virum, D. *Ioan. Bulwerum*, cognomento *Chirosophum*, sub personâ *Philocophi*, Surdis mutisque canticum novum, cum discantu felicitèr canentem.

ABdita Natura nobis miracula pandis,
Quæ nescit Libris Plebs inimica bonis.
Quæ doctos latuere viros : latuere Platonis
Discipulum, quæ Tu das, Stagerita novus.
Instituis Surdos, Mutos audire Magistros
Dum Logicum faciunt meta labella sonum.
Sic nunquam frustra narratur Fabula Surdo,
Si detur Surdis, *posse videre sonos.*

UNIVERSITÄTS

To his ingenious friend *Philocophus*, *on this Foundation of his intended Academie.*

REjoice you Deafe and Dumbe, your Armes extend
T'embrace th'inventive goodneſſe of a Friend!
Who heere intends, for your reliefe, to Found
An Academie, on NATVRES high-eſt ground:
Wherein He doth ſtrange myſteries unlocke,
How all the Sences have one common Stocke.
Shewes how indulgent Nature for each ſence
Wanting, allowes a double recompence.
How ſhe tranſlates a ſence, tranſplants an Eare
Into the Eye, and makes the Optiques heare.
Inoculates an Eare with ſight; whereby

It

It ſhall p.rforme the office of an Eie.
Preſents rich odours Taſted, Viands Smelt,
And Sound and Light in a ſtrange maner felt.
The ſences (Arts new Maſter-piece) are taught
T'exchange their objects by a new found thought.
The Deafe and Dumbe get Hearing Eies, which breake.
Their Barrs of Silence, and thence learn to ſpeake
Words may be ſeene or heard: W'are at our choyce
For to give Eare, or Eie unto a Voyce.
Where men by their tranſpoſed ſenſes gaine,
This Anagramme of Art and Nature's plaine.

Amicitiæ & Artis Tranſcendentiæ ergo

Tho. Diconſon, *Med. Templ.*

A Table of ſuch hints and notions as more directly concerne Deafe and Dumbe men.

THat men born Deafe *and* Dumb, *have a kinde of ſignificant ſpeech and naturall Language; and what that is.*

Wherefore it is that Deafe *and* Dumbe *men can expreſſe themſelves ſo lively by ſignes.*

That all Deafe *and* Dumbe *men, ſeeme to have an earneſt deſire to unfold their lips to ſpeech as if they accounted their* Dumbneſſe, *their greateſt unhappineſſe.*

That a man born Deaf *and* Dumb, *may be taught* [illegible] *of*

[illegible]

The ſtrangeneſſe of that expreſſion, abated and qualified, by proving a community among the Senſes, and their mutuall exchanging of objects.

And Hearing to be nothing elſe but the due perception of motion.

A notable example of Hearing ſounds with the eye, *in a Spaniſh Lord, who was borne* Deafe *and* Dumbe.

The cauſes why men are borne Deafe *and* Dumbe, *various and unknowne.*

Suppoſed by ſome to happen through a propriety of their place of birth.

An example ſeconding that opinion.

The opinion of Aſtrologers, why men are borne Deafe *and* Dumbe.

That the ſin of the Parents is ſometimes thus puniſhed in their children.

An example of Gods juſtice in a Boy borne Deafe *and* Dumbe.

That Deafeneſſe *is ſometimes* ex Traduce,

Traduce, *and an hereditary evill.*

Why Deafe *men beget* Deafe *children.*

Why the children of Deafe *men are not alwayes* Deafe.

Ariſtotles opinion that Dumbneſſe *is a priviation incident to man only.*

That Deafeneſſe *and* Dumbneſſe *may happen to other creatures alſo.*

The cauſes why many in a Family, prove oftentimes Deafe *and* Dumbe, *very darke and obſcure.*

Hiſtories both Foreigne and Domeſtique of Deafeneſſe *and* Dumbneſſe *running in a bloud and many children of one man and woman proving ſo defective in their ſenſes.*

A very ſtrange Hiſtory of two twin Siſters borne Deafe *and* Dumb, *having but two eyes betweene them: both living to old age.*

Why thoſe who are borne Deafe *are conſequently* Dumbe.

The chiefe cauſe ſuppoſed by ſome

to be a ſympathy betweene the Nerves of Hearing and Speaking.

A twofold reaſon of their ſtrict ſociety and communion, according to Bartholinus.

The ſeverall opinions of Phyſicians touching the cauſes of Naturall Deafneſſe, *and ſo conſequently of* Dumbneſſe.

Both opinions of ſympathy and privation of Hearing urged by ſome to introduce a conſequence of Dumbnes *upon* Deafenes.

Varolius *his Anatomicall inference of Naturall* Deafeneſſe *from Naturall* Dumbneſſe.

That to argue Deafeneſſe *from* Dumbeneſſe, *is no good way of inference.*

The chiefe ſigne to diſtinguiſh naturall Deafeneſſe, *from that which happens through a diſeaſe.*

The only true and undoubted cauſe why they who are borne Deafe, *are*

con-

ſequently Dumbe.

That men originally Deafe, *though they ſeeme to be* Dumbe, *yet moſt part of them are able to yeelde ſome ſound or inarticulate voyce.*

That Dumbe *folkes, when they are angry, will make a very great gabling noyſe.*

A reaſon of that extraordinary loud fury in them.

That the voyce which Deafe *and* Dumbe *men utter, is very unapt in it ſelf, to expreſſe the conceptions of their mindes unto others.*

That Dumbe *men not naturally* Deafe, *inſomuch as the voice is naturall, underſtand one another when they vent any paſſion of their mind therby.*

In what caſes originall Deafenes *is incurable, and the reaſons.*

The ſad and lamentable condition of thoſe, who are borne Deafe *and* Dumbe.

The ſadder condition of thoſe who are Deafe *and* Blinde.

The yet more miſerable condition of thoſe who are Deafe, Dumbe, *and* Blinde.

A ſtrange Hiſtory out of Platerus, *of an Abbot reduced to this wretched condition, in whom the ſence of Touch did officiate for all the reſt.*

Another pregnant Example of the officious nature of the Touch, in ſupplying the defect and temporall incapacity of the other Senſes.

Sennertus *his well collected reaſons of calling naturall* Deafen:ſſe, miſerandum malum.

The incapacities of Deafe *and* Dumbe *men according to the Civill Law.*

The pittifull condition of thoſe who are Deafe *and* Dumbe, *and withall* indocile *Fooles and mad.*

What

What the Civill and Canon Law decreeth concerning such.

That they who are borne Deaf *and* Dumbe, *unlesse there appeare pregnant signes of a well tempered minde within, are neither capable nor worthy of the benefit of this New Art which teacheth men born* Deafe *and* Dumbe *to heare with their* Eye, *and thence to learne to speak with their Tongue.*

Three reasons of Mercurialis. *why mens Hearing of all the sences should be most often hurt from their Nativity.*

A fourth reason given by Varolus.

That in originall and Naturall Deafenesse, *both Eares are alwayes affected, and why?*

That the chiefe signe of Naturall Deafnesse *in men is To have both Eares affected from their Nativity*

In what cases originall Deafnes *is incurable, and the Reasons.*

Why

Why one Eare onely is commonly affected in Deafnes *happning through ſickneſſe.*

That there is no neceſſity of that common affection betweene the Eare and the Tongue, but that one may become Mute through Naturall Defect, without any hurt to the Nerves of the Tongue.

This proved by many arguments and by the example of the Spaniſh Lords ſpeaking as ſoone as he had got from Art an Auditory Ele of Diſcipline

That there is no reciprocall neceſſity that they who are originally Dumbe, *muſt be therefore* Deafe.

This confirmed by one of the foure caſes of Deafe *and* Dumbe *men ſtated in the Civill Law.*

The anatomicall reaſon of Dumbe *mens being* Dumbe *from their Nativity, and yet not therewithall being* Deafe.

An Anatomicall Reaſon, why they who become Deafe *through any diſeaſe, doe not ſympathetically grow Mute.*

An Anatomicall Reaſon, why they who become mute through ſickneſſe do not ſympathetically thereupon grow Deafe.

That they who are ſtrucken Deafe *by a diſeaſe, prove ſometimes accidentally* Dumbe.

Hiſtories of ſome, who after they could ſpeak growing Deafe *through a Diſeaſe, have loſt the uſe of ſpeech.*

The Reaſon thereof:

Hiſtories of many deprived of their hearing by ſickneſſe, who yet have retained their ſpeech.

The Reaſon of their retention of ſpeech.

An Aphoriſme of Mercurialis *explained touching* Deafe *mens (who are Deafe through ſome diſeaſe) not being by reaſon thereof, or in as much*

as they are Deafe, Dumbe.

Histories of some stricken Dumbe *by astonishment or indignation, who yet may be supposed not thereupon to have growne* Deafe.

Aristotles *opinion of sights conducing more to prudence and discipline, then hearing disliked by* Mercurialis, *because he had observed blinde men oftentimes, to be more prudent, then they who are* Deafe.

Riverus *his judgement why they who are* Deafe *from their nativity, have the instruments of their speech.*

Vitiated.

A reply to that.

Arculanus *his doubt whether the number of* Dumbe *or* Deafe *men be greater.*

Resolved upon the question, that there are more Dumbe *from their nativity then* Deafe, *for, all that are borne* Deafe, *are* Dumbe.

That there are, ex tempore, *more*

Deafe *then* Mute.

The Philoſophicall reaſon thereof.

Whether men Mute *from their nativity, may in progreſſe of time attaine unto ſpeech.*

An example verifying they may.

Luſitanus *anſwer to* Fontanus *his queſtion.* An muti fiant loquaces? *affording a Philoſophicall reaſon of ſuch ſtrange events.*

Hiſtories on many borne Dumbe, *who by ſome extraordinary fright, and paſſion, have received the gift of ſpeech.*

Why they who are ſo cured, muſt be frighted as well as angered.

The Philoſophicall reaſon of ſo ſtrange an effect of a mixt paſſion.

The ſuffrage of the civill Law to Mute *mens recovery of ſpeech.*

That they who have beene Mute *from their nativity, if their eares have beene open, and the impediment was onely in their Tongue (that remo-*

ved)

ved) they instantly fall to speaking as if they had learned it before.

This not onely inferred from Histories, but reason.

An example of a Boy of foure yeares old, thought to be Mute, who by a naturall crisis recovered, and on a sudden began to speake, as other Boys of that age and so proceeded to a greater perfection of speech.

That it is an ancient conceit setled in all mens mindes, that no effectuall relieſe can be given to men originally Deafe and Dumbe, but by the divine Art of miracle-working Faith.

Histories of many Deafe, and Dumbe men miraculously cured.

A very strange example of a Boy Deafe and Dumbe, cured by a mischiefe, or a chance-medley miracle.

Reasons why Deafe men speake through the Noſe.

Why ſmelling is often loſt upon Deafeneſſe.

Another reaſon thence taken of Deafe *mens ſpeaking through the Noſe.*

That men Deafe, *or blinde, or otherwiſe defective in their ſenſes, are apt to uſe expreſſions as if they heard or ſaw.*

What that property in them may ſeeme to imply.

Painting and limbing commended, as uſefull, and matter of contemplation to Deafe *and* Dumbe *men.*

Hiſtories of two Deafe *and* Dumb *men eminent in that Art.*

That writing to the Deafe *and* Dumbe *may ſerve in ſtead of ſpeech.*

That from writing firſt learned by Deafe *and* Dumbe *men, there lies a way (if well followed) to the attaining unto ſpeech, or an Articulate voyce.*

A ſtrange example of a man borne Deafe *and* Dumbe, *who feeleth ſounds.*

How this Deafe *and* Dumbe *Lord, who*

who was taught to ſee words, had thoſe words ſo ſeene or heard, transferred to pronuntiatiõ & again to his Intellect.

A Reaſon why they who are Deafe by nature, are neceſſarily Mute.

How the Deafe and Dumbe Spaniſh Lords underſtanding, might be framed out of wordes ſeene or heard with his eye.

That it is a ſtranger thing in nature, if conſidered, how children learne to imitate ſpeech, who as is thought, take no marke at all of the motions of the mouth of him that ſpeaketh; then that this Deafe and Dumbe Lord by obſerving the motions men made, ſhould be taught to underſtand others, and to ſpeake himſelfe that others might underſtand Him.

How both theſe may be done.

That Deafe and Dumbe men have their other Senſes more ſharpe to ſupply the want of this.

That they are heerby endowed with

an ability and ſagacity to heare or ſee with their eye, beyond any other men that have their hearing.

That they who want their hearing, ſee more exactly.

A Reaſon thereof.

That Deafe and Dumbe men having a double defect, to wit of hearing and ſpeaking both, have uſually a double recompence.

That it is not ſo difficult to Deafe men as unto us to conceive and diſtinguiſh of each motion and ſignification of the Lips.

That the ſubtleties of articular motions are with more attention (and delight) contemplated by Deafe men.

That the apparent motions of the Lips, the Formes of Naturall Letters, and ſo conſequently of wordes, ſeeme to have beene diſtinguiſhed by the obſervation of Deafe and Dumbe Folkes, who ſeeme to have attained unto this knowledge, by their owne attentive

tensive obſervation.

That the Civill Law witneſſeth, how ſome Deafe *and* Dumbe *men, have come to perceive the efficacy of others wordes, by the moving of their lips. That* Deafe *and* Dumbe *Folkes are apt to be angry, if you make ſignes onely unto them, without uſing alſo the motion of your lips.*

The ſuppoſed Reaſon thereof.

The admirable properties of ſome men accidentally Deafe, *who ſpeake and perfectly underſtand what any man ſayes, by the moving of his Lips.*

That it was never ſeene that any Deafe *and* Dumbe *man, by his owne obſervation (though he might underſtand what others ſayd) attained to ſpeech without a Teacher.*

That this Spaniſh Lord was the firſt Deafe *and* Dumbe *man that was taught to* heare the ſounds of words with the eyes, and thence learnt to ſpeake with his Tongue.

The Reaſon why this Deafe *and* Dumbe *Lord, by Art made to ſpeake, became thereby a generall Linguiſt.*

That this Deafe *and* Dumbe *Lord, now taught to* heare with his eye, *could at the diſtance of a large Chambers breadth ſay wordes after one, that another ſtanding cloſe by the ſpeaker, could not heare a ſyllable of.*

Reaſons thereof.

That it is likely he could ſooner perceive the motion of wordes at a diſtance, then another could heare their audible ſound neere hand.

That a Deafe *and* Dumbe *man* taught to heare the ſound of words with his eyes, *becauſe he heareth not himſelfe (although this way he dothers will not be able well to moderate the tone of his voice.*

A way ſuppoſed to remedy this only defect appearing in this Art.

How this Deafe *Lord might come*

to discerne in another whether he ſpoke ſhrill or low.

That if ſpeech were naturall to man, there is no reaſon but men borne Deafe and Dumbe, (their tongues being commonly free,) might come out with it without hearing or teaching.

That the moſt unanſwerable argument againſt the Naturality of any Language, is, that they who are naturaly Deafe, ſpeake not at all.

Montaigne his vaine endeavour to evade the former argument, by imputing Deafe mens continuing Dumbe, not onely to their incapacity of ſpeaking, by reaſon of their naturall Deafeneſſe; but alſo to the Sympatheticall League betweene the nerves of hearing and ſpeaking.

That Dumbe Nurſes make Mute Children.

The Age wherein judgement may be given whether a Childe is like to prove Dumbe.

That

That words may be tasted by Deafe and Dumbe men.

A Hint of a practicall Demonstration of conveying Articulate and intelligible sounds another way to the Brain of Deafe *and* Dumb *men, then by the Eare or Eye.*

Errata.

Errata.

Page 3. l. 10. reade χέειν. fol. 9. l. 20. change fol. 11. l. 22. doe, fol. 15. l. 3. affirms, l. 8. naving fol. 16. l. 19. Verulamian, fol. 31. l. 12. Διάλεκτος, fol. 53 l. 19. was, fol. 73. l. 18 nere, fol. 77. l. 25 parents is thus, fol 91 l. 1. neryx, fol. 92. l. 2. with the, fol. 119. l. 22. Seiberg, fol. 122. l. 1. utter a voyce, fol 123. l. 22. quia, fol. 124. l. 13. be ill, fol. 128. l. 18. there, fol 138. l. 1. example in one, fol. 140. l. 13. Rayed and, fol. 142 l. 15. Chronicle, l. 16. Urſpergenſian, fol. 145. l. 4. repay, l. 6. his, l. 7. remaining, fol. 151. l. 26. in an, fol. 154. l. 1. ſhutting, fol. 157. l. 11. are, fol. 165. l. 9. hence they, fol. 171. l. 10. her, fol. 177. l. 19. who.

PHILOCOPHUS:
OR THE
DEAFE and DUMBE
MAN'S FRIEND.

That the Mouth is the Adequate Organ of Speech.

CHAP. I.

THat the *Univerſall Regi-on of the Mouth* is the *Adequate Organ of Speech*, appeares even to our very Sences: Since no man ſpeaketh but by the *Mouth*, and that obſtructed, *Speech* periſheth, and is put to a neceſſary ſilence: For we muſt open our *Mouth* before we can ſpeake; the *Door* or *Win-*

dow

dow of *Vtterance* muſt be open'd firſt: you muſt turne the *Cock* of the Conduit, or pluck out the *Stople*, before the *Water* can guſh out. This being the *place of birth*, to which all our *conceptions* are brought, and at which the labouring Mind is delivered of all her thoughts, which iſſue, we call *Orall-Reaſon*. This Great *Hippocrates* was not ignorant of, where among the *ſeven Figures* whereby *Senſe* happens unto man, he reckons the *Mouth* for the *Figure* of *Speech*; as deſerving to be accounted the Organ of another Senſe: Now ſince the *Mouth* is the *Adequate Organ of Speech*, it is worth the enquiry what other *Inſtruments* concurre to that *Action*. The *Univerſall Region of the Mouth* is conſtituted of the *Iawes*, the *Tongue*, the *Pallate*, the *Teeth*, and *Lips*; but *Speech* is not formed unleſſe by the naturall Inſtruments, comprehended in theſe Verſes.

(Palatum,
Inſtrumenta novem ſunt Gutter, Lingua,
Quatuor et Dentes, et duo Labra ſimul.

Among theſe, the *Tongue* is the *Principall*

cipall Organ to whom the *Action* is committed: which yet is not ſo to bee accounted the *chiefeſt cauſe of Speech*, as if all Speech did flow from thence, and that the other parts of the *Mouth* were onely uſefull Aſiſtants unto it: But the *Lips* beare a great ſtroak in the *Action*, they being the moſt extant and remarkable Organs of *Orall Utterance*. Hence with the *Greeks* called χείλια ἀπὸ τῦ χέγειν λόγον, *quod Sermonem fundunt*: and *Labia*; in the *Allegoricall Philoſophie* of Interpretation of *Dreames*, ſignify *Words*; becauſe they are pronounced with the *Lips*. So that although the *Tongue* bee the *Principall Interpreter* of the Mind, yet that alone is not ſufficient to frame our *Speech*, but that it wants the aſſiſtance and cooperation of the *Iawes*, the *Pallate*, the *Teeth*, the *Noſtrils*, and the *Lips*, Senſe it ſelfe doth teach, and the Authority of the *Hebrew Gramarians*, who for this cauſe, that the *Tongue* doth daſh the aire formed into a voyce, now againſt this part, now againſt that, have diſtinguiſhed their *Letters* into *Labiall*, *Gutturall*, and *Dentall*. Hence it is, that when the *Tongue* is diſappointed of

the commodious and neceſſary aide of the adjacent parts, whereby it comes to paſſe that certaine Letters which are wont to be framed by the miniſtrie of theſe Members, are very hardly or worſer pronounced; Chyrurgions by a bold Art, raiſed from ſubtile obſervations made upon the naturall uſe of every implement of Speech, take upon them to repaire ſuch defects, and to piece and patch up the broken and decayed Harpe of Speech.

But in Man theſe *Organs of Speech* are longer before they are perfect for *Action*, becauſe of the excellent variety and and differences of Letters; whereas other creatures can expreſſe few or no Letters; and that which is various and diſtinguiſhed with many differences, that is longer in perfecting. The voice indeed is but one, but there are many kindes of ſpeaking. And verily children at firſt, no otherwiſe then Brutes, doe expreſſe their *Appetitions*, being not able to pronounce Letters. An Infant being called *Infans, quaſi non fans*; becauſe he ſpeakes not, for an Infant is borne Dumbe· So that it is miraculous

that

that *Hali Abben Ragel* reports, to wit that he ſaw an Infant who beganne to ſpeake when he was ſcarce 24. houres old, ſince he was borne unhappily to foretell the loſſe of the Kingdome, and the deſtruction and deſolation of that Nation.

Vandale the Wife of *Duke Baruch*, having conceived by him, after ſhe had been pregnant two years, brought forth an Infant that preſently did goe and ſpeake.

Anno 633. *Nanthildis* the wife of *King Dagobert* the ſecond, brought him a ſon which was named *Sigibertus*; this Infant being forty dayes old, when hee was to be Chriſtened by St. *Amandus* the Biſhop, when they all were ſilent, he anſwered with a cleare voice, *Amen.*

Anno 1104, a woman that had gonne with child two yeares, brought forth a Man-child ſpeaking.

Anno 1275, in *Cracovia* a certaine Infant ſcarce halfe a yeare old, beganne diſtinctly and readily to ſpeake, and ſay to the great admiration of all; The *Tartars* ſhall come and cut off our Heads:

and when he was asked whither he was not afraid himſelfe of the *Tartars*, he anſwered, yea, in good ſooth I am in great dread of them, becauſe they ſhall take away my head alſo: which came to paſſe 12 years after.

Another certaine Infant having all its Teeth was borne, and in the firſt day of its birth beganne diſtinctly and readily to ſpeake, untill it was Baptized, afterwards it loſt its Teeth and Speech.

Yet they that write of the *Indians*; report, that the children of the *Guineans* do generally both goe and ſpeake when they are but a year old.

Cardan reckoning up many things whoſe meere rariety cauſeth admiration, for that they happen but ſeldome, ſaith, That it is naturall for an Infant (although he be new borne) to ſpeake; and yet it is held for a very great wonder, as a thing comming againſt nature, becauſe it is rare.

But after what manner it is naturall, *Ariſtotle* teacheth us, for ſince *Speech* conſiſts of the *ſtrength of the Tongue* and *Intelligence*, and *Intelligence* comes to the moſt

moſt before the *ſtrength of the Tongue*, it comes to paſſe that it ſeems a wonder for any to *ſpeak* before their *Underſtanding* is abſolute: And yet if the *ſtrength* of the Tongue may bee firſt compleate, ſince man is prepared by nature to ſpeake, what ſhould hinder him but that he ſhould, as Pyes, and Parrots, rehearſe things heard though not underſtood? Or that hee ſhould not with ſome endeavour and concourſe of Spirits to his Tongue, pronounce things hee underſtands? That which ſhewes this to be ſo is, that this cheifly happens, and more clearely, to them when they awake from ſleep: For then things ſeen and heard by ſleep, move more, and there is preſent more plenty of ſpirits, and the Tongue by ſo long reſt becomes ſtronger.

Of the uſe and neceſſity of ſuch a ſtructure of inſtruments for Speech.

CHAP. II.

Speech being *the Worke of Reaſon performed by certain inſtruments*, man received a power of forming certain ſounds, and apt Inſtruments for the production of Speech: for unleſſe there had been ſome kinde of meanes or way found out, that he might as it were lay open the motions of his minde, it had been debarr'd the freedom of communication. Therefore there was need of an artificiall ſtructure of Inſtruments, whereby the *minde* as a *quil* ſtriking upon the parts appointed for the forming of the voyce, by ſounds expreſſed after a certain manner, ſhould ſet forth and *lay abroad to the view*, it ſelfe expounded by *external motions*. And as a *Muſician* that is deſtitute of a Voyce, uſes *Aſcititious Voyces* of a Pipe or Harpe; ſo the *minde* of man the Searcher out of divers rules and faſhions, ſeeing ſhe could not open the purpoſes of her thoughts in the

the heart, or phanſie, which perceives things by externall Senſes, as an induſtrious *Artifex* ſhe beates upon the *animal Organs*, and by ſounds produced by them, *communicates* and *makes manifeſt* her *bidden cogitations*. In which Inſtrument of ſpeech, there is a mixt kinde of Muſique of a Pipe and a Lute, no otherwiſe than if theſe two inſtruments ſhould ſound together in a mutual concent. The *Breath* paſſing through the Artery, imitates the ſound of a Pipe, the *Palate* and the *two Pipes that belong to the Noſtrils*, the *Cheekes*, the *Tongue*, and the *ſtructure* of the *Jawes*, about which the *chin* unfolded in a concave forme, at length ends in a ſharpe point, all theſe variouſly and manifoldly repreſent the *plectrum*, and the *Lute*, and with great variety changed the *tones* of the Voyce, as the matter requires. And laſt of all we uſe the *diduction* and again the *compreſſion* of the *lips*, as Muſicians who by the Stops of their Fingers *moderate the Breath* in Pipes, and the harmony of the Song: and therefore in the mythologie of the ancient Ethnickes, *Mnemoſyne* who is ſaid to be the Mo-

ther of the Nine Muſes, whom ſhe bore to *Jupiter*, with their brother *Apollo*, import nothing elſe but the ten Modulations of Mans Voyce: therefore in *Apollos* Harpe repreſented with ten ſtrings; ſo in the Scripture we reade of the Dedacord or Pſaltery: others allegorize it to be the four fore-teeth, againſt which the Tongue ſtriketh, the two Lips which are the Cymbals or Inſtruments to faſhion the words; the the Tongue, and the ſtring of the Tongue: the Palate whoſe concavity begets a ſound; the Wind-pipe which is the paſſage of the Breath; and the Lungs which like a pair of Bellowes give and take back the Ayre or Spirit.

Of the conveniencie and excellent ſcituation of the Mouth for the more viſible appearance and manifeſtation of Speech.

CHAP. III.

SPeech being the *end* of the *Voyce*, it was proper and requiſite, that the *Organ of Speech* the *Mouth* (which containeth

taineth in the amplitude of its cavitie, all that Region which lyeth from the *Larynx*, the Organ of the voice, to the border of the Lips) ſhould bee placed *after* the *Organ of the voyce*, as nearer to the *advantages of Utterance*; that as the *Articulation* of the Bones hath an *evident motion*: So *Speech* which is a *Metaphorical Articulation*, that is an *affection* hapening to the *Voice*, might be performed by a *moſt evident motion*. Therefore the *Tongue* ariſeth neere the ſupream part of the *Larynx*, and being interwoven with all kind of *Fribres*, it is eaſily and ſwiftly moved any way, wherefore according as by inhearing to the *Palate* or the *Teeth*, it oppoſeth it ſelfe divers wayes to the *Voice*, proceeding out of the *Larynx*, divers *Articulations* ariſe according to our *Arbitriment*, ſignifying the conceptions of our Minds; to which operation the *Lips* does very much conduce, which are moveable after all manner of wayes, which that they might eaſily *oppoſe* the *voice*, and moſt ſuddenly either *precede*, *accompany*, or *follow* the *motions of the* Tongue, were to be placed as nigh the *Throat* as poſſi

ble

ble might be. Hence it is, that in favour of *Speech* and *Dearticulating* the voyce, among all Animals, Man onely hath his *Face leaſt prominent*, and his *Lips leaſt diſtant* from his *Throat*. His *Mouth* being commodiouſly placed in the *Confine* and *paſſage* of three great Venters, the *Head*, the *Thorax* and *Abdomen*, which powre out their force into it, making it their *Generall vent* and *breathing-hole*: For ſince it was to bee the Organ of *Speech* and *Singing*, it was to be fitted to the *Larynx* and the *Arterie* both, and to the *Head*; for being neceſſarily to bee *moved in ſpeech*, it behoved it ſhould expect the force of *moving* from the *Head*, from whence it flows into all the parts. And ſince *ſound* is not but from the breath, whoſe conceptacle the *Arterie* is, it ought to draw it from thence; for things that are *nigh*, doe more commodiouſly receive force by influence than they that are a *far off*. Adde unto this, that the *conceptions* and *notions* of the *Mind*, which the *Mouth brings forth*, ſignified by ſound and the voyce deſcend from the *Head*, from whence it was better to receive them without a

Medium

medium, for ſince they are *intentional* they would eaſily vaniſh. And the *ſcitnation* of the *Mouth*, in the forepart and *middle of the Face*, in that portion thereof which the Ancients called *the Temple of Goodneſſe and Honeſty*, is moſt *conſpicuous*, and none of the leaſt *advantages* to the *apparence of Speech*: For, man was ordained to *converſe* with man *Face to Face*: and therefore it is ſayd, that God ſpake with *Moſes*, as a man talketh with his Friend, *Face to Face*. And no man doth love to hold *Diſcourſe* long, before a *Face* muffled or turned away; Speech being rendred thereby obſcure, and leſſe intelligible. And therefore *Adam* when hee required one to converſe and diſcourſe with, God when he intended to accommodate him with a Talking Mate, the genuine expreſſion of the word is, *Faciam adjutorium quaſi coram*, or *contra eum*. For ſince the *countenances* of thoſe that *conferre* together are *mutually turned one towards another*, and Man was born to move with his *Face forwards*, it is apparent that the Faces of thoſe that *talke together*, are as it were the *Face* of thoſe that goe oppoſite

ſite and contrary wayes, and by conſe-quence, they are oppoſite and contrary in the *ſame line*; ſuch a helper was not found among al the creatures, and there-fore it was ill with *Adam*. And indeed the Mouth lyes ſo convenient and op-portune for *obſervation*, and *diſcerning the locall motions of words*, and for *in-ſpection* and *expoſition of mens minds* thereby, that the *Hebrews*, to the honour of the *Viſibility of Speech*, moſt con-ſtantly attribute *Speech* to the *Lips*; the Scriptures abounding in ſuch kind of expreſſions. 'Tis true, this *ſounding vi-ſible image of the mind*, is not the *Origi-nall*, but a *Copie* only of the Mind, for the *faculty* or power of Speech con-ſiſteth of two *Actions*, the one *outward*, the other *inward*: the *inward* Action of *Locution* which ever preceades the *outer* Speech, is *inviſible* : but the *outward*, which is the giving of various ſounds to our breath, as it paſſeth through our Mouth, by divers *conjunctions* of our Tongue and Lips to themſelves, or to divers parts of the Mouth, or by their ſeparations from them, is ſo *evident and apparent*, that the conſideration of theſe pre-

premiſes makes me reflect upon a place of *Plinie*, (but by way of reverſe) for wheras he affiims that a great part of the Countenance conſiſteth in the Voice, this with as good reaſon ſheweth, that a *great part of the Voice, even when it is artiulated into ſpeech is in the Face* or *Countenance* no vocall or articulate expreſſion havnig anyproduction of ſignification, without ſome *manifeſt and proper motion or alteration of the Countenance*: No marvell thenthat it alwaies proves ſuch a notable *Interpretour* to the *litteral meaning* of our words. And therore the conceiteof that Gentleman ſeems to me veryingenious, and worth more ſcanning than this place will afford; who coming to the *Spetle* to heare one of thoſe Sermons which are uſually Preached there upon *Eaſter* Holy-dayes; when he could not by reaſon of the greatneſſe of the Congregation come neere the Pulpit to heare, nor well diſcerne the Face of the Preacher; remembering he had a Proſpective-glaſſe in his pocket, tooke it out, and levell'd it at the Preachers Face, by which inſtrument having drawn the Preacher to appeare nearer unto him, he not only

ſaw

ſaw, but heard him very well. Indeed that Word which ſounds outwardly, is but the *ſigne* of that which *appeareth* inwardly, and to that rather doth the name of the Word appertaine: For, that which is *framed and delivered by the Mouth*, is but *Vox Verbi*, and is ſo called in reſpect of the other, from which it hath the *Derivation and Apparencie*, and there may be a *Word* (a *Mental one*) without *pronunciation*, but there cannot bee *pronunciation* or any Vocall repreſentation of the Mind by any utterance of Diſcourſe, without a *Word*.

That Speech is a voluntary Action, and therefore perform'd by Motion.

CHAP. IV.

WEE know nothing (ſaith the *Verulanian Oracle*) that can at pleaſure make a Muſicall or Immuſicall ſound by *voluntary motion*, but the Voice of Man and Birds. By Speech which is an immuſicall Sound, framed by

by the Motion of the Tongue and Lips, Man hath a prerogative of expreſſing his Mind : To Speake being nothing elſe, but by certaine Motiuncles of the Mouth to open our Cogitations to others in Words proceeding from the Conjugations of Letters, whereof our Speech conſiſts. Letters the true Elements of Speech being made of Motions, nay being nothing elſe but locall motions of the parts of the Mouth, it being in vain for any man, opening his Mouth, and uttering out his breath, to ſtrive to ſpeake without moveing his Lips and Tongue : For, the other inſtrumenrs of Speech although they concurre with the Moveable parts, yet becauſe not moved, are not reckoned among the cheife Cauſes and Authors of Speech ; ſince the very Tongue and Lips, which were made very Moveable and Voluble to this end, are not accounted the chiefe inſtruments of Speech, and firſt cauſes of Articulation, but *quatenus they are moved.* And they are Moveable in as much as they have obtained a Faculty of Moving, and are Muſcules, which are the *Adequate Or-*

gans

gans of voluntary, Motion. For Speech is a voluntary Action and free, and may be made or reſtrained according to our arbitriment, and wee at pleaſure can either ſpeake or hold our peace: And therefore it is performed by Muſcules, which are Arbitrary Organs. Hence the Tongue and Lips performe Speech, and conforme Letters by locall Motion, as is *moſt evident to Senſe*, and confirmed by Reaſon, for being a *voluntary Action*, it is therefore perform'd by *Motion*, as other *voluntary Actions* of the Tongue are. Indeed the Tongue as it is the ſenſory of Taſt, doth not neceſſarily require moving, for the alteration and dignotion of Sapors, is accompliſhed without moving; but other offices of the Tongue as voluntary, are altogether performed by moving, moſt Eminently among the reſt that of *Speech*: So that *Motion* alone is able to give account of all the *voluntary expreſſions of Speech.*

That

That Words are nothing elſe but Motion.

CHAP. V.

WHat *are words but motion*: ſaith the truly noble & learned *Digby*? wch confirming interrogation may ſeem ſtrange to thoſe who are not well acquainted with the myſterious *Eſſence* of *words*, and yet to thoſe that ſhall ſcan it well, it will appear manifeſt, that Words (as hath been ſaid) are nothing elſe but *locall motions of the parts of the mouth*, and that they have no exiſtence without *motion*, nor can ſubſiſt beyond it, their *ſound* periſhing and expiring as ſoon as the *motion* determines; for otherwiſe it would fall out as in ſome ſuddain Ecchoes, that one word would chop upon another, and ſo drown each other in the very act of delivery, which would tend to the confuſion and utter annihilation of Speech. So they who would diſtinguiſh betwixt Words and Motion, and reduce them to ſeverall predicaments, muſt labour at four Workes: firſt to produce Words with-

uot

out any *local motion* of the mouth. 2ly, to accompliſh the literal or *articulate motions of the mouth*, without any *audible* or *viſible articulation*. Thirdly, to keep Words from vaniſhing away with the Motion, or periſhing upon the determining of the Motion of the Mouth. And fourthly, to preſerve the Motion a foot after the creation of Words. And ſo they may make a Diſtinction, otherwiſe Words and Motion, as having one common life and exiſtence, will live and die together. He that ſhall attempt this, will have as hard a taske as *Eſdræ* had, when the Angel bid him ſhew unto him the image of a Voyce, and would be forced to anſwer with him, Who can do this thing but he who hath not his dwelling with men? Some zealous Patriots of the *Ariſtotelian* Philoſophy, ſeem very unwilling to admit Words to be Motion; and therefore had rather ſay, that Words are not Motion, but by Motion of the Tongue Words are uttered, believing that we move our Tongues many times when we ſpeak not. But if Words were Motion, we muſt ſtill ſpeak when we

we move our Tongue. But I ſuppoſe a fair diſtinction, implying the *ſpecies* of Motion may induce much to a reconciliation, to which end we ſay, that Motion agrees with the Tongue generically, and the Motions of Speech ſpecifically. For as concerning the Offices the Tongue performes by *Motion*, *Motion* may be ſpoken of the *Tongue* in divers reſpects, as *Commanducation*, *Deglution*, *&c.* and as here of *articulate ſpeech* or *wording motion*. He that ſhould infer upon him, that holds *Words to be nothing elſe but Motion*, that the *Tongue* muſt neceſſarily *talke* as often as it walkes, may as well ſay, Walking is Motion. But the *Foot* is the Organ of *progreſſive Motion*; *Ergo*, A man cannot *move his foot*, but he muſt *walke*. This were not to argue like a *Peripatetique*. And it may be if *Ariſtotle* himſelfe, whoſe Dictates are worthy of all honour, had lived to ſee the progreſſe and advancement of Learning, in the miraculous effect of this Art, he might have been induced (at leaſt by way of Probleme) to aske this Queſtion, *Why Words ſeem to be a* ſpecies *of Motion?*

Of the excellent choice of Nature in the Appulſive Motions of Speech.

CHAP. VI.

IT is no wonder that Nature deſtined the *Mouth* for the place and Organ of *Speech*, wherein (if any where) various and manifold Appulſions are made, wherein the Tongue and Lips being *moveable*, may be *appelled* and concurre together: yet the Motions of the Tongue and Lips which conduce to *Speech* and the *production* of *Letters*, alſo though they are manifold and various they that are moſt agreeable for forming of Letters, are chiefly *upward* Motions, for it behoved theſe Inſtruments to follow the nature of the *Ayre* (which is a moſt light body) whereby it raiſeth it ſelfe *upwards*. All *Appulſe* being done *ſtraight upward*: for, all *Appulſions* are not profitable to Speech, and to forming of Letters, ſince other Offices alſo of the Tongue, to wit, *commanducation* and *deglution* are performed by the *Appulſion* of the bodies of the Tongue, Lips, and Teeth; but

but with this difference, that the *Appulſions* which conduce to *Speech*, are more *facile* and *expeditious*, and are done with farre leſſe endeavour and ſtrength. For whereas the tongue is *appell'd* to the Palate, Teeth, and Lips, the Teeth to the Teeth, to the Lips and Tongue; and beſides Lip to Lip and to the Teeth and Tongue. Certainly thoſe Appulſions of the Tongue onely are profitable to *Speech*, which are made to the Palate and Teeth: and again, of the Lip to Lip and to Teeth, whereas other Appulſions conduce to other Offices of the Mouth: therefore there are two *efficient* parts of Appulſe, the *lower* Lip and the Tongue; the *ſuſcipient* or *ſuſtaining* parts are either the *upper* Lip, or the *upper* Teeth, if the Lip do *appell*, but if the Tongue do *appell*, they are the Palate and the Teeth. The Quere therefore is, Why ſince Appulſions are made from other parts of the Mouth, yet thoſe two propoſed ſhould be onely profitable to Speech? And it is anſwered, that thoſe Appulſions were admitted which were both *facile*, *ſwift*, and *elegant*; and on the contrary, thoſe rejected,

jected, which were either *unapt* to forming of Letters, or which were more *difficultly* or *ſlowly* effected or disfigured and deformed the Mouth. Nature having had great regard to provide for the *comelineſſe* and *decency* of *pronunciation*: therefore Nature avoided the *Appulſion* of the Tongue to the Lips, as that which came more *fouly*, *difficultly*, and *ſlowly* to the forming of Letters; for if the Tongue ſhould appell to the *lower* Lip, that Appulſe would prove unprofitable, for it would vibrate to no apt Letter; but if to the *upper* Lip, it would onely make *L*, *N*, *T*, *D*. but ill-favouredly and difficultly, which perchance Nature left to old men that were *Edentuli*; whereas the ſame Letters notwithſtanding are neatly, diſtinctly, eaſily and ſpeedily compreſſed by the *Appulſe* of the Tongue to the Palate. Beſides the *Appulſe* of the Tongue to the Lips could not be done unleſſe the Tongue were made longer, whereupon afterwards it would not perchance be congruous for the *Appulſe* to the Palate for the forming of other Letters. In like manner, Nature avoided the *Ap-*

pulſe

pulſe of Teeth to Teeth as that which can produce no conſonant by reaſon of a too fierce and cruell illiſion of the ayer, which ſhould be pleaſing ſoft and gentle, it being worth our labour to be ſo faire ſpoken. Whence *Galen* ſaid, there ought to be a proportion and conveniencie between the *percutient Body* and *percuſſed*: therefore from the moſt hard *Teeth* there is made too fierce a pereuſſion to the ayer, and for this cauſe, although to the uttering of the voyce, hard bodies ought to concur: yet to *articulate* the ſame, that is to the production of any letters, either both, or one at leaſt, of the concurrent bodies muſt be ſoft, whereby the ayre may be pleaſingly intercepted and expreſſed, from whence it is collected, that nature in the producing of Letters, hath moſt eſpecially ſubſtituted thoſe *appulſions* which have *elegancy*; *facility*, and *expedition* adjoyned unto them, ſuch as are the *appulſion* of *Lip* to *Lip*, and to the Teeth; and of the *Tongue* to the *Palate*, and the Teeth. And verily ſo farre are the *Motions* requiſite to *Speech*, from introducing any

deformity into the Face, that they are obſerved many times to improve the *Countenance.* Wherefore the Bride-groome in the Canticles to his Spouſe. *Sicut vitta coccinea labia tua,* Thy Lips are like a thread of Scarlet, and thy talke is comely. And it is a piece of the character of our *Henry* the ſeventh, that his *Countenance,* to the diſadvantage of the Painter, was beſt when he ſpake. But above other conſiderations it appeares, that Nature in the contrivance of *Speech*, affected *expedition*, which is diſpatched by moſt *ſwift*, and *expedite Motions*: for if *Speech* be made by *Motion*, and ſignifie the affections of the mind, which are *Motions*: without doubt, the *moving* of the *inſtruments* muſt anſwer to the *movings* of the *minde*; now ſince there is nothing *ſwifter* than the *minde* which in a moment can paſſe unto the Heavens, and ſurvey the whole earth; it is requiſite and deſervedly fit, that the *Motion* both of the *Lip* and *Tongue* ſhould be moſt *ſwift*, as that which was to follow the *motions* of the *minde*. Therefore nature would have theſe *appulſions* and

motions

motions performed, not by the *Muſcules* of the *Tongue* and *Lips*, but from their Body only, *quatenus* they are *Muſcules*, whereby the *Motion* and *formation* of *Speech* might be moſt ſwiftly diſpatcht; for, both the *Tongue* and the *Lip* hath *Muſcules*, and are made *Muſcules*; *quatenus* they have *Muſcules*, they are moved by another, and therefore more ſlowly: but *quatenus Muſcules*, they are moved of *themſelves*, and moſt ſwiftly and expeditiouſly rolled, agitated and appelled. And for this cauſe chiefly, were the *Tongue* and *Lips* made *Muſcules*, that they might ſtrike on and affect the ayre, which is indeed a moſt light Body, and in the meane while moſt ſuddenly follow the moſt ſwift *Motions* of the mind. It ſufficiently therefore appeares, the *moving* whereby the *Tongue* and *Lips* are moved to performance of *Speech* proceeds not from any other, but from their *proper Bodies*, the *Motion* ariſing thence being ſufficient for ſuch an employment; for when as Nature with that which in *moving* required no great *ſtrength*, requires alſo the *celerity* of

motion, ſhe makes the parts to be moved of themſelves, mingling throughout the *motory power* with the *part to be moved*, as in the *Lips* and *Tongue*, which ſince they were not to agitate bones or Meates, but moſt light ayre, and to afford quick and *ſpeedy motions* in ſpeaking, by good reaſon we judge Speech to be accompliſhed without the miniſtry of Muſcules, by the *Body* onely of the *Tongue* and Lips; for if in ſpeaking, the *Tongue* ſhould be moved by Muſcules, as in *Commanducation*, both its *motion* and *Speech* would have fallen out to be farre ſlower: but it was fit that Speech ſhould be moſt ſpeedy and expedite, that the ſoule might on a ſuddain ſignifie its conception of pleaſure or diſtaſte, to the Conſervation of the Body.

That the Motions of thoſe parts which Create words, excell the ſignifying faculty of any other member.

CHAP. VII.

TO *ſpeak*, is nothing elſe but by certaine *motiuncles* of the *Tongue* and *Lips*, to intimate and ſignifie certaine things, as it is agreed between thoſe that ſpeak together, that is to ſay, as ſome are wont reciprocally to open their cogitations by divers motitations of their fingers. This only being the difference between them, that the *Tongue* and *Lips* are the moſt accomodated of all the parts of our Body, to ſignifie what is conceived in the mind. The *Tongue* by reaſon of its wonderfull *mobility*, and becauſe it is placed in the very paſſage or high-way of the Breath, by its *diverberation* produceth manifold ſounds, which occurre to the hearing of man afarre off, therefore this particle is moſt ready, beſt provided and moſt fit and convenient, to which men ſhould commit the office of *Communi-*

cating what they have conceived in their mind; becauſe no other part can undergoe ſo many and ſo various motiuncles, and by the aſſiſtance of the Lips and the other inſtruments of Speech, frame ſo manifold voyces: neither came it to paſſe by chance, that the *Tongue* ſprung up to be apparently accommodated for this uſe, but it was ſo provided and ordained by Nature; for, a *ſoft* and *voluble ſubſtance*, endued with many *Muſcules* at its root, placed upon the Larynx, planted beneath the *Palate*, encompaſſed with the *Teeth*, and *Lips*, that receiving the Ayre expired by the Larynx, and driving it many wayes againſt the *Palate*, and Teeth, it might produce manifold *ſounds*, by which according to his arbitriment, man might ſignifie to man his otherwiſe incognoſcible cogitations. Therefore the *Tongue* and *Lips* are thought to be farre more accommodated to intimate our thoughts, than either the *Hand* or *Foot*, or any other particle, becauſe of the peculiar advantages of their expreſſions, which according to the Doctrine of this Art are moſt viſibly audible. *That*

That Speech is an Articulate Voyce formed by the Conjugation of certaine Letters.

CHAP. VIII.

THe Tongue (which yet as the great Advancer of Learning ſaith) is no very fine inſtrument, in point of Articulation, maketh no fewer motions, than there be Letters in all the words we utter. Hence *Speech* which the Latines expreſſe by the words *Locutio, ſermo, oratio,* or *Loquela,* and the Greeks by διάλεκτος, as if you ſhould ſay *Colloquium*, may be defin'd an *Articulation of the voyce* by (the efficient Cauſe or inſtrument) the *Mouth*: in which Definition the *voyce* is the *Genus* ; for, the *voyce* is the *matter* of *Speech*, there being no way without the *voyce*, for any man to *ſpeak* out; and the *Difference* which informes the *voyce* with *Speech*, is *Articulation*. For, the *voyce* inform'd with *Articles*, is an *Articulate voyce*, which is called *Speech*. As for the *voyce*, that is conformed in the *Larynx* by the *Cleft*, and as

ſoone as it is produced, it offers, Subjects, and fits it ſelfe, as it were the *matter* of *Speech*: But the *Articles* which come upon the *voyce*, and *informe ſpeech*, deſerve a more diligent conſideration, for, this *affection*, happning to the *voyce*, is a certaine *interception*, *diviſion*, *Diſtinction*, or *interciſion* of the *voyce*, which being of its owne nature *fuſe*, *continued* and *indiſtinct*, upon the *Articles* acceſſion, the *continuation* of the voyce is *intercepted* and *taken away*. As when we *looſly*, *indiſtinctly* and *continually* forme the voyce thus: o o o. if we to it adjoyne the *article* c, n, or t, now it will be co, no, to; that is to ſay, we conſtitute there by a *divided and intercepted voyce*. Which thing a very *Pipe* diſtinguiſhed with *ſtops* doth moſt fully declare, which without the *motion* of the Fingers, ſends forth onely a voyce, but with the *motion* of the Fingers and the interchangeable *apertion* or *occluſion* of the *ſtops*, it brings forth an *intercepted* and *articulate voyce*, and after a manner *ſpeech*: And although *ſpeech* is proper to man, as proceeding from his Enunciative Fa-

Faculty, notwithſtanding other Animals doe ſpeake among themſelves, And a *Pipe* or *Harpe* utter after a manner an *Articulate voyce*. Therefore a voyce not *looſely ſpent*, nor *continued*; but *interciſed*, *diſtinct*, and *intercepted*, is Speech, or an *Articulate voyce*; called therefore διάρθρωσις by *Ariſtotle*, to wit *Dearticulation*, Metaphorically as *Fabricius* thinkes, a Denomination taken from the *Articles* or joynts of the Bones, for as διάρθρωσις according to *Galen*, is an *Articulation* or *Compoſition* of *Bones*, which hath an *evident motion*. So *Speech* is performed by *evident motion*. Beſides, as *joynts* are certaine *knots* which ſeeme after a certaine manner to *intercept* the *continuation* of the *Bones*: ſo *Speech* alſo, which is an *Articulate* or *joynted voyce*, ſeemes to be *intercepted* into many parts, not ſpread out in one looſe tract nor continued. And as by the *joynts* the ſeparated Bones are *conjoyn'd*, that they proceed in a kind of *continued ſeries*: So an *Articulate voyce*, although it be manifoldly *divided*, yet it flowes out ſo *continued*, that it may ſeem to be *joyned* and cou-

pled together, or perchance we may ſay, *Speech* is called an *articulate voyce*, as much as if we ſhould ſay, *diſtinct* and *manifeſt*: metaphorically alſo, by a denomination taken from *Articles* added to *Nounes*, which not only the *Grecians*; but the *Italians* and *French* alſo, and many other adjoyn unto their Nounes, that as *Articles* added to *Nounes* ſignifie a *diſtinct* and certain thing: ſo the *voice* which of its own nature is *defuſe*, *continued* and *indiſtinct*, as being dead without Letters; when it appeares to paſſe into Speech, is made *diſtinct* and *manifeſt*, and it advanceth into *ſpeech*, if it be imformed by *Articles*: ſo that although man had *inſtruments* requiſite for the expulſion and colliſion of the voyce, and breath and ayre as the matter for the production thereof, that it might reſound as an adequate object of hearing; yet he had not had the diſciplinative and informing power of Diſcourſe, unleſſe thoſe Voyces were ſo *articulated*, that they might ſignifie and repreſent the conceptions of the minde: for, the Auditors by reaſon of the defect of *Articulation* would not be edified thereby.

That

LIBRARY OF GALLAUDET COLLEGE

That Letters, the true Elements of Speech, quatenus they are pronounced, are natural.

CHAP. IX.

THoſe Letters which we bring forth and are uttered in pronunciation, are natural; thoſe which we write, artificial: for if Letters be made of Motions, or (rather indeed) are nothing elſe than the Motions of the *parts of the Mouth*; without doubt we affirme, that even as thoſe Motions are natural; ſo the Letters conſiſting of thoſe Motions, *quatenus* they are pronounced, are natural: which *Martianus Capella* the renowned Grammarian ſhewes: where he divides the Letters into *natural* and *effected*, calling thoſe natural which we ſpeak, but thoſe, effected characters which we write. And for this reaſon it is, that Letters with all Nations in reſpect of their places or way of pronunciation are the ſame, and although the contrived images of the natural Letters or character may differ in their repreſentation,

ſentations, yet *quatenus* they are pronounced, there is no diverſity in ſpeaking: but that afterwards ſo numerous and various Tongues enſued, the Letters are not the cauſe, but the compoſition of Letters, that is Syllables and Words. And it comes to paſſe alſo hence, that Letters are natural, as they are created by certain deſigned parts, neither can they by promiſcuous parts, or by any mutual compact, be any otherwiſe formed: for, certain kinde of Letters are procreated from the Appulſion of *Lip* to *Lip*, certain alſo from the *Lip* to the *upper Teeth*, and certain alſo by the Tongue and Palate: neither is it to any purpoſe that one ſhould attempt to pronounce F with both his Lips, or M with the Tongue and Palate, or N with the Lip and Teeth, although they endeavour it with the moſt exact diligence, and ſtretch and diſtort his Lips never ſo much, but he ſhall perpetually be inforced to make M, B, P. with his Lips: F and V conſonant with his Lip and Teeth, and the other Conſonants with his Tongue and Palate: but by what meanes this is done, eſpecially

ſince

ſince the appulſion and moving is one; let them explain who ſhall have the happineſſe to know the cauſes of ſo great things, it is enough for us with others to give a hint or imperfect report of this admirable contrivance of the Builder, and divine concent of parts.

That the Motions of Inſtruments of ſpeech which go to the making the Alphabet *of* natural Letters, *are worthy Enquiry.*

CHAP. X.

AMong other things pertinent to the inquiſition of ſounds, the *motions of ſpeech* are recommended unto us, by the great Advancer of Learning, where he ſaith, The *motions* of the *tongue*, *lips*, *throat*, *palate*, *&c.* which go to the making up of the ſeveral Alphabetical Letters, are worthy enquiry. The *Hebrews* have been diligent in it, and have aſſigned which Letters are *labial*, which *dental*, which *gutiural*, *&c.* As for the *Latines* and *Grecians*, they have

have diſtinguiſhed between *ſemi-vowels* and *mutes*, and in *mutes* between *mutæ tenues*, *mediæ*, and *aſpiratæ*, not amiſſe, but yet not diligently enough: for, the ſpecial ſtroakes and motions that create thoſe ſounds, they have little enquired; as that the Letters B, P, F, M. are not expreſſed but with the *contracting or ſhutting of the Mouth*. That the Letter N and B cannot be pronounced, but that the Letter N will turne into M. as *Hecatonba* will be *Hecatomba*. That M. and T. cannot be pronounced together, but P will come between, as *emtus* is pronounced *emptus*: ſo that if you enquire to the full you will finde, that to the making of the whole *Alphabet*, there will be fewer *ſimple motions* required than there are Letters. But becauſe theſe were ſubtill and long to deſcribe, he reſerres them over, and promiſeth to place them among his experiments of ſpeech: yet not having had the happineſſe to finde him ſo good as his word, having condoled the loſſe of ſuch accurate Obſervations as his would have proved: upon his hint of encouragement we advanc'd after the ſcrutiny of theſe Alphabetical

betical motions; wherein things have ſo ſucceeded to our inquiſition, that if we had intended a particular ſatisfaction, as we do onely a general intimation, we could produce ſuch an Alphabet as ſhould put an end to all Doubts in this matter, by exhibiting the motions of ſpeech in the capital Characters or Letters of our Alphabet, which as notes and images, with the quality and quantity of their Lines, do very aptly ſerve the natural Letters, in whoſe pronunciation, the parts of the mouth obtain a various Figure, and every Figure conſiſts of certain Lines: or in the repreſentative motions or poſtures and Figure of the mouth, marſhalled like the Alphabets of geſture in our *Chirologia*, expreſſe the very natural Letters themſelves, moſt apparently proving, that Letters are nothing elſe but motion, a ſubtlety of diſcovery which few will ever imagine ſecible, untill they ſee the ſecret opened among other nations reſerved for our intended Academy.

That

That the formes of Letters, and ſo conſequently of Words, may be punctually obſerved and took notice of.

CHAP. XI.

OVr Vnderſtanding indeed is very dull at the inſpection of *Formes*, and although (as the *Britiſh Stagerit* truly confeſſeth) it be neither poſſible or to purpoſe, to ſeek in groſſe the *Formes* of thoſe ſounds which make *Words*, which by *compoſition* and *tranſpoſition* of Letters are infinite: yet to enquire the *Formes* of thoſe ſounds or voyces which make *ſimple letters*, is eaſily comprehenſible, and being known, induceth and manifeſteth the *Formes* of Words, which conſiſt and are compounded of them; this being no more a vain purſuit than the enquiry after the *Formes* of *ſenſe* and *voluntary motion*, which is a part of *Metaphyſicke*, though *Phyſicke* doth make enquiry of the materiall and ſufficient cauſes of them, but not as to their *Formes*. And if a man ſhall keep a continuall watchfull and ſevere eye upon

on the *motions* of the *mouth*, he may adviſe and take notice of the *Formes* of ſpeech, the diſcloſure whereof would be fruitfull and important to this Deſigne: hence it is that although nothing is more variable than the *differing ſound* of *Words*, yet men have found out the way to reduce them to a *few ſimple Letters*, ſo that it is not the inſufficiency or incapacity of man's minde, but it is the remote ſtanding or placing that breedeth theſe mazes or incomprehenſions: the remedy whereof is not to quicken or ſtrengthen the Organ, but to go nearer the Object, and therefore there is no doubt but if we will learne and uſe the approches and avenues of Nature, we may maſter any difficulty that ſhall oppoſe the deſignes of our Intellect. But, indeed, the Obſervation of the *natural Letters*, in reſpect whereof all Nations are of *one lip*, as before the confuſion of Tongues, and the firſt finding them out, was abſolutely the rareſt and the moſt exquiſite felicity of Invention as ever ſucceeded to the wit of man: and but that I thinke the wit of man able to comprehend all things in the ſphere of its

its capacity (larger than moſt imagine) I ſhould be apt to attribute this ſubtile notion, to the revelation of ſome courteous ſpirits, it ſeems ſo to tranſcend the ordinary atchievement of our obſervation: and that ſo many *Languages* ſhould reſult out of the *tranſpoſition* of theſe 24. Letters, will not appear ſo ſtrange a thing, if we well conſider the infinite variety of mens *countenances*, the Face conſiſting not of above ten Lines, the leaſt alteration whereof cauſeth a manifeſt diſtinction.

That the Ancients took the eſſential difference of Letters, *from the various motions of the Mouth.*

CHAP. XII.

IT is manifeſt, that the Ancients chiefly diſtinguiſhed the *Letters* out of the *variety of motions*, which they obſerved in the very inſtrumental parts of ſpeech, ſeated in and about the mouth: becauſe thoſe which are made by the parts of the Body, are more *eſſential*,

as

as making *different articulations*, that is, *Letters* altogether *distinct* from one another, of which kinde there are not above ſeven *eſſentially* diſtinct, beſides the Vowels: whereas there are more made from the various moving of the very ayre, which is altered and moved by a greater or leſſe impulſion, although the *motion* and *appulſion* of parts be the ſame, as in B, P, C, G, D, T, F, V. For from the ayre variouſly affected by reaſon of a *milder* or more *valid motion* or appulſion of the very part which is moved (from whence there happens a more gentle or ſtronger eliſion of the ayre) the difference of many Letters were taken: for if the *Lip* be driven upward to the other *Lip* in a *gentle motion*, cauſing a milder eliſion of the ayre, M is made: if it be more forcibly impell'd B, if moſt ſtrongly P reſults: ſo that here you have *three letters* from *one ſimple motion*. Now although theſe Letters are made with the ſame parts, and differ not in the variety of parts, but onely in the vehemency of the impulſed ayre, yet Antiquity received them notwithſtanding into the number of Letters, to

prevent

prevent Equivocations, and unprofitable Repetitions: but because those *Letters* differed not in an *essential difference*, wch is taken from the *variety of parts*, but onely according to the *greater* or *lesser impulsion* of ayre, which for the most part varies not pronunciation, but retain their alliance of sound and article) therefore the Ancients by reason of this cognation or affinity which they have among themselves, in that they are made by the same *motion*, they would have them mutually to give way to one another, and one to be indifferently put for the other; whence it comes to passe that G, G. because they are formed by the *same motion* of the mouth, nor differ between themselves, unlesse because in C. the breath wanders more licentiously than in the prolation of G. they give way to one another, although perchance they said, they gave way one to another in regard of the propinquity of the appulsion of parts in them, so that those that are formed by the same motion and only vary with the elision of the ayr, in as much as they vary by reason of the ayre, they drew out *various letters*: but

in

in as much as they are made with the *ſame motion*, they put one for another; which they not onely obſerved in the Conſonants, but in the Vowells.

That the motions of the parts of the Mouth in Speech are ſo remarkable, that ſome have (not without ſucceſſe) attempted to imitate them by Mathematicall motions.

CHAP. XIII.

SVch Sagacious *Æmulators* and audacions *Inquiſitours* of Nature there hath been, who without naturall vertues, by *Mathematicall Magique* only, having borrowed the influences of the Heavens, produce workes like to thoſe of Nature, as ſpeaking Bodies, which are not endued with animall vertues; for, *Mercurius* writeth that the Ægyptiãs by a moſt inutterable art, made the Images of their Gods (eſpecially of *Mercury*) ſo, that they uttered an *articulate voyce*. And we have a hint

hint of encouragement to ſuch a Deſigne, from the Grand Augmentor of Sciences. There is found, ſaith he, a ſimilitude, between the ſound that is made by *inanimate Bodyes*, or by *Animate Bodies* that have no *voyce articulate*; and divers *Letters* of *articulate voyces*: and commonly men have given ſuch names to thoſe ſounds, as doe allude unto the *articulate Letters*. As trembling of water hath reſemblance with the Letter L. quenching of hot mettals with the Letter *Z*, ſnarling of Dogs with the letter R, the noyſe of ſcreetch-owles with the letter ſh. voyce of Cats with the Dipthongue eu. voyce of Cuckoes with the Dipthongue ou; Sounds of ſtrings with the Letters ng. So that if a man (for curioſity or ſtrangeneſſe ſake) would make a Puppet or other dead Body, to pronounce a word; Let him conſider on the one part, the motion of the Inſtruments of the voyce; and on the other part the like ſounds made in inanimate Bodies; and what conformity there is that cauſeth the ſimilitude of ſounds; and by that he may miniſter light to that effect.

But

But to come neerer to the point. Many of the Learned are of opinion, and perſwaded in their judgments, that the *imitation* of the *motions of our ſpeech* may be effected by inſenſible creatures; if a Dextrous man would employ his time in contriving and making ſuch an inſtrument to expreſſe thoſe different ſounds; wch not having more then ſeven ſubſtantiall Differences; beſides, the Vowells (as ſome who have careſully noted them, doe affirme) it would peradventure be no hard matter to compoſe ſuch an Engine, which becauſe it will be a ſubtle imitation of the worke of nature, it will be neceſſary that our Artiſt have this qualification of being more than ſuperficially tinctur'd in Anatomy, the better to be acquainted with the Muſcules, and the Nerves inſerted into their Heads, which are the principles and ſprings of all thoſe *outward motions* whereby *Speech* is *perform'd and uttered*. And I believe the Modell muſt be in faſhion of a *Head*, which is the Royall part unto which Speech is intruſted; for as the *Tongue* and *Lips articulate*; the *Head* reſounds. Frier *Bacons* brazen

Head,

Head, and that Statue framed by *Albertus Magnus* which ſpake to *Thomas Aquine*, and which he miſtaking for a Magical Device brake, was certainly nothing elſe but Mathematical Inventions framed in *imitation* of the *motions of ſpeech* performed by the Inſtruments in and about the Mouth. As for that leaden Pipe which *Baptiſta Porta* in his *Magia naturali* ſpeakes of as effectual to this purpoſe; or that of *Walchius*, who thinkes it poſſible intirely to preſerve the voyce or any words ſpoken, in a hollow Trunke or Pipe, and that this Pipe being rightly opened, the Words will come out of it in the ſame order wherein they were ſpoken, they have not ſo ſubſtantial a way for ſuch a Diſcovery, and therefore may be ſcand at leaſure with the Relation of *Baldaſſar Caſtilio* in his *Courtier*, and Dr. *Helyn* in his *Geography*, of a cold Countrey, where the Peoples Diſcourſe doth freeze in the ayre all Winter, and is heard the next Summer, or at a great Thaw: yet if the conceit of *Walchius* have any Truth, it may ſerve ſomewhat to extenuate the groſſe abſurdity of that Popiſh

Relique

Relique concerning *Joſephs* [Hah] or the noyſe that he made (as other Carpenters uſe, in fetching of a blow:) which is ſaid to be preſerved yet in a glaſſe amongſt other ancient Reliques.

That Articulate Speech *doth not neceſſarily require the audible ſound of the voyce, but may conſiſt without it, and ſo conſequently be* ſeen *as well as* heard.

CHAP. XIV.

ONe would thinke indeed, that *Speech* without the *voyce*, as the *Forme* without the *Matter* could not poſſibly conſiſt: yet if one ſhould by an emulous imagination abſtract one from the other, He ſhall find it to be ſo: for, the *formation of Articles* is from *Speech*, but the voyce was contrived that *Speech* might be *heard*; for which cauſe it is loud and ſounding: But Speech of it ſelfe alone without ſound or the voyce, can produce mute and inaudible articles of Elocution. Not that

the *Formes* of *words* are quite without their *matter*, He indeed, who as St. *Augustin* ſaith, can underſtand a *word*, not only before it ſound, but alſo before any Image of the ſound there be formed in the Imagination (although our ſight at beſt be imperfect in this kind:) yet he that deſires to attain it, muſt not look upon the *faſhion of our Words* either as they ſound in the eare, or are utter'd by the voyce, or' thought upon in ſilence (for the thoughts if you trie them) can even feign the noiſe of the *Tongue*. He muſt paſſe over all theſe, and come to that *prime Word* of a reaſonable creature, *quod nec prolativum eſt in ſono, nec cogitativū in ſimilitudine ſoni*; but doth exceed all thoſe ſignes, either externall or internall whereby it is ſignified, and is begotten of that very Science which remaines in the minde, and remaines truly and properly mentall, and is produced *intellectually* onely, without *Matter* or *Motion*. But in uttering of *words*, which is the effect of *Speech*, there is alwayes neceſſarily required both *matter* & *motion*. And therefore to prevent that the *Forme* ſhould never remaine quite without

without the *Matter*, Nature hath made a double proviſion; one is that a vowell ſhould be alwayes adjoyned unto a conſonant, for ſo the *voyce* perpetually as the *Matter* is adjoyned: the other is that there ſhould be a *momentany interſciſion*: for ſince *Speech* without the voyce which ſuſtaines it, cannot ſubſiſt, it is ordered the interſciſions of vowels, which effect Conſonants, ſhould be all momentany, for ſo the voyce is *intercepted*, and taken away by the vowell, and a Conſonant is formed. And in the meane while *Speech* is never without ſome low degree of the voyce, neither is its *proper matter* wanting unto it. The breath in its emiſſion being driven and daſhed againſt the inſtruments of Speech, and tacitely formed into words: And that *mute Articles* of *Speech* may be produced without any *audible utterance*, appeares in them that labour of the diſeaſe *Aphonia*, and have altogether loſt their voyce: and they who are mute by Nature, cannot, ſpeak but onely *Monophones*, that is one kind of ſound or voyce, without any *audible articulation*; whereas it is very re-

markable, that *Speech* doth not only forme out of it ſelfe *articles* of utterance, but alſo by it ſelfe alone can declare the conceptions and affections of the mind. *Fabricius* makes all this good by a familiar and eaſie Example. For when he was a Schoole-boy, there being many of them in one chamber, they were interdicted the uſe of Speech: But we (ſaith he) by the *motion* only of our *Lips* and *Tongne*, without any voyce at all, although we were diſtant one from another, did communicate our conceptions, and affections of our mind one unto another. And a curioſity of conſtant obſervation hath enabled many to doe as much: for *Lodovicus Vives* ſpeaks of ſome Artiſts, who could diſcerne what any man ſpake, though no ſound of their intent approached their eare, deſcrying the ſtilleſt and low-voyced words of their Lips, helped by an Art-informing and *attentive Eye*, only by *ſeeing their Lips to move and open as they doe in Speech*. It is likewiſe related of ancient Doctor, *Gabriel Neale*, that he could underſtand any *word* by the meere *motion* of the *Lips*, without

any

any *audible utterance.* And Sir *William Cornwallys* ſpeaking of a Lover, attributes ſuch a faculty unto him. His eares, (ſaith he) not having ability to perform their office, he therefore teacheth his eyes a *new occupation*, meaſuring the wind that proceedeth from his Miſtreſſes mouth, and ſpelling *Words* by the obſervation of her *Lips*. But we cannot wiſh for a more ample teſtimony of this thing, than the uſuall practice of thoſe friends of Mr. *Criſpes*, who being intimate with him, in their familiar converſation never uſed their voyce, but ſaved themſelves the unneceſſary labour of ſpeaking out, exhibiting only the motions of Speech diſtinctly unto him, without any other ſound than that of their pure motion, which is audible enough to him who wore his eare in his eye: Sound and the voyce adding nothing of pefection to the intelligible motions of Articulate Speech.

Since therefore the *Muſculous extremities* of the Mouth, together with the effect the inward motions of the other Inſtruments doe cauſe without, have ſuch an *evident ſtroak* without any au-

dible ſound, in the *articulate explanation* of the mind; He that can judge of the way of framing theſe *tacite Symbols of the mind*, beſides the uſe we here chiefly drive at, it might be of notable uſe in diſcovering the ſecret whiſperings of perfidious men, who are of the Generation *Solomon* ſpeaks of, who *move their lips*, to bring evill to paſſe: and to diſcerne the malicious anger of ſuch, who (as we uſe to ſay) mutter the Devils *Pater noſter*. Had old *Eli* had this Art, when he obſerved *Hanna's* mouth, *ſeeing her lips going*, when ſhe ſpake *mollia verba* praying ſoftly, he would not have ſo raſhly taxed her of Drunkenneſſe as he did, but might have underſtood the intention of her prayer.

That it is neither incredible nor impoſſible, that a man borne Deafe and Dumbe, ſhould be taught to heare *the ſounds of* words *with his* eyes, *and thence learne to ſpeak with his Tongue.*

CHAP. XV.

SO lazie and ſluggiſh are the naturall inclinations of moſt men, that they are prone to limit the infinite capacity of man, and the effects of his admirable obſervations, to known and common Matters: whereas conſidering his abilities, and the fertility of his Braine, there is no accident of imperfection that may befall him, but with the indulgent cooperation of Nature, he may work himſelfe either out of it, or invent a ſupply to the defect and inconveniences of it. For a notable inſtance of the induſtrious felicity of an obſerving wit in this kind, wee are extraordinarily beholding to that Gallant and learned Knight, Sir *Kenelme Digby*: That whereas hitherto, the underſtanding of *words* by the *motions of the Lips*, hath been an

Art which we have heard indeed, that many have pretended unto, yet hath been thought deceitfull and ſcarce to be credited; He affords us an Example of an Artiſt, who ſublimed this Art unto an almoſt incredible perfection.

The Hiſtory of this rare atchievement of Art is thus delivered, by that Honourable Relator.

THere was a Nobleman of great quality that I knew in *Spaine*, the younger brother of the Conſtable of *Caſtile*, who was taught to *heare* the ſounds of *words* with his *eyes* (if that expreſſion may be permitted) this Spaniſh Lord was borne Deafe, ſo Deafe, that if a Gun were ſhot off cloſe by his eare he could not heare it, and conſequently he was Dumbe; for not being able to heare the ſound of words, he could never imitate, nor underſtand them: The lovelineſſe of his Face,

Face, and eſpecially the exceeding life and ſpiritfulneſſe of his Eyes, and the Comelineſſe of his perſon, and the whole compoſure of his Body throughout, were pregnant ſignes of a wel-temper'd mind within. And therefore all that knew him lamented much the want of meanes to cultivate it, and to embrue it with the notions, which it ſeemed to be capable of, in regard of it ſelfe, had it not been croſſed by this unhappy accident, which to remedie, Phyſitions and Chyrurgions had long employed their skill, but all in vaine. At the laſt there was a Prieſt, who undertooke the teaching him to underſtand others when they ſpoke, and to ſpeake himſelfe that others might underſtand him, for which attempt at firſt he was laughed at, yet after ſome yeares he was looked upon as if he had wrought a Miracle. In a word,

after ſtrange patience, conſtancie, and paines, he brought the young Lord to ſpeak as diſtinctly as any man whatſoever; and to underſtand ſo perfectly what others ſaid, that he would not looſe a word in a whole dayes converſation. I have often diſcourſed with the Prieſt whilſt I waited upon the Prince of *Wales*, (now our gracious Sovereign) in *Spaine*, and I doubt not but his Majeſty remembreth all I have ſaid of him, and much more: for his Majeſty was very curious to obſerve, and enquire into the utmoſt of it. It is true, one great misbecomeingneſſe he was apt to fall into, whil'ſt he ſpoke: which was an uncertainty in the Tone of his voyce, for not hearing the ſound he made when he ſpoke, he could not ſteadily governe the pitch of his voyce, but it would be ſometimes higher, and ſometimes lower, though for

for the moſt part what he delivered together, he ended in the ſame Key as he began it. But when he had once ſuffered the paſſage of his voice to cloſe, at the opening it again, chance or the meaſure of his earneſtneſſe to ſpeak or reply, gave him his Tone, which he was not capable of moderating by ſuch an artifice as is recorded *Caius Graechus* uſed, when paſſion in his Orations to the People drove out his voice with too great a vehemency or ſhrilneſſe. He could diſcerne in another whether he ſpoke ſhrill or low: and he would repeat after any bodie any hard word whatſoever, which the Prince tried often, not onely in *Engliſh*, but by making ſome *Welchmen* that ſerved his Highneſſe ſpeak words of their Language, which he ſo perfectly ecchoed, that I confeſſe I wondred more at that, than at all the reſt, and his Maſter himſelfe would

would acknowledge that the Rules of his Art reached not to produce that effect with any certainty. And therefore concluded this in him muſt ſpring from other Rules he had framed unto himſelfe out of his own attentive obſervation; which the advantages which Nature had juſtly given him in the ſharpneſſe of Senſes to ſupply the want of this, endowed him with an ability and ſagacity to do beyond any other man that had his Hearing. He expreſſed it ſurely, in a high meaſure by his ſo exact imitation of the *Welch* pronunciation: for that Tongue (likethe *Hebrew*) employeth much the guttural Letters, and the motions of that part which frameth them, cannot be ſeen or judged by the eye, otherwiſe than by the effect they may happily make by conſent in the other parts of the mouth expoſed to view. For the knowledge he had of what

what they ſaid ſprung from his obſerving the motions they made, ſo that he could converſe currently in the light, though they he talked with whiſpered never ſo ſoftly. And I have ſeen him at the diſtance of a large chambers breadth, ſay words after one, that I ſtanding cloſe by the Speaker, could not hear a ſyllable of. But if he were in the darke, or if one turned his face out of his ſight, he was capable of nothing one ſaid.

A Preamble to the OBSERVATIONS upon the rare Atchivement of Art before related.

WE muſt confeſs there be infinite things in the boſome of Nature, which are hidden and unknown to us, Nature abounding with innumerable treaſures of Sciences which can never be exhauſted, and in the ſuppreſsion of ſome as in the manifeſtation of thoſe that are diſcovered, the immenſe Wiſedom doth ſufficiently ſhine and appear. The particular Notions and Rules of this new found Art, may perchance as that Invention of Herophilus *concerning the Rythme and metrical lawes of the Pulſe, appear a little too fine and ſubtle for the groſſe fingers of our Apprehenſion, and a Taske onely fit for the grand Maſter of Subtleties himſelfe. But upon the atchievement being matter of fact, a leſſe acute underſtanding may faſten a few eaſie Obſervations.*

Obſervation. 1.

THe firſt thing obſervable that occurres in this Relation is, that *this Spaniſh Lord was taught to hear the ſound of words with his eye, if that expreſſion may be permitted.* Indeed the exploit and expreſſion both, are very new, and may ſeem exceeding ſtrange to thoſe who either know not that there is a *community* among the Senſes; or have not well thought upon it. It being admirable how the objects of one *Senſe* may be known by another; and how one *Senſe* will oftentimes ſupply the office and want of another: for *light* may be *felt*, *odours* may be *taſted*, the *reliſh of meates* may be *ſmelt*, *magnitude* and *figure* may be *heard*, and *ſounds* may be *ſeen*, *felt*, or *taſted*. Examples and Experiments of all which Exchanges I am able to produce upon occaſion: ſo that to exerciſe *Senſe* is, our brain to receive an impreſſion from the externe object, by the opera-

operation or mediation of ſome one of thoſe which we call an externe *Senſe*, yet there ſeemes to be no abſolute neceſſity that *Senſation* muſt be made by an organical part made for that purpoſe, but *one ſenſe* may be exerciſed by the Organs of another, by changing the offices of the *Senſes*, which well examined would keep the moſt Sceptical from doubting of a *community* among them, if not of degree, at leaſt of the whole kinde: for we ſee the *touch* is the ground-worke of all the reſt. And therefore *Campanella* in his ingenious Book *De ſenſu rerum* proves, that all the *Senſes* are but Tact: but the *ſenſories* and manner of *ſenſation* differ, which he makes good through all the *Senſes*, proving that al *ſenſation* is performed by contact. By looking into the cauſes whereof we ſhall diſcerne theſe ſtrange effects to fal within the obſervation of Art, and to deſerve a further enquiry. That *odours* ſhould be *taſted* and the *reliſh of meates*, *ſmelt*, is not ſtrange, if we conſider the conformity betwixt the two *Senſes* of *ſmelling* and *taſting*: for, Phiſicians that write of theſe *Senſes*, finde them very con-

conformable: and therefore it happeneth that the looſing of one of them, is the loſſe alſo of the other. And accordingly the very names which men have impoſed to expreſſe the affections of both, do many times agree: as *ſavour*, which is common both to the *ſmell* and *taſte*; and *ſweet* likewiſe: the ſtrongeſt of which we ſee oftentimes do make themſelves known as well by the one as by the other *Senſe*; and either of them in exceſſe will turne a mans ſtomacke: and therefore deafneſſe which *Marcellus* cals *Surdiginem*, the *Greeks* call κώφωσιν which word as *Herotianus* notes (with *Hippocrates*) doth not only denote a privation of Hearing, but alſo ſometimes a privation of ſight; after the ſame manner (almoſt) as we finde among the *Latines*, that *ſurditas* doth oft ſignifie a privation or obtuſion of divers *ſenſes*, but howſoever one *ſenſe* through a *ſympathetical* league more naturally and ſtrictly obſerved between it and ſome other *ſenſe* may be impaired or ſuffer damage upon the defect of that other *ſenſe*: yet there is ſeldom any decay in Nature, but will be by this community ſome-

ſomeway ſupplyed. For if all the *ſenſes* ſhould be defective except the touch (which cannot be utterly loſt without the privation of life) the virtue of all the *Senſes* would run into the touch, and make that not to be depoſed King of the *ſenſes* ſo accurate, it ſhal be able to officiate for all the reſt. And indeed the expreſſions are ſomewhat remarkable, that men defective in their *Senſes* often uſe, which ſeem to acknowledge no defect, but what they have an equivalent recompence for; it being ordinary for blinde men to uſe words as if they ſaw: which I remember *Montaigne* in his *Eſſayes* takes great notice of, who was once viſited by a blinde Gentleman, who took upon him confidently to commend the Architecture and contrivance of his Manſion-houſe: What a fair lightſome room, ſaith he, is this? What a goodly proſpect this houſe hath? What a fair & beautifull childe is this? Taking upon him to judge of colours and all manner of beauty and proportion. And this day I followed a blinde man in *Red-croſſe*-ſtreet, who being near a Brew-houſe made a ſtand; Oh, ſaith

ſaith he, This is a Brew-houſe, I ſee it; to whom I: It is will gueſſed, Are you ſure you ſee it? I, replied he; That I do, I ſmell it. Two Gentlemen paſſing by, ſmiled at the blinde mans expreſſion, Nay, I aſſure ye Gentlemen, ſaid I, He is in the right, for he does ſee it, ſo I paſſed on leaving them two behinde me blaming the ſobriety of my juſtification of that, as they thought impropriety of *Speech* uſed by the blinde man, which put me in minde of a paſſage in *Servius* in his *Tractate de Unguent. Armario*, of a man that having loſt his eyes, ſaw notwithſtanding through his noſe. And I believe men accidentally deaf, who can ſpeak and perceive any thing by the motion ofmens lips, wil be apt(to the great juſtification of occular Audition) now and then to ſay I hear, or I have heard: and being the other day in company of one Maſter *Oxwyth* a *Spaniſh* Merchant to whom I am much beholding for ſome intelligence out of *Spain*, and he telling me ſomwhat of the rare qualities of this *Spaniſh* deaf Lord, which his Factor had ſent him intelligence of, (to ſatisfie my curioſity who had formerly intreat-

ed

ed that favour from him. He began to tell me ſomewhat of the moſt remarkable properties of M. *Criſpe*, who is wel known to be deaf, and among the reſt he ſaid, that a while ago he walking with him in the company of others, one asked him how his Brother did? My Brother (replied he preſently) is very well, I *heard* from him but the other day: and whether his intelligence came by word of mouth, or from the mouth of a pen; in tranſitory or fixed words; He that had an Ear in his Eye, might well ſay, He heard from his Brother. and that the defect of the *Ear* in deaf men, may be ſupplied by the office of the *Eye*, or the defect of the *Eye* in blinde men by the office of the *Ear*; ſo that the *Ear* alſo may *ſee*; will not appear ſo paradoxical, if we conſider the conſent of *viſibles* and *audibles*, as it is elegantly ſet forth by my Lord *Bacon* in his Natural Hiſtory, *Cent.* 2. from *Exper.* 255. to *Exper.* 267. which being long to recite, I referre to the inquiſition of the curious. And with good judgement for demonſtrations ſake, did that *Heroe* of learning uſe in divers inſtances, the examples

amples of the ſight and things viſible, to illuſtrate the nature of ſounds, proſecuting it to a more full compariſon, ſince the hearing hath a great affinity with the Organ of ſigh; for they have both one common faculty, and the extremity of the auditory paſſage, where the Nerve dilated is conjoyned with the included aire, doth anſwer to the Chryſtalline : in like manner thoſe parts which are about the involution of the *Eare* are correſpondent to the ſight of the *Eye*, and the other parts about the *Chryſtalline*. And I would fain know why *Gordonius* a learned Phiſician, as appeareth By his Workes, in his Deſcription of the Inſtruments of Hearing, where he writes of the *Diſeaſes of the Ear*, attributes a *concave optique Nerve* unto the *Ear*. His *Marginal Commentator* confeſſeth he ſeeth not for what reaſon he doth it, and till ſome bodie will undertake to ſee farther into his minde, we may ſuppoſe he was a ſecret Friend, and a well-wiſhing *Nichodemus* to *auricular viſion*. Now whether the expreſſion of *hearing ſounds with the Eye* may be permitted,

will

will appear, if it cannot be denied but that *Hearing* is nothing elſe but the due *perception of motion*, and that *motion* and *ſound* are not different entities, but in themſelves one and the ſame thing, although expreſſed by different names and compized in our underſtanding under different notions, which is proved by the obſervation of *ſounds* which follow the lawes of *motion*, for every effect of them is to be demonſtrated by the *principles* and *proportions* of *motion*. So that *motion* alone is able to effect and give account of all things whatſoever that are attributed to *ſound*, and *ſound* and *motion* do go hand in hand together, and whatſoever may be ſaid of the one is likewiſe true of the other. *Ariſtotle* therefore defines *ſound* by *motion*, and the Voyce to be a kinde of percuſſion, and therefore *ſound* is the ſame with *motion*, and no reſulting quality, which may be further convinced by the ordinarie experiment of perceiving Muſique by mediation of a ſticke: for, a deaf man is capable of that *ſound* no otherwiſe than as bare *motion* is *ſound*. Now ſince *articulate ſound or motion* may be *perceived* by

the

the *Eye*, then it may *hear* as well as *ſee*, and *hear by ſeeing*. It will be no great impropriety of ſpeech to affirme the *Eye* may *hear*, ſince it can perceive the adequate object of *hearing*, and performe the office of an *ear* in judging of *ſound* as it is *motion* (all *ſound* being *motion* as ſoon as it is perceived) and the thing which we call *ſound* and makes ſpeech audible, being purely *motion*. Indeed *ſound* wch is but an accident of *ſpeech*, & which is as they commonly ſpeak, the *ſenſible quality* of *Hearing*, is reckoned by Philoſophers to be *proprium ſenſi'e*, to wit, to be perceptible but to one *ſenſe*: yet as it is *figure* and *motion*, which two alwayes imply one another, and of the eſſence of *ſpeech*, it may be accounted *commune ſenſile*, and be perceived by more outward *Senſes* than one. I but ſayes one, if *ſound* be *motion*, Which is the *mobile*? Surely, in *artieulate ſounds* which are the *motions* I onely undertake for, the *mobile* may be the aire or breath, as it is moved and informed by the inſtruments of *ſpeech*. And if that be not liked, What thinke ye of the *Lips* for the *mobile* of *articulate motion*? Verily,

although

although I am not of his opinion, who held that *motus* and *mobile* were all one: yet by a warrant of Anatomicall ſubtletie I may ſay, that *movens* and *mobile* are; for in the *lips* which were to move and be moved in ſpeech, the *motory power* is mingled with the *mobile*. I, but no *motion* is performed in an *inſtant*: but *ſound* in an inſtant fils thouſands of *eares* if they be neer. Surely, *Articulate motion* alſo is performed in an *inſtant*, and can fil thouſands of *eares* or *eyes* if they be at a convenient diſtance. I, but *reſt* is oppoſite to *motion*, but it is not oppoſite to *ſound*. Surely, *ſilence* which is a *reſt* from ſpeech, is oppoſite both to *motion* and the audible *Articulation of ſounds*. I, but againe it is objected, here are many *motions* without any *ſound*, for you may move your *hand*, or any part of your Body without *ſound*. It may bee not: for we have reaſon to ſuſpect there may be ſome kinde of ſound in every motion, according to that of *Auſonius*, *Nil mutum Natura dedit*. And I thinke and beleeve there is ſome *ſound* in every *motion*, although it may not be perceived, being drowned by other greater ſounds

that are about us. And wee are emboldened by this Art to queſtion whether the *eare* bee the onely judge of *ſounds*. The rather, ſince there are ſome nations have no eares, yet heare moſt exactly. Tis true, *Articulat motion* requires not alwayes a *audible ſound*, but a *viſible* it doth at leaſt; and therefore not to be accounted among thoſe *motions* which are ſuppoſed to paſſe without *ſound*: For otherwiſe, *Articulate ſound* and *motion* being one and the ſame; you will make them like the two *Socii* in *Plautus*, mock one another, as if *Articulate motion* ſhould paſſe without *ſound*, that is, without it ſelfe. I but yet againe, there is a *ſympatheticall* and *antipatheticall* power in *ſounds*, to affect or diſaffect the hearer, which is not in *motion*: although there be not found objects ſo ingrate to the eye as to the eare, yet in *Articulate ſounds* this way perceived by the eye, there is, as well as by the eare; for, what are the angry frownes and ſtormie motions of a tempeſtuous countenance, which provokes the face of another to the like impetuoſities, but antipathetical motions? and what are yawnings

and

and laughter, which appeares chiefly about the mouth; but ſympatheticall motions which paſſe from one man to another, and affect or diſaffect them with the like? More eſpecially theſe ſounds of motions which are audible to him that heareth with his eares, have a power to gratifie or diſtaſte his ocular eare.

But I have no deſigne to oppoſe any mans fanſie, or to impoſe any thing upon it, if they will give me leave (at leaſt for the decency and countenance of the argument I handle) to ſay and thinke thus: Let them enjoy the liberty of their judgement, for wee are not neceſſarily engaged by our deſigne, to make good this expreſſion of *hearing ſounds with the Eye*. Therefore as for that, wee ſay as the great Advancer of Learning ſaide of factitious Gold: If a mettall may be procured by Art which ſhall exactly anſwer in al things the properties of Gold, let men diſpute whether it bee Gold or no: So if we may by the favour of God have this Art ſo ſucceſſefull unto us, that a Deafe man may be brought to enjoy the benefite of an eare in his eye; that is, the eye to officiate for the eare, let men

diſpute whether he heares with his eye or no: for wee are not ſo magiſtrall in this matter, as to have any thought of deceiving others with a vaine Philoſophy of ſwelling words.

Obſervation. II.

HE *was borne Deafe and* Dumbe. Great are the Nation of thoſe (otherwiſe ingenions men) who have fallen under this unhappy accident; the cauſes being various and unknowne: there are who ſuppoſe that this happens to ſome through the *propriety* of their *place of birth*. *Soranus* affirmes, that thoſe who are borne in Ships at Sea, are by a *proprietie* of their place of birth, like Fiſhes, *mute*. *Montuo* confidently affirmes, that by a *proprietie* of the place, they who were borne within the walls of the Caſtle of Claramont, proved *dumbe*; as it happened to all the Barons that were borne there. Aſtrologers ſay that Childe will be *deafe*, that is borne when

when *Mercurie* is Lord of the ſixt houſe, and infortunate by evill aſpects with *Saturne*, chiefly if he be in the ſixt houſe: Likewiſe they will have great impediment in their hearing, in whoſe nativity Jupiter and Saturne bee both impedite and infortunate above the earth; that is, if they be retrograde or combuſt in evill places. And if Mercurie be impedite of Saturne in a Childes nativity, it doth hinder the tongue; but it is worſe when they be corporally conjunct together, eſpecially, in the Aſcendent, or in the ſeaventh houſe, and in the ſame ſigne with the Sun. (Mercurie being then Occidentall:) or if Mercurie be above the earth corporally conjunct with Saturne, or elſe in an evill aſpect of Saturne, and in a *dumbe ſigne* called *Signum mutum*, and alſo is unfortunate, that is to ſay, in an evill place, retrograde or combuſt and peregrine, that party then borne, will have great impediment in his *tongue*, or elſe will be *dumbe*, and cannot ſpeake. Sometimes the ſinne of the Parents are exemplarily puniſhed in their children. Dr. *Joachim* the brother of *Camerarius*, told him he ſaw in the Court of the Lant-

grave of Heſſe, a Boy *deafe* and *dumbe* ſo witty, that hee could not wonder enough at his dexterity in executing the commandements that were given him; for by a winke of the eye, hee conceived of the will of the Prince and of his houſhold: The Lantgrave ſeeing him wonder at the ſight, hee told him: You ſee this young Boy, his uſe is to declare with a marvelous readineſſe by geſtures of his body, and by *motions* of his fingers, any new thing he ſeeth done in the Court or City. He is an example of Gods juſtice, for, his mother being accuſed of ſtealing when ſhee went with childe with him, uſed ſuch an imprecation, that if that which ſhe was charged with was true, her Childe might never ſpeake when it came to be in the World, but remaine Dumbe all his life.

To ſome this is an hereditary evill and an *imperfection ex traduce.*

But why Deafe men ſhould get deafe children? may be from that ſimilitude which ſpringeth from the ſeede, in as much as it flowes from the whole œconomy of the Body; that is, ſometimes it flowes out more from the Father, ſometimes

times from the Mother; from this plenty of proviſion proceedeth the ſimilitude, ſo ſome part in children reſembleth the Mother, another part the Father; as that ſeede hath more copiouſly iſſued from the parts of either Parent. And commonly when a Deafe and Dumbe man hath got his Wife with childe, there is a ſolicitous expectation in their Friends whether the childe ſhould prove Deafe and Dumbe or no: For it falleth not out alwayes, that the children of Deafe and Dumbe men inherit that imperfection of their parents, as intailed upon them: whereof the reaſon above mentioned may ſerve, that is, the ſeed of the perfect parent may be more luxuriant and predominant, whereof I have known ſome examples. What the iſſue of a Deafe and Dumbe man and woman would prove, there hath beene no opportunity afforded to trie, becauſe few Philoſophers have beene bidden to ſuch a wedding. The like reaſon may be, why they ſhould have deafe Children who are deafened by ſome diſeaſe, or by reaſon of ſome overpotent object which hath deſtroyed their ſenſe of Hearing. Upon which a Quære

might be raiſed, whether the children of thoſe who dwell neere the Catarrachs of Nile (whoſe parents are all deafe,) are not commonly borne deafe alſo, rather then afterwards ſo made.

We doe not heare indeed, that any of the brethren or family this Lord was of, were unfortunate in the like defect, although that hath beene the ſad condition of many eminent Families. *Fernelius* writes of a Senatour, whoſe Wife being healthy, yet all the children hee had by her were *deafe* and *dumbe*; the cauſe he judgeth to be very darke and obſcure. *Cardan* ſpeakes of a woman that had five and twenty children, of two of which number ſhee was delivered within tenne moneths, both *deafe* and *dumbe*, which both lived, and lived in his time; the one with three Mola's, the ſecond with two, not onely dead but putrified; who while ſhe went with them felt not her ſelfe as with her others, but ſhee felt as it were a weight of lead in the bottome of her belly. It being very likely that the Mola's growing to by reaſon of their frigiditie (for they are as congealed blood) did hurt their braines, thence the hearing,

and

and ſo dulled the facultie of ſpeech; eſpecially when they putrified.

Nor are examples of theſe ſad accidents very rare among us; ſuch therefore as I have either knowne, or by credible intelligence gained notice of from others, I ſhall here annex, conceiving it fit to enlarge the Forreigne ſtory of Deafe and Dumbe men, with ſuch additionall notions. The rather that wee may come a little out of theſe outlandiſh Writers debt, and in ſome reaſonable ſort, vie Hiſtoricall obſervations with them.

Sir *Edward Goſtwick* of *Wellington* in the County of *Bedfordſhire* Baronet, a Gentleman otherwiſe very accompliſhed, was borne *deafe* and *dumbe*; hee hath attained unto writing, which is a ſubſtitute of ſpeech. and from whence there lyes a way if well followed, to the recovery of an Articulate voice. Hence, writing to them that are deaf and dumb, may ſerve in ſtead of ſpeech, who therefore doe beſt begin to write, and afterwards learne to ſpeake. The firſt invention of Writing was to make *Verba viſibilia, miſſilia, & permanentia*, to re-

medy the defect of ſpeech that vaniſheth away, is onely audible, and cannot bee wrought into diſcourſe but by two that are preſent together, whereas this invention puts an eare, as it were into the eye, and preſents our cogitations viſible and legible, writing being the later invention; ſpeech by it ſelfe ſignifies all our conceptions, and writing ſignifies our ſpeech; for, writing to words, is as words to cogitations: Yet this order is not of neceſſity, that ſpeech muſt bee learnt firſt, and afterwards Writing ſhould ſucceede, to ſignifie our words; rather then words writing: there being no naturall neceſſity for it, ſo that the contrary cannot bee done: But it happens rather by reaſon of the facility, and becauſe men that are deprived of none of their ſenſes, are apt ſooner to ſpeake, then to write; the tongue being ſooner fitted by nature for that employment, then the hand for this: But the cleane contrary may be done, as appeares in the atchievement of this honourable Gentleman, and others mentioned in this book. For as they who have their hearing doe as the readyer and better way begin at ſpeech,

ſpeech; ſo they who are deafe doe beſt begin at writing: Therefore neither of them hath a naturall neceſſity, but it ſeemes by the nature of the thing, that the reaſon and account of ſpeech and writing is the ſame; but that they have a greater facility of ſpeaking, who enjoy all their ſenſes; but they who want their hearing, may have writing in ſtead of ſpeech, and the notice of things accrues to them by ſight, as to others by hearing: So that ſpeech is as it were a ſilent and audible writing, and writing is a viſible and permanent ſpeech, and withall ſo miſſive, that where the eare is abſent, we can ſend our mind by writing to a friend; why not then when the faculty of hearing is wanting, as in deafe men, may we not ſend a meſſage of intelligence to his eye in writing, ſince the eare and eye are knowne to exchange objects, without any robery, in caſe of neceſſity, transferring their ſenſitive rights one unto another?

The youngeſt brother of the ſaid Sir *Edward Goſtwick* is in the ſame condition, being yet an excellent Limbner, invited to that art by his Genius, or ſome ſignalitie

ſignalitie of ſpirit obſerved in him. Painting and Limbning next to writing, having beene ever thought of excellent uſe, and to afford ſingular contentation to thoſe that are borne deafe and dumbe. And therefore *Q. Pëdius* the Nephew of *Q. Pedius* a man of Conſular degree, and one that had tryumphed, by *Cæſar* Dictator, made Co-heir with *Auguſtus*, being dumbe by nature: *Meſſala* the Oratour, of whoſe familie the Grandmother of the childe was deſcended, being carefull how the Boy ſhould be brought up, after mature adviſe and deliberation thought good that he ſhould by ſignes and imitation be trained up in the Art of Painting: And *Auguſtus Cæſar* approved of his judgement and advice herein; and in truth, the young Gentleman being apt thereto (although he dyed a youth) was growne a great proficient in that Art.

Sir *John Keyes*, Maſter of the Ordinance to King *Jame*, had two Siſters, who were both borne Deafe and Dumb; they could write, and were very ingenious to imitate any kinde of needle work they ſaw.

Sir

Sir *Miles Fleetwood* hath two handſome Gentlewomen to his daughters, both borne *deafe* and *dumbe*.

De *La Barre* the rich Dutch Merchant, who lived at Eeling in Middleſex, had two daughters born *deafe* and *dumb*, they were both marryed: A Friend of mine who was once in their companies at Brainford (their Husbands alſo being there;) told me he did much admire at their dexterity of perception; for by the leaſt motion of their Husbands countenance or hand, they preſently conceived of their meaning.

Maſter *Freeman* of London Skinner, had two daughters both *deafe* and *dumbe*.

One Maſter *Diet* a Parſon in Staffordſhire, hath a Brother and Siſter both *deaf* and *dumbe*.

One *Thomas King* Farmer of Langley, in the County of Eſſex, had by one woman a ſonne and three daughters, all *deafe* and *dumbe*.

One in Oſmaſton, within a mile of Darby, had foure ſonnes and all of them were borne *deafe* and *dumbe*.

One *John Gardiner* of Thaxted in Eſſex, hath a ſonne and daughter both *deafe* and

and *dumbe*; his ſonne *Robert Gardiner*, is a Tradeſman here in Towne, and one of the moſt notable examples I have diſcovered, for proofe of the feeling of ſounds: and whom to the ſatisfaction and admiration of ſome Friends of mine, I have ſhewed and expoſed to a philoſophicall view and tryall.

And as I am informed by a Merchant of credit living in London, who hath a ſonne *deafe* and *dumbe*; there was in Lincolneſhire, one Maſter *Dalliſon* a Gentleman that uſed grazing, who had three ſons born *deaf* and *dumb* who made them all 3 Graziers; and they proved the craftieſt in that way, that the Country ever bred: for they were very expert at their pen, which they managed in all their affaires, with ſingular readineſſe, uſing it (as it is indeed) for a kinde of ſupplementall ſpeech: I am informed by an accompliſht Gentleman that knew them, a learned Friend of mine, they were ſo accurate at the pen, that they could write the Creed in the compaſſe of a farthing, which he hath ſeene fairely ſo written by them.

One

One Maſter *Adams* in the Eaſt of Kent had two daughters, very handſome proper Gentlewomen, which were all the children he had, and they were both borne *deafe* and *dumbe*.

A Husbandman of Sherington, within a mile of Newport, in the County of Buckingham, had a ſonne and a daughter both borne *deafe* and *dumbe*.

A Husbandman living at Tilſtone in Cheſhire, about ſeven mile from Cheſter, had two daughters. Twins, that were borne *deafe* and *dumbe*, having but two eyes betweene them; one of the eyes of each of them being originally blinde; they lived both to be old women. Some Cheſhire men of my acquaintance, who knew them both, affirme, that they had a very ſtrange and admirable nimbleneſſe of perception, both to underſtand others, and to deliver their owne mindes by ſignes, which happened, without doubt, unto them through the marvelous recompence that nature affordeth in ſuch caſes: For, having but one eye, the ſight of that was certainely very accurate.

Ariſtotle is of opinion that deafneſſe and dumbneſſe are privations onely happening

ning unto men. Yet there be who are of another minde for, that Horſe who never moves nor prickes up his eares at any noiſe or ſound, and uſeth to caſt back his eares, is deafe : and that horſe who in the companie of thoſe he hath uſed to travell with, never neighes, is dumbe. Yet if a Horſe were foaled deafe, hee would not be conſequently dumbe, becauſe the ſpeech of beaſts is naturall unto them, and hath no dependencie upon the eare, and ſo it cannot be excluded by a privation of hearing, through any naturall deafeneſſe.

Obſervation. III.

HE *was borne deafe, and ſo conſequently he was dumbe.* They who from their firſt conformation and birth are *deafe*, they likewiſe are ἄναυδοι, or at leaſt live μογλαλοι. Hence *ſurdus quaſi ſeoridus.* i. *ſine ore*, and *mutus quia eo ſenſu minutus.* The chiefe cauſe why they who are borne *deafe* are conſequently *dumbe*,

dumbe, is ſuppoſed to be the *ſympathy* betweene the inſtruments of *hearing* and *ſpeaking*, the reaſon of whoſe ſtrict *ſociety* and *communion* is not knowne to all men; which according to *Bartholinus* is two fold: firſt a nerve of the fift conjugation hath diverſe branches ſhooting from it, the greater is expanded into the Eare, and the membrane which is of exquiſite ſenſe, and carries the ſpecies of all ſounds unto the Braine: the leſſer branch runs out to the *Tongue*, and the Larynx, by reaſon of this comm union of veſſels (which with *Hippocrates* and *Galen* is the onely cauſe of a ſimple ſympathy) the affections of the *Eare* and *Tongue* are eaſily communicated. Hence when the membrane of the Eare is touched by two deepe a picking, there followes a dry Cough; and in the inflamation or impoſtume of the Lungs, with a ſhortneſſe of the breath, the eares grow moyſt. The ſecond cauſe of this *ſympathy* is a little *Cartalagineous Canale*, as it were an Aqua-duct, which from the ſecond paſſage of the *Eare* is carryed unto the *Palate*, ſo that from the *mouth* into the *Eare*, and from the *Eare* into the *mouth*,

mouth, the ayre doth freely paſſe and repaſſe, whence when wee would heare with more attention, we hold our breath leſt by inſpiration of the thick ayre, the *Cochlea* of the eare ſhould be filled, and the Tympanum extended. They alſo that doe pick their eare, doe raiſe ſpettle, becauſe by that compreſſion there is made an expreſſion of excrements into the *Cartilagineous Aqueduct*, and from thence into the *Tongue*, for, by this way (which was made to purge out the congenit ayre) there lyes a paſſage for the excrements from the *eare* to the mouth; but not *è contra*, by reaſon of the *Valvula* it hath; whence in the affections of the *eare*, *Maſticatories* are ſo beneficiall. And therefore when the inſtruments of *hearing* are hurt or ill affected, the inſtruments of *ſpeech*, that have ſo neere an allyance unto them, are likewiſe endamaged. *Laurentius* ſayes, that they who from their *firſt conformation* are *deafe* by reaſon of the *obſtruction*, *exolution*, and *refrigeration* of the *nerve* of the *fift paire*, they alſo are *mute*. *Campanella* ſayes that *naturall deafeneſſe* proceedes either from the *obſtruction of the Auditories*,

ries, or the want of the *Meningis*, and theſe are all *mute* without a voyce, not without ſound, for ſound is naturall, but the voyce and ſpeech is learnt by hearing, or altogether deſtitute they are of ſpeech, yet they utter a voyce, which is ſo far from enabling Dumbe men to expreſſe their conceptions to others, that they ſeeme very unapt to doe it, neither can any underſtand Dumbe men, unleſſe thoſe who are a long time and much exerciſed with their converſation; neither could they then, unleſſe Dumbe men themſelves, beſides the voice, did adhibit diverſe geſticulations of the hand and whole body: Notwithſtanding, in as much as the voyce is naturall, it is underſtood of all men, and therefore when Dumbe men utter any ſad voyce, all men underſtand it, and will perceive the affection of the minde to be ſadneſſe; and herein Dumbe men will alſo very well underſtand one another, if they be not originally Deafe.

The great noyſe and gabling which Deafe and Dumbe folks make, eſpecially when they are angry, proves them to have a ſufficient command of their voyce the

the ſound whereof many times makes the houſe to ring againe, with their inarticulate noyſe of their anger: Inſomuch as he who to avoyde the inconvenience of Domeſticke tempeſts, ſhould marry a Dumbe Miſtreſſe, may perchance ſpeed no better then Seigniour *Moroſo* did with his Silent woman.

The reaſon may be, That Deafe and Dumbe folke being deprived of hearing they are not ſo capable of a ſoft anſwer or Apologie inductive to a pacification, which might allay and calme the tempeſt of their anger: and then wanting a vent of ſpeech, whereby others uſually denounce their indignation, they pay it with the voyce, which is the onely weapon they have left, moving their tongue, as if they would hammer and forge out ſomething equivalent to an Articulate voyce; which they manage to the utterance; from which there reſults ſuch a noyſe, which although inarticulate, is ſignificant enough to expreſſe their paſſion and chollericke indignation.

Petraus adjudgeth *deafeneſſe* to happen

pen through an ill and unapt ſtructure of the eares, and imperfect *occluſion* of the *auditory Nerve*, or by obſtruction from a humour, or craſſe winde, and theſe for the moſt part are *mute*.

Jonſtonus ſayes, *deafeneſſe* happens through default of the braine, which either begets not animall ſpirits, or tranſmits them not, through ſome peculiar diſeaſe. Secondly, in the *auditory nerve* which doth not carry them, or by a vitious conformation; whence *deafe* men are for the moſt part *dumbe*. Some indeede thinke that originall deafeneſſe may happen through a dislocation or ill diſpoſure of the little bones of hearing. But *Capivaccius* ſays they erre and are ignorant in Anatomie, who thinke the hearing may be hurt through any defect of thoſe three little bones of the eare. It were to be wiſhed, that diſſection had been made of many Deafe and Dumbe, which might have diſcovered the ill conformation of the inſtruments of hearing, and the other cauſes of theſe impediments.

Magirus Sennertus and others from the

the ſame *ſympathie* interre *dumbneſſe* to be a *conſequence of naturall deafeneſſe.*

Varolius on the contrary, inferres *deafeneſſe* from *dumbneſſe.* The *auditorie Nerves*, ſaith hee, ariſe on both ſides of that part of the *Cerebellum* which he calls *Pontem*, or the Bridge; and the *nerves of Taſte* ariſe about the middle of the ſame betweene both the *nerves* of *hearing*: From which my obſervation, you may ſaith he, if you pleaſe, drawe out a reaſon, why from thoſe that are *dumbe* by nature their *hearing* alſo is taken away. Since the *nerves* of *hearing* and the *Tongue* are derived from the ſame principle: But this is not ſo probable a way of arguing as the other, ſince the chiefeſt ſigne to diſtinguiſh *naturall deafeneſſe* from diſeaſed, is, that they who are borne *deafe* are alwayes *dumbe.* Of which the true cauſe is not this ſuppoſed *ſympathy* betweene the *eare* and the *tongue*, which *Mercurialis* a moſt exact and judicious Phyſition approvs not of; but that which followes in the *relation* is the undoubted cauſe; for, this Lord was *deafe*, and ſo conſequently

ly

ly *dumbe*; for not being able to *heare* the ſound of *words*, he could never *imitate* nor *underſtand* them: Therefore *Alexander* anſwering to this Problem; Why they that are borne *deafe* are likewiſe *dumbe*? Saith, That *ſpeech* and diſcourſe are acquir'd by diſcipline, diſcipline comes by *hearing*. Whence *hearing* taken away, there is no place left for *diſcipline* to enter in, and ſo conſequently *ſpeech* is deſtroyed; it being impoſſible to apprehend *Idioms*, or to forme new, without *hearing*: For, the minde of the *deafe* not *inſtructed* by *ſound*, cannot tell how to forme thoſe vocal words which the wit of man hath invented, for they can neither conceive in their minde, nor produce with their tongue words which they never *heard*: For, *ſpeech* in the naturall and ordinary way, is learnt by *diſcourſe*, *heard* and conveyed to the underſtanding by the *eare*, which is the *ſenſe of diſcipline*. For, man being borne to the knowledge of all things, it behooved him in ſooth to be *diſciplinable*, that beſide *ſenſitive* knowledge, his underſtanding might perceive thoſe things by *diſcipline*, to which the ſenſes

ſenſes could not attaine, but the hability to *diſcipline* conſiſts in the nature of our Intellect, which is certaine pure power of its owne nature reſpective to all kind of knowledge, to which in as much as it is *diſciplinable*, all the ſenſes are ſervicable, but more eſpecially the *hearing*, without which men attaine to none or little and unconſiderable *diſcipline*: for they who are born *deafe*, or become *deafe* in their infancie, although they may have the parts of their voyce and ſpeech, yet they never learne to ſpeake, wanting the chiefe *medium* to greater *diſciplines*. And although *deafe* and *dumbe* men may attaine to ſome knowledge by *diſcipline*, yet they never arrive to the intimate eſſenſes of things by apprehenſion whereof our Intellect gaines a proper perfection. All this happening unto them through their defect in *hearing*, which as *Theophraſtus* ſaith, of all the ſenſes is neereſt allyde unto Reaſon, and therefore thought by *Ariſtotle* moſt to confer to the receite of *diſcipline*. *Montaigne* (as *Riverus* alſo) would have both the reaſons *ſympatheticall* and *privative*, to introduce the *conſequence of dumbneſſe upon*

on deafneſſe, being of opinion, that the reaſon why they that are *deafe ſpeak not at all* is, not onely becauſe they could not receive the *inſtruction of Words by the Eare*, but rather in as much as the *ſenſe of hearing* whereof they are deprived hath ſome affinitie with that of *ſpeaking*, both which with a naturall kinde of ligament or ſeame hold and are faſtned together: in ſuch ſort as what we ſpeake we muſt firſt ſpeake it unto our ſelves, and before wee utter and ſound the ſame forth to ſtrangers, we make it inwardly to ſound unto our *Eares*.

Obſervation. IV.

His deatexeſſe it ſeemes was ſuch that if a Gun had beene ſhot off cloſe by his eare, he could not heare it; yet Phyſitians and Chirurgions had long employed their skill to remedy that unhappy accident. Which method was commendable in reſpect of the uncertaine cauſe of the impediment: For although the cure, ac-

cording to the opinion of all, cannot be effected where originall deafeneſſe proceeds out of the privation (or as they ſpeake) *Ex carentia foraminis*, that is, when the *Auditorie nerve* is wanting, and not planted in the *ſtony Bone*, or when the *nerve* it ſelfe is created ſolid: or when the *orbicular membrane*, the *Tympanum*, or more properly called the membrane of the Tympanum, which is pellucid, thin, and ſubtile, that ſounds might be more eaſily transferred to the congenit ayre, is thick from their birth: becauſe theſe things happen through a defect of the *Plaſtique virtue*: And what nature once takes away, the Phyſitian by no art can repaire, there being alſo no returne allowed from a privation to a habit: Yet ſince poſſibly ſome other matter might bee in cauſe, and nature many times in a ſtrange extraordinary manner appeares propitiouſly to co-operate with the adminiſtrations of Art; this concluſion was neceſſary, which preceding the attẽpt, was a means of advancing the reputatiõ of the cure which was wrought by a new way of *ocular ſuppeditation*, beyond the reach of any cõmon Auriſts

Auriſts skill. But before we winde up this Obſervation, it would be worth the noting, what *Mercurialis* conceives to be the cauſes why *hearing* is ſo frequently hurt from mens nativities, which he delivers to be chiefely three. One is, that the Infant in the wombe hath all the inſtruments, almoſt of the ſenſes occluded, except the *eares*, for it hath neither the *noſtrils*, nor *mouth*, nor *eyes* open: Yet for the moſt part it hath the Eares wide open, and therefore it eaſily comes to paſſe that ſomewhat out of the wombe may fall into the Eares, which indeede cannot happen to the other ſenſes. Another reaſon is, that the inward inſtrument of *hearing* is empty, and being empty in the wombe, and a moſt moyſt head, is eaſily repleniſhed. A third reaſon is, that the *auditory nerues* & the proper inſtrument of *hearing*, are nearer to the braine then the other inſtruments of ſenſe, and being nearer the braine, are more paſſible; and hence it comes to paſſe, that they are more eaſily offended. To theſe *Varolius* ſeemes to afford a fourth reaſon, or if you had rather, the third very much explained and enlarged. The riſing

ſaith he, of the *Auditorie nerves*, from the proceſſe of the *Cerebellum*, as it ſhewes the uſe of the after-Braine was to be the chiefe principle of the ſenſe of Hearing: So it teacheth us the cauſe why more are deprived of their *hearing* from their nativitie, then of any other ſenſe: For ſince they proceede from the *Cerebellum*, and are not drawne out far, they are eaſily ſtopped with the *mucous* excrements thereof.

Another thing obſervable is, that both the *Eares* are alwayes affected in originall *deafeneſſe*; that being the chiefe ſigne of naturall *deafeneſſe*, which being cauſed, almoſt, alwayes through the diſeaſe of the Braine, whence the cauſe being *internall* and common to both the *Auditorie nerves*, it is neceſſary that at the offence of a Principle both the *nerves* ſhould be offended, and conſequently, both Eeares grow Deafe. Which happens otherwiſe in Diſeaſes becauſe *deafneſſe* in a Diſeaſe, for the moſt part, proceedes from ſome externall cauſe precedent; now an outward cauſe may hurt one Eare, the other unhurt, becauſe the Eares being very remote, one eare may be

be hurt from without or within, the other unhurt: ſo that the Principle of the Nerve be not offended.

Obſervation. V.

THe loveline ſſe of his Face, and eſpecially the exceeding life and ſpiritfulneſſe of his Eyes, and comelineſſe of his perſon, and the whole compoſure of his body throughout, were pregnant ſignes of a well tempred minde within. Whence we note, that it is requiſite he ſhould be an expert Phiſiognomer, who attempts this Art to judge of the capacity, fit yeares, and ingenious compoſure of countenance, the ſigne of a well tempered and Docile minde, which as they were inductive encouragements to the firſt Attemptor: So no queſtion did much conduce to the facility of the worke For, *Ex omni ligno non fit Mercurius*, and it had been in vaine to have caſt away time to relieve an Idiot, maugre the indiſpoſi-

tion of Nature and Minerva, who had not ſo much as matter to worke upon.

Obſervation. VI.

All that knew him lamented much the want of meanes to Cultivate his minde, and to embrue it with thoſe notions which it ſeemed to be capable of, in regard of it ſelfe, had it not beene ſo croſſed by this unhappy accident. The condition that they are in who are borne *deafe* and *dumbe*, is indeed very ſad and lamentable: for they are looked upon as miſpriſions in nature, and wanting *ſpeech*, are reckoned little better then *Dumbe Animals*, that want *words* to expreſſe their conceptions; and men that have loſt the *Magna Charta* of *ſpeech* and priviledge of communication, and ſociety with men: For by this one thing men chiefely differ from other living creatures. This is the *interpretor* and as it were, the *meſſage* of the minde: This doth eaſily expreſſe and declare thoſe things which the

the underſtanding conceives. All which things, how much they confer to the attaining of *diſcipline*? how much to the ſociety of men among themſelves? And laſtly, how much to their conſervation and perfection? hereby appeares manifeſt, that they who are moſt able in *ſpeech*, they alſo ſeeme to excell among men, and to be of a more excellent underſtanding: To ſumme up all; *Speech* doth ſo much avayle to the adorning and perfecting of man, that nothing almoſt greater or better could have beene given by God. And therefore *Plato* ſayd, The *Effluction of words, the Miniſter of prudence, is of all Effluctions the beſt and moſt beautifull*. So that in *Republicâ literariâ*, *deafe* and *dumbe* men never attaine to any degree of honour or reſpect. Let us ſee how they are lookt upon in *Foro Civili*, there, there is much arguing about their *Civill capacities*, and many Embargos have beene made of their goods, and thoſe priviledges which belong to a free condition, with many inconveniencies and incumbrances on their eſtates.

A *deafe* and *dumbe* man cannot be a

witneſſe in thoſe things which are perceived by the ſenſe of *hearing*.

A *deafe* and *dumbe* man is uncapable of all conventions which require words.

A man borne *deafe* and *dumbe* cannot *Donare*; ſome extend it to other contracts, but *Alexander* reproves that extenſion.

A *deafe* and *dumbe* man underſtanding nothing, is compared to an Infant.

If a *dumbe* man underſtand any thing, he is compared to a Pupill.

A *deafe* and *dumbe* man found a Delinquent, is not puniſhed more gently as a Pupill.

A *dumbe* man may enterpoſe his *command*, if he have underſtanding, but he cannot interpoſe his *authority*.

A *dumbe* and *deafe* man cannot *alienate* among the living, for he is like to a *dead man*.

A man *deafe* and *dumbe* by nature, cannot make his laſt Will and Teſtament.

A *deafe* and *dumbe* man cannot appoint Executors of his laſt Will and Teſtament.

If a man be *dumbe* and *deafe* by nature, ſo that he can neither *write* nor *ſpeake*, he cannot make his Teſtament; but if theſe defects be ſevered, that hee can either *write* or *ſpeake*, he may make his Will, and it is of force. This therefore is to be obſerved: A man both *deafe* and *dumbe* by nature, cannot make his Will, and although it be made for a pious cauſe it is not of force; among which cauſes liberty is numbred: For a Teſtament made by a man both *dumbe* and *deafe* by nature, wherein hee bequeatheth freedome, is of no value. But if he be not *mute* or *deafe* by nature, and hath learnt to Paint or Write, hee may make his Teſtament. Yet ſome ſay that in making a laſt Will, there is neede of an *articulate voyce*, and that ſignes will not ſuffice.

Sexnertus very juſtly therefore calls *deafeneſſe*, *Miſerandum malum* a pittyfull and miſerable miſchance; for ſince the Eares are as it were the Portall or entrie of the minde, by which thoſe things are ſent into the minde, which are delivered by Doctrine and Inſtitution, for the right managing and tranſacting our

life before God and men: that man muſt needes be miſerable who is deſtitute of the *faculties of hearing*, for hee cannot uſe the ayde and benefit of *hearing*, either to his eternall health, or preſent ſafety. They are more miſerable yet, who are withall *blinde*: Since they are not capable of the benefit of this Art, or of an *ocular ſupply* to their *Auricular defect*. But moſt miſerable are they, who are *blinde*, *deafe* and *dumbe*. An example of which wretched condition we have in *Platerus* of a certaine Abbot, who being made *blinde*, *mute*, and *deafe*, by the malignity of the *French Pox*, could no other way underſtand and perceive the mindes of others, then by their drawing letters upon his naked arme with their finger, or piece of wood; expreſſing ſome intimation unto him, out of which ſingly by themſelues apart perceived, he collected a *word*, and of many *wordes* a *ſentence*; which how miſerable a caſe it was, and how horrid the puniſhment of his committed ſinne, any one may eaſily underſtand. A pregnant example of the officious nature of the Touch, in ſupplying the defect or temporall incapacity of

the

the other ſenſes we have in one Maſter *Babington* of *Burntwood* in the County of *Eſſex*, an ingenious Gentleman, who through ſome ſickneſſe becomming *deaf*, doth notwithſtanding feele words, and as if he had an eye in his finger, ſees ſignes in the darke; whoſe Wife diſcourſeth very perfectly with him by a ſtrange way of Arthrologie or Alphabet contrived on the joynts of his Fingers; who taking him by the hand in the night, can ſo diſcourſe with him very exactly; for, he feeling the joynts which ſhe toucheth for letters, by them collected into words, very readily conceives what ſhee would ſuggeſt unto him. By which examples you may ſee how ready upon any invitation of Art, the *Tact* is, to ſupply the defect, and to officiate for any or all of the other ſenſes, as being the moſt faithfull ſenſe to man, being both the *Founder*, and *Vicar generall* to all the reſt. So that whereas among the ſenſes beſtowed upon us by nature, ſome are *neceſſarie* to life, others to a happy life; ſome to neither: without the ſenſe of *Touch* man can neither bee, nor live; without *ſight* and *hearing* he may indeed live,

live, yet no way well or happily: *smelling* is neither neceſſary to a mans being, nor well-being And that *ſight* and *hearing* conduce to a good and happy life appeares in that they are moſt neceſſary for the acquiring *prudence* and *diſcipline*. And although *Ariſtotle* ſeemes to have thought that *ſight* did more conferre to prudence then *hearing*: Yet *Mercuriales* is of another opinion, becauſe he obſerved *blinde* men to be oftentimes wiſer and more prudent then thoſe that were *deafe*. So that he who is deprived of his *hearing*, ſeemes to be at the greateſt loſſe; and therefore a good *Auriſt* is worthy of double honour.

But moſt diſconſolate is their condition who are naturally *dumbe*, and withall indocile fooles or mad, of which ſort I have known many: For they commonly are deprived of the ſociety and converſation of men, and by reaſon of their incapacitie and want of underſtanding, they are fit for no publique employment, and they are in vaine and impertinently preſent at any conference or conſultation, their condition in many things being far worſe then that of *blinde* men. In the Civill

Civill Law, a *deafe* man underſtanding nothing, is compared to an Infant, and if he altogether want underſtanding, he muſt have a Guardian appointed him, it being left to the arbitriment of the Judge to determine whether he hath underſtanding or no, and there are certaine ſignes nominated by which hee muſt demonſtrate that he is not voyde of underſtanding. And when it is preſumed that he wants underſtanding, he is interdicted Marriage by the Canon Law.

Obſervation. VII.

AT the laſt there was a Prieſt who undertooke the teaching him to underſtand others when they ſpoke, and to ſpeake himſelfe that others might underſtand him. It is ſomewhat obſerveable, that a Prieſt was the undertaker. I know not how, but they have beene inventors of many ſtrange Arts; which yet no great wonder if wee conſider their receſſe, opportunitie and encouragements

to

to ſtudy, and all their advantages to promote a contemplative life. And as they ſay of them who ſhall be Inventor and Owner of the *Philoſophers ſtone*, that he muſt have many good and pious qualifications: So he that attemps ſuch an exploite as comes neerer to a true miracle then thoſe of the *magi* did to thoſe of *Moſes* (as being an artfull ſhadow of a ſupernaturall and miraculous effect which could not bee done but by faſting and prayer) it will bee neceſſary that he ſhould Prieſt-like ſeriouſly and religiouſly ſet upon the worke, ſince a Heathen would not have attempted ſuch a buſineſſe, without firſt ſacrificing to *Mercurie* for good ſucceſſe.

He taught him to ſpeake.

In teaching of Parrots and other Birdes that are imitatours of mans ſpeech: That man ſhould be the *teacher* is not the matter, for they will imitate the ſqueaking of Cart wheeles, or any noyſe they heare: but in learning of an *Articulate voyce* ſo compleat as that of mans is, there is a neceſſity that man ſhould bee the *teacher*. For man

man could not have *diſcipline*, unleſſe from Man, becauſe the *active power* of *diſcipline* exiſts in man onely: for as man had the *paſſive power* of *diſcipline* granted unto him, ſo it was neceſſary hee ſhould have the *active power* alſo, delivered unto him: And what the *active power* ought to have beene, wee ſhall finde in the quality of the *paſſive power*. For, men are chiefly diſciplinable, *quatenus*, they have *hearing*, therefore the *active power* muſt conſiſt in ſomething that may move the hearing, and ſo effect it, wherefore ſince ſound is the *adæquat* object of hearing; Man received a power for forming of certaine ſounds, which wee call the voyce, and inſtruments to the *Articulation* thereof, whereby ſpeech is produced. Indeede the firſt exerciſe of this diſcipline ſeemes to bee committed unto Women, as being by nature more *talkative* and eloquent, the fleſh of whoſe *tongue* is ſoft and flexible for the forming of a ſweeter voice and *articulation*, for which very cauſe, their *tongue* is broader, whence it appeares by experience that not onely

Birds

Birds that have a ſoft and broad *tongue* doe ſing more acute and better; but men alſo (eſpecially women) whoſe tongues are ſofter, are more *talkative*, and alſo pronounce voyces more *articulate* then men, by reaſon of the flexibility of their *tongue*, proceeding from the ſoftneſſe thereof: Did not all of us, as many as are men learne firſt to ſpeake of our Mothers or Nurſes? Hence it is that *Plato* and *Quintilian* are ſo carefull in their directions for the choiſe of a fit Nurſe for Children, that the *tongue* and *Speech* may be rightly and diſtinctly formed: And after the introduction of *Coloines* into Forraigne Countries, have not the Children borne there, reteyned the ſpeech of their Mother? Certainely Nature her ſelfe the *Architectrix* of things, ſagaciouſly foreſeeing what was herein convenient for mankinde, hath allowed Women this priviledge, that they are ſeldome any where found *mute*. And therefore *Quintilian* ſayes, that Children will prove *mute*, if they be brought up by Dumbe Nurſes. Yet upon what occaſion ſoever dumbneſſe may

may happen, there is no certaine judgement to be given of a childs being *mute*, untill he bee three yeares old. But that this Lord born *deafe* and *dumb* : was yet *taught to understand others when they spake, and to speake himselfe, that others might understand him*, and this without a miracle, by the power onely of Art; seemes to me plainely to contradict that supposed infallible *sympathy* of the *nervs of hearing and speech*, that without controll or contradiction, many Physitians have confidently affirmed to be the onely cause why a man *deafe* from his nativity, is consequently *dumbe*: for it had beene impossible if that Law of *sympathy* had beene perpetually binding, to have recovered *speech* without *hearing* first, for so runne the Lawes of occult Qualities, and the Decrees of the *Median* and *Persian sympathists*; whereas this Lord having got a paire of *Eare-Spectacles* before his eyes, whereby the dependencie that *speech* had upon the *eare* was taken away : There remained no signe of a sympatheticall league of silence contracted betweene the *tongue* and the *eare*: But the *tongue* set at liberty, proves free,

and

and being *ſui juris*, leaves the unprofitable *eare*, and by Art enters into an *Auditory* league of amity and allyance with the *Eye*, which now officiouſly becomes a *ſuccedaneum*, or *Quid pro quo*, for the *Eare*. It muſt bee confeſſed that the effects of ſympathy are very ſtrange, as appeares by rare accidents that have befallen the ſenſes. *Camerarius* not without admiration, beheld *William*, Prince of Orange, who upon the receiving of a wound in his Neck, loſt his Taſte. And a French Souldier, who by the like wounnd became *mute*: for there is a double *nerve* proceeding from the third Conjugation, which is inſerted into the Larynx, with one branch whereof, the *tongue* is made apt for ſpeech, with the other Saporours are perceived: That hee ſhould looſe his Taſte is a leſſe marveyle; but that he ſhould looſe his ſpeech, who had his *hearing* good and his *tongue* untouched, ſeemed ſaith *Bodin* incredible to me before, untill we had found it true by experience.

The Inſtruments of ſmelling, have a knowne ſympathy with the *Eare*: For wee ſee very often, that when the noſtrils

ſtrils and ſenſe of *ſmelling* is impaired through a dull obtuſe neſſe, that the *hearing* is alſo ſomewhat offended: likewiſe in ſneezing, when we blow our Noſe, and in holding our breath in our compreſſed noſtrils, who doth not forthwith perceive his *hearing* and *eares* really to ſuffer thereupon, Of which (ſaith *Mercurialis*, in his Epiſtle to *Varolius*) no man can deviſe a better reaſon, then if he ſhould ſtate the inſtruments of *ſmelling* to reach on both ſides even to the paſſage of *hearing*, and ſo ſhould affirme, that the *hearing* is in ſome ſort co-affected with them: And indeed they who looſe their *ſmelling*, doe alſo very ſoone become ſomewhat *deafe*, as you may eaſily perceive. But whether from this ſympathy we may finde any reſolution of that Problem, why thoſe who are thick of *hearing* doe ſpeake through the noſe, is not yet agreed upon. Although here *Mercurialis* writing to *Varolius* about this matter, ſayes, Hee may very well boaſt, that hee hath hereby layd open a way for the explanation of many doubtfull and obſcure effects.

But that there ſhould be ſuch a neceſ-

ſity

ſity of this common affection happening to the *eare* and the *tongue*, as it is the inſtrument of ſpeech, (not yet agreed upon to be a ſenſe) the faire flouriſh of an unſatisfying ſympathy can give little aſſurance. And I am the leſſe affected with this elegant evaſion of a *nonpluſt* Ignorance, becauſe they who become *deafe* through any diſeaſe, though their voyce becomes hoarſer; yet they doe not conſequently grow *mute*: For, that branch onely of the *nerve* of the fift Conjugation, which is appointed for the office of *hearing* hath loſt its faculrie. And they who become *mute* by reaſon of ſickneſſe, grow not thereupon *deafe*, becauſe the other branch of the *nerve* which is accommodated for the uſe of the *tongue*, is onely affected. As wee may ſuppoſe it likewiſe happens to them who by ſome extraordinary aſtoniſhment and indignation are ſtrucken *dumbe*, as the Wife of *Nauſimenes* the Athenian was, who comming in the interim of her Son and Daughters Inceſt, was ſo ſtrucken with the ſight of that unlook't for, and haynous crime, that ſhe found no words of indignation for the preſent, and for ever after

after remained dumbe.

Infra Iulio Frier Roccus having obſerved a Monk to riſe every night to pray before the wodden Statue of St. *Dominick*, removed the Image from the Altar, and appareld himſelfe like St. *Dominick* with a whip in his hand; the Monck comes to pray, *Roccus* ſhakes his whipe a little, as t'were threatning: the Monck begins to tremble, *Roccus* moves towards him, the Monck flies; *Roccus* followes, the Monck falls down dead: *Roccus* having ſet the Image againe in its place, runs with the other Moncks unto him and raiſed him up, who could never ſpeak againe and dyed ſpeechleſſe after few dayes This *Campanella* afterward heard of *Roccus* himſelfe; The ſame happened in *Provinca*, to a certaine ſervant going out very early to the Mill, whom one of his fellow ſervants puting on a ſtrange habit, put in to a great fright, as *Campanella* relates the ſtory. *Hortenſius* the orator not only crackt his voice with declaming, but by an untimely fate loſt it altogether and became mute on a ſudden, of whom *Q Sereno de Medic.*

——— *Cauſis conjectus agendis*
Obmutuit,

Obtinuit cum vox Dõino vivente periret,
Et nondum extincti moreretur, lingua
disserti

The Temple which was built by *Iolaus* the Nephew of *Hercules*, unto him, was of so great estimation with the Inhabitants, that if they failed of their wonted devotion in that place, they presently became Mute : and if againe they vowed to perfect their Sacred rites, they recovered their speech. And *Zacharias*, wee know was struken Dumb by the vision he saw in the Temple, yet neither of these, as we may probably conjecture, were thereupon stricken Deafe likewise.

And that all who are deprived of their *hearing*, doe not therewithall likewise become *Mute*; we have an example among the Chirurgicall observations of *Fabricius Hildanus*, of a Noble Virgin, the Daughter of that stout and most noble man, the Lord *Seibery* President of *Blanctenstein*, whom *Hildanus* familiarly knew. This Lady being borne of a mother in a manner *Deafe*, about the eight yeare of her age had a Cathar fell into her *eares*, upon which there followed a tingling sound : who unluckily falling into

into the hands of an Emperick, about the twenty fourth yeare of her age, utterly loſt her *hearing*, and became ſo *deafe*, that ſhe could not *heare* a Gun diſcharged by her *eare*; Notwithſtanding, ſhe retained her ſpeeeh, for, not looſing her *hearing* altogether in her infancie, but after ſhe had been ſufficiently confirmed, and before inſtructed both in her mother *tongue*, and in the reading of bookes: being well ored, Religious and well given, ſhe retaynd the Elegance which ſhe had attained unto in her mother *tongue*, and many more diſcourſes to the edification of others. Her husband and ſome of her Domeſtique ſervants, by certaine ſignes and tokens underſtand her meaning, and diſcourſe with her; thoſe that areſtrangers write their minds in a Tabl-booke, which ſhe hath always ready for that uſe, to whom ſhe returneth anſwer by word of mouth.

And as writing is in it ſelfe a permanent ſpeech, ſo it is permanent to them that become *deafe* through any ſickneſſe; *Platerus* makes report of a *deafe* man who coming to him to be cured, whilſt he ſtayed with him, when any thing was

to

to be declared unto him, if a Pen or Table Booke were not at hand to note ſuch things unto him (for being learned, hee could very well read what was written) if (in the defect of theſe) any one with his finger drawing it on the Table, had expreſſed the figure of letters, he ſtrait underſtood what it meant.

And indeed ſo it ſeldome happens that they who become *deafe* through any diſeaſe grow alſo to be *dumbe*, that the Records of ſuch accidents are very rare among the memorable Hiſtories of Phyſicke; among which, after much ſearch, wee have met but with two examples. *Fabricius Hildanus* in his Chyrurgicall obſervations, ſpeakes of a Sonne of the Reverend and moſt excellent Man, both for learning and pietie, *Joannis de L. Oza*, Miniſter of the Moretenſian Church; whom *Hildanus* remembers to have bin a Boy very well educated, lively, and for his age ſtrong and talkative, untill the eight yeare of his age; at which time, being taken with a grievous diſeaſe; he was cured rather by the benefit of nature then of Phyſique: For, no rational Phyſitian was called to adminiſter unto him, preſently

preſently after his diſeaſe, when by little and little he grew ſo Deafe, that he no longer underſtood what any one ſpake unto him, he became alſo *Mute*: neither could he to this time, be reſtored by any remedies; he lived when *Hilaanus* wrote thisCenturie,at *Moratum*:well enough Married, where he is famous for an excellent Turner, which is the Art he exerciſeth. *Hilaanus* was an eye witneſſe of his conceited, and crafty wit, which was ſuch, that he underſtood the minde of thoſe that were converſant with him, at the firſt ſight, by geſture of their body. But this Muteneſſe happned not unto him through any ſympatheticall affection of the Tongue with his Eare; but by a privation of conſequence;for, being at the eight yeare of his age not ſufficiently confirmed and grounded in his Mother Tongue, hereupon when he could no longer underſtand what men ſpoke, he eaſily loſt that which he had formerly learned.

Platerus hath ſomewhat the like relation of the daughter of a certaine noble and illuſtrious Lord, who being 7 years old, could neither *hear* nor *ſpeake*; yet

could utter a word: being otherwiſe ingenious and induſtrious, and who endeavoured with many imperfect offers to expreſſe words, and to utter an articulate voice; the whole cauſe of which evill, *Platerus* indeed, imputes to the ſympatheticall league between the conjugation of Nerves, from the auditory Nerve propagated to the Nerves of the Tongue; ſince the Tongue which for motion and the ſenſe of Taſt, ſtood in need of many Nerves; if there happen any defect to any one branch onely, it cannot effect motion ſo ſufficiently as is required to the pronunciation of ſyllables; although the Tongue may be moved, and there may appeare no ſenſible defect in the motion of it. But he doubted whether this happned unto the noble Virgin from her birth, although they made account that ſhe in the firſt yeare of her age, ſo entertained and applyed her Eares to ſounds, as if ſhe had heard them; Afterwards the Headach which ſhe ſuffered, ſeemed to have occaſioned the enſuing loſſe: concerning her ſpeech he delivers nothing certaine; ſince infants (otherwiſe) by reaſon of their inbecility cannot

cannot ſpeake ſo ſoone : yet he thinks it is verylikely, that ſhe then loſt her ſpeech, when ſhe was deprived of her hearing, which thought of his is undoubtedly unto the purpoſe.

But as to his charging this upon the old ſympatheticall account ; I am not of his minde, but rather had reckon her failing in the weak inchoation of ſpeech, as a neceſſary conſequence of the privation of the ſenſe of hearing: and her imperfect offers at articulate pronunciation at her ſeaventh yeare, to be the faint and dying motions of an imperfect and feeble ſpeech : and the green fruite of the lips, nipt in their bud, & periſhing before thorough ripe. And in this ſenſe would I underſtand that of *Mercurialis* in his Prelections of the diſeaſes of the Eare ; *Surdi a morbo, quantum ſit ratione ſurditatis non ſunt muti, Dico ratione ſurditatis, quæ fieri poteſt, ut morbus qui facit ſurditatem, etiam auferat loquelam*, that is, they who are Deafe through a diſeaſe, by reaſon of their Deafneſſe are not *mute* ; that is ſimply in as much as they are *deafe* : yet it may ſo fall out, that the diſeaſe which occaſions Deafneſſe, may deprive

them of their ſpeech alſo: to wit, if there be *læſio principii*, that the common principle of both faculties ill affected, or by accident, upon the preceding loſſe of their hearing, as in theſe examples.

The like (as I am credibly informed) hath hapned unto a Gentlewoman a Neece of Sir *Robert Pyes* Lady who now liveth with her, who having had her *hearing*, and thereby attained to ſome degree of *ſpeech*, about the ſecond yeare of her age was deprived of both, by a great ſickneſſ that befell her; and remaineth now, being a woman growne, ſo *deafe* and *dumbe*, that any one unacquainted with the occaſion of her loſſe, would ſuppoſe her to have been originally *deafe* and *dumbe*: *Deafneſſe* hapning to her in the very initiation of her *ſpeech*, ſoone obliterating the weake impreſſion of that imperfect language ſhe had then attained unto; for, *hearing* being the ſenſe of memory, that affected, in all probality, the memory muſt ſuffer ſome Diminution with it, which hapned to them both, without any impeachment of their Intellects, they retayning the uſuall capacity and underſtanding of Deafe and

Dumbe

Dumbe folkes, and their dexterity in expreſſing themſelves by ſignes. Speech onely being ſoone aboliſhed by oblivion, where diſcourſe with others cannot bee maintained ; nor any recruite allowed unto the tongue thereby ; there having never been (as yet) any way contrived by Art to inable men made Deafe by ſickneſſe, to learne *de novo* , to ſpeake, notwithſtanding the impediments of the Eare. This accidentall dumbneſſe which thoſe fell into, being of that kind wherein the voyce or rather vociferation or ſound indeed remaines, but yet the articulate ſpeech is intercepted, which kind of mutenes is by the Greeks called *κωφώσις*, which is found analogically in infants, but properly in thoſe who have loſt their ſpeech through ſome preceding diſeaſe.

Riverus a ſtrong *ſympathiſt* in this point, would have the reaſon thereof to be evident , ſeeing they who are *deafe from their Nativitie*, if they had not the *inſtruments* of their ſpeech vitiated, they would bring forth an *articulate voice* out of a naturall inſtinct, as other Animals doe, although from their Nativitie they ſhould be ſeperated from other A-

nimals of the ſame ſpecies, that they could never heare them, yet they would bring forth a voice that is Connaturall unto, them. But they (ſaith he) who are *Deafe from their nativitie* utter no *articulate voice*, but onely a confuſed ſound, which argues a manifeſt leſion of the *parts* ſerving to the *ſpeech*: for anſwer whereunto, I confeſſe it may ſo fall out, that cauſe which deprives the *eare* orginally of its *hearing*, may alſo take away the faculty of ſpeech from the *tongue*; yet in moſt *deafe* and *dumbe* men that I have ſeene, I cannot perceive but that they have thoſe few naturall expreſſions which proceede from the inſtinct of nature, which are rather paſſions of the minde, then any ſignificant ſounds that properly belong to any Tongue or language: ſuch as is the interjection of laughter, as ha, ha, he, of ſorrow, as ha, of weeping, as oh, of crying out for aide, as O, although it may be they utter them not altogether in ſo plaine a tone as they who enjoy their ſpeech.

Neither if any man be *originally dumbe*, is there any reciprocall neceſſity that he muſt be *deafe*. Hence *Ioachimus Mynſingerus*

ſingerus in the Scholiaſt upon the Inſtitutions, Stating the *foure caſes* of *deafe* and *dumbe* men ſaith, *Si aures apertæ ſunt, lingua vero impedita, ſive ex accidenti, ſive novercante natura contraxerit, &c.* Which words imply, that one may be *dumbe* from their Nativitie, and yet injoy their *hearing*; *Arculanus* upon *Almanſor*, raiſes a doubt, whether the number of *dumbe* or *deafe* men be greater? towhich it is replyed, that there are more *dumbe* from their Nativitie, then *deafe*; for, all that are *deafe* are *dumbe*; becauſe through their defect of *hearing*, they cannot learne how to forme letters, ſyllables nor words; *dumbe* men being *dumbe* from their Nativitie, by reaſon of ſome defect in the *nerves* moving the *tongue*, which come from the *ſeaventh paire of nerves of the Braine*: who yet notwithſtanding are not *deafe*, there being no defect exiſtent in the *fiſt paire of nerves of the Braine*, and in the other Organs and inſtruments which ſerve to *hearing*; whereas, *ex tempore*, there are more *deafe* then *mute*; for we ſee by the courſe of Times and cauſes occuring to ſick men, that the *eare* is oftener hurt then the

tongue; for, nature was very carefull to furniſh the *tongue* with *greater nerves* and *Arteries* for the *Taſts* ſake, without which man can not long ſubſiſt; the Tongue moreover being lodged in a ſafer place, incloſed in an immured den, whereas the *eares* are more obnoxious by their ſcituation to be endamaged by extraneous occurrents. *Fonſanus* puts the queſtion, *An muti fiant loquaces?* and he affirmes by way of anſwer, that he ſaw this verified in *Zacharias* his foole; about which accident he writes to *Luſitanus*, deſiring an explication of that wonderfull example. *Zacharias*, ſaith he, a foole Orphant, who would be angry at the motion of the Moone, Lunatique and *mute*, theee months before his death, fell into a Conſumption; and when he was waſted ſo farr that he drew neere death, he *ſpake freely*, gave thankes to me and the ſtanderes by, for our undeſerved favours to him, yea kiſſed my hand before I felt his Pulſe. This man in his right wits, departed godly out of this life. To which prodigious Hiſtory *Luſitanus* returnes in anſwer; that it had neede of a Coon or Pergamean *Oedipus*. But, ſaith he,

he, That men ſhould have an impediment in their voyce, and become */peechleſſe* and *mute*, by reaſon of Copious humidity tenaciouſly infixed about the organs of the voyce, is no new thing; ſince many deſtitute of */peech* in their youth, in the progreſſe of their age, (by the helpe of Art) have been made vocall, the excrementitious moyſture being wholly ſpent. If this ſaith he be true, which I take to be moſt certaine, what ſhould hinder but that our ſick man who remained *mute* ſo long, his body conſum'd, and the ſuperfluous moyſture by the force of the torrid and feaveriſh heate exhauſted, ſhould *ſpeake*; his vocall organs being made more fit to performe that office?

And *Valeſcus de Taranta* affirmes, that many children who had impediment in their ſpeech, have heen reſtored by their Adoleſcencie. *Mercurialis* reports of *Maximilian* the ſonne of *Frederick* the third Emperour, that he was *dumbe*, untill the ninth yeare of his age, and yet notwithſtanding afterwards he proved a moſt eloquent Prince.

There are ſtories extant of certaine *dumbe-men*, who by reaſon of ſome ex-

traordinary fright and paſſion, have received the gift of *ſpeech*. *Valerius Maximus* reports, that one *Ægles Samius* a *dumbe* wreſtler, when the title and reward of a victorie he had obtained, was taken from him, being *kindled with indignation*, his paſſion unlockt his Tongue, and gave him *ſpeech*.

Iuſtin, and *Herodotus* report, that when the walls of *Sardis* were taken by an onſlaught, a certaine *Perſian* with his drawn ſword ſet upon *Cræſus* unknown unto him, as if he had meant to ſlay him, whom when *Craſus*, engaged in the ſlaughter of the enemie, neglected to avoyde; his *dumbe* ſonne *Atys*, deeply apprehending the danger his father was in, is ſaid to have broke out into theſe words, ὦνθρωπε μὴ κτεῖνε Κροῖσον, *i. e. homo ne perimas Cræſum*, where ὦνθρωπε as *Piſcator* obſerves, pathetically ſhewes the affection of a troubled ſpeech, not a little encombred with feare; for when he ſhould have ſaid ὦ ἄνθρωπε, his feare and indignation precipitating his ſpeech, made him ſay ὦνθρωπε. And from this firſt time of his *ſpeaking*, he ever afterward enjoyed the benefit of ſpeech. *Pauſanias*

ſanias reports that one *Balbus* a *dumbe* man wandring up and down in a Deſert, met with a Lyon, and was ſtrucken with ſo exceeding great feare and trepidation, that thereupon he obtained the guift of ſpeech. And in this caſe they muſt be *frighted* as well as *angred*: for, a mixt paſſion which cauſeth a Miſcellaneous motion of the native heate, is onely efficacious in this buſineſſe; for, the conflict that ariſeth out of both theſe paſſions mixed, to wit feare and *anger*, hath unequall motions of the native heat, for it is *revoked* and drawn in by feare, and the Animal faculty moves to its center: and againe by *anger* it is plentifully moved in the way of *expanſion* to the circumference; ſo that the native heate is variouſly mixed and exagitated, more then it could be affected with one of them alone. The native heate becoming hereby more vigorous, and rowzed up with theſe affections is ſo prevalent, that it is able to tame the vitious humours of the body, and to drie up and diſcuſſe the over much moyſture, & imbecility that ariſeth from the importencie of native heat; and if the Nerves of ſpeech are reſolv'd with much moyſture,

moyſture, or the heads of the Nerves by which the voluntary motions of ſpeech are performed, are filled with thick viſcid and tough humours, to diſſipate, attenuate, cut, digeſt, and breath them out, and ſo conſequently take away *Stamering* or *Dumneſſe*. Hence your Civil Lawyers, whoſe Pandects are ſtuffed with the ſubtile notions, and obſervations both of Natures regular Acts, and Prevarications affirme, that ſome who have been *mute* from their Nativity, have recovered their ſpeech; and indeed the manner of their recovery, and aſſumption of ſpeech is very ſtrange, for if their *eares* have been open, and the impediment only in the *tongue*, that removed, they inſtantly fall to *ſpeaking*, as if they had perfectly learnt it before: which inference I make not onely from theſe Hiſtories, and reaſon, but ſomewhat a like caſe in *Campanella*, who reports, that he ſaw a Boy foure yeare old, who had always fetid filth, and ſuppurations in his *eares*, neither was he yet able to *ſpeake*. He was thought *dumbe*, yet he heard a voyce and ſound, and tooke in hand to doe what he was commanded; but there hapned unto him cholerique

rique, and watry dejections for the ſpace of three daies, and forthwith his *eares* were healed, and he began to ſpeake well as other Boys of the ſame age, and ſo proceeded to a greater perfection of *ſpeech*, being when *Campanella* writ this relation ſeaven yeares old; therefore ſayth he, there are alſo naturall Criſeſes without any diſeaſe; for he was otherwiſe well, and had a very good ſtomack, and purgation, eſpecially if it be naturall, takes away all miſchievous evill of nature.

He was taught to ſpeake. In this caſe of moſt *deafe* and *dumbe* men where the tongue is commonly free from any impediments, as this young Lords, it ſeemes was; if any ſpeech had beene naturall to man, why did not hee ſpeake without teaching? or why do not all *deafe* men whoſe *tongues* are not reſtrained by nature from voluntary motions ſufficient to declare ſuch a faculty, without teaching come out with it? the moſt unanſwerable argument againſt the naturality of any *language* is this, that they who are naturally *deafe* ſpeak not at all, from whoſe force once alledged there

is

is no evaſion. *Montaigne* indeede is very confident that if *ſpeech* be not *naturall* to man, it is not neceſſary; and he would faine evade this argument by imputing *deafe* mens continuing *mute*, not onely to their incapacity of ſpeaking from their naturall *deafneſſe*, but alſo to the *ſimpathetickall* league betweene the *nerves of hearing and the tongue*: but that will not bring him off; for the truth is, they ſpeak not, becauſe they cannot heare to learne: He believed alſo that if a child bred in ſome uncouth ſolitarines, far from haunt of people (though as he confeſſeth it were a hard matter to make tryall of it) would no doubt have ſome kinde of words to expreſſe and ſpeech to utter his conceites; for, ſaith he, it is not to be imagined that Nature hath refuſed us that meane, and barred us that helpe which ſhe hath beſtowed upon many, and divers other creatures: for my part, I think that Nature hath dealt no more diſcourtiouſly with us in this then ſhe hath in not arming our heads with hornes, ſince ſhe afforded us hands to frame any kinde of Armour we ſtand in neede of; for if any ſpeech were *naturall* to man, he

he could not be docile and apt to learn o-ther *tongues*, becauſe that which remained within would prohibit any extraneous: as therefore God made man altogether withour Science, that he might be apt and ready to all Arts: ſo there was a neceſſity that he ſhould be made voyd of any *ſpeech*, that he might learne them all, and if without a teacher as many other things, *ſpeech* ſhould be borne with men, in good ſooth if they ſhould learne another *ſpeech* they would be all of a double language; for if the language that a man hath firſt learned doth not prohibit, but that he nevertheleſſe may afterwards learne another (but there are many that can ſpeake two, three, or foure languages) far leſſe could that be prohibited that ariſeth out of nature it ſelfe, by that which is attained by ſtudy, and that which ſome report by divination, hath no great likelihood even in the opinion of *Montagne* himſelfe, that Hebrew ſhould be the innate *ſpeech* of man; a perſwaſion onely nouriſhed by thoſe who are ignorant in Philoſophie; ſince we ſee many men more handſome, and fit for many other languages then for

the

the Hebrew, which could in no wiſe be, for all things are ſpontaneouſly carried to that which is *naturall* unto them, ſo that *ſpeech* doth not appeare to be compacted, or performed by nature, but by uſe and cuſtome; otherwiſe as all Nations are of one and the ſame *nature*, they would have the ſame *ſpeech*; whereas there is no ſuch matter, but rather it is manifold as cuſtome hath made it currant: *naturall* indeede it is to man to *ſpeake*, becauſe nature as we know by the very formation of the mouth, the *tongue*, and other inſtruments hath ordained them to this uſe; but to uſe *this or that ſpeech*, falls out by ſtudy and learning, and even the very *Idioms* proceed from uſe, and a tacit conſent of men: beſides thoſe 70. which aroſe at the Tower of *Babel* in the diviſion of *tongues*, of whome God would be the Author and teacher; not that they, rather then thoſe that grew extant by uſe had any cognation with nature, but that for a ſhort and expedite diſtribution of Nations, it was expedient there ſhould be many *tongues*: but God made choice of thoſe that pleaſed him: therefore ſince nothing

thing could be more profitable nor pleaſanter to the life of men, then reciprocally to communicate their cogitations one unto another, neither any thing more naturall then the deſire of knowledge and ſcience, which is purchaſed by *teaching* and *learning* and to *teach* and *learne* happens, no otherwiſe then by communicating the conceptions of the mind: by the very impulſe of Nature, man is carried unto ſpeech, becauſe there is no choicer or eaſier way can be thought to innuate or declare his minde; therefore men firſt found out ſpeech, whereby they might in words ſignify the conception of their minds

The language this *deafe* and *dumbe* Lord was taught to ſpeake, was *Spaniſh*, it being the language of the Country wherein he was borne, which ſhould have been his *mother tongue*, but could not ſo properly be called in him, who had attained unto it, By ſuch a new way of *ocular audition*, which as all other language hath ſo little of Naturality in it, that by diſuſe it may be utterly loſt: of which the honourable Relator of this ſtory, in his Treatiſe of bodies, affordes us a notable

able in one *Iohn* of *Leige* who driven by an extreame alarum of feare from the apprehenſion of approaching enemies into a Forreſt for ſhelter, being there loſt, continued ſo long, that he had quite forgot the uſe of ſpeech; inſomuch as when he was found, he was faine to be taught how to ſpeake againe; whereas if his language had been naturall, it could not have been forgotten or loſt by any diſuſe.

Obſervation. VIII.

For which attempt at firſt he was laughed at, yet after ſome yeares he was looked upon as if he had wrought a miracle. The attempt to bring relieſe to men *borne deafe and dumbe*, is a thing ſo far beyond any mans conceite, that they looked upon him as ſome *Utopian* Montebanck, who firſt pretended to this Art: a ſimple pride, and a ſhallow fate, having been ever the Nurſes of Ignorance, which is the cauſe of ſcornefull laughter; many

men

men being of that temper, that becauſe they cannot conceive how it can be done, therefore it cannot be done, as if all invention were limited within the narrow ſpheare of their capacity. *That he was lookt upon as if he had wrought a miracle,* ſhewes that the opinion of moſt men is, that *Originall deafeneſſe and dumbeneſſe* is not curable but by miracle, it having never been done by any other then the Divine Art of miracle-working faith.

And thus we reade in the Goſpell of St. *Luke*, of one that was poſſeſſed with a Divell, being *deafe, blind, and dumbe*; for St. *Luke* makes him *dumbe*, St. *Mathew blind*, and from his Dumbneſſe thoſe that comment thereupon, infer his Deafneſſe; *Chryſoſtome, Tertullian*, and *Hierom* ſay, That the word *Copbos* ſignifyeth *dumbe* and *deafe*, and ſome interpretours tranſlate it in the ſeaventh of *Marke*, *ſurdum et mutum*; To *Tyrus Boſtrenſis*, *Lyra*, and *Euthimius*, it ſeemeth that he was not *deafe*, for that his *dumbeneſſe* not being Naturall, the Divell might make him *dumbe* but not *deafe*, leaving him his *hearing* for his greater torment. *Fonſeca* obſerves that he being both

both *blind* and *deafe*. Saint *Luke* makes mention, that he was onely *dumbe*, which he purpoſely did (as St. *Auſtin* hath obſerved) to ſigne out unto us the greateſt ill that could befall him. The words of St. *Luke* are thus rendered, *Et erat Ieſus ejiciens Dæmonium, et illud erat mutum*, Ieſus *was* caſting forth a Divell; this word *erat* implying the difficulty of getting him out, as alſo the long time of his continuance there; for Chriſt did not preſently caſt out this Divel, but ſtayed, pauſed a while upon the matter; ſhewing thereby, that it was not ſo eaſie a thing to be done as ſome thought it to be, but rather full of difficulty. And when the Divell was gone out, the *dumbe ſpake*, which when the multitude heard, they marvelled, ſaying, it was never ſo ſeen in *Iſrael*; inſomuch as ſome of them whiſpered among themſelves, that he was the Sonne of God; and the good old woman *Marcella*, bleſſed the wombe that bare our Saviour, and the Paps that gave him Suck. When our Saviour had cured this man, who upon his enquiry of them who brought

brought him, He found to be have been so possessed from his childhood; the Apostles asked *Iesus* privately, why they could not cast him out? Who answered them; that that kind would come forth by nothing but Fasting and Prayer. In Ecclesiasticall Histories we reade of one *Theodimindus*, a young man both *deafe and dumbe*, who was wont to stand at St. *Martins* Church, moving his lips onely, who did seem so promptly to pray, that he was seen to let fal teares sometimes between his tacit words, craving almes by his gesture; this youth standing with his eyes lift up to heaven, there burst out a streame of bloud with rotten matter from his mouth, and spitting it out upon the earth he began to groane grievously and to hauk out I know not what parts of blood, insomuch as one would have thought some body had made an incision in this throate with an instrument; and purulent matter like bloudy threads hung down his mouth; whereupon the ligaments of his *eares* and *jawes* being broken, elevating himselfe, and raising up his hands and

eyes

eyes to Heaven with his mouth yet bloudy, he broke out into theſe his firſt words: I returne great thankes unto thee moſt bleſſed St. *Martin* that opening my mouth, thou haſt made me after ſo long a time of ſilence deliver words in thy praiſe. The people admiring at this miracle, asked him if he had alſo recovered his *hearing*, who profeſſed openly to them that he heard all things very well.

The like miraculous reception of *ſpeech* (in all the circumſtances) hapned to a *dumbe* man in the Monaſtery of *Schwartzachth*, as appeares by the Cronicle of the *Urſpergenſium Abbats*.

It is reported alſo by Eccleſiaſticall writers, that one *Anagildus* who was both *deafe* and *dumb* and *blinde* was reſtored to all his ſences, whilſt he prayed unto St. *Julian*: The like is reported of St. *Bernard*, who returning upon a time to his Monaſtery, cured one both *deafe* and *dumbe* that ſtood at the Gate. *Riverus* in his medicinall obſervations affords us a ſtrange example of a Boy both *deafe* and *dumbe*, who was cured by a *miſchiefe*, or a *chance-medley miracle*, who upon a time

time, playing at dice, was ſtruck with a big ſtaffe, with which moſt grievous blow his *occipitall bone* was broken into many particles, of which dangerous wound, notwithſtanding by the induſtry of a skilfull Chirurgion he was cured. And while he grew to be well, his ſenſe of hearing came to him, and he began to ſtammer out certaine little *words*, untill at length hee attained the perfect faculties of *hearing* and *ſpeaking*; and in that condition he lived untill the forty fifth yeare of his age, having been ſcarce two yeares dead when *Riverus* recorded this Hiſtorie.

Obſervation. IX.

THat *ſtrange patience, Conſtancy, and paines* was required to the effecting of this worke, any one would imagin, ſince great matters are not ſoone atchieved; it ſeemes it was *after ſome yeares*, before he who for his undertaking of it was

was laughed at, was looked upon as if he had wrought a miracle: which is no diſparagement to this Art, ſince *ſpeech* is not attained by Infants but with many difficulties, and eſſayes, after ſome yeares; and, even writing, which is but the image of *ſpeech*, before it can be learnt in any perfection by them who have all their ſenſes, uſually takes up many of our youthfull yeares.

Obſervation. X.

THat he ſhould be brought to ſpeake as diſtinctly as any man whatſoever, and to underſtand ſo perfectly what others ſayd that he would not looſe a word in a whole days converſation, ſheweth the wonderfull perfection of this Art. That he ſhould obſerve the accent, and terminations of every word, not hearing himſelfe, is very ſtrange: But the laſt is moſt ſtrange and difficult, even to them that have the juſt perfection of all their ſenſes; for who would undertake in a whole days diſcourſe

courſe not to faile in underſtanding, or miſſe one word of what another ſayd unto him? which manifeſtly ſhewes that Nature doth pay any defect, by recompencing at leaſt twofold. How he was brought to ſpeake ſo exactly (this naturall Deafneſſe remaing upon him) is worth the enquirie; for to imagin after what manner the words *ſeene* (or as we uſe to ſpeake) *heard* with his *eye* were transferred to *pronunciation*, and againe to the *intellect*; is the greateſt difficulty in this buſineſſe; we will ſuppoſe this *tranſmutation* was not performed without a neceſſary *junction* between thoſe *words ſeene* and the *habit of moving the vocall Muſculs*: and it manifeſtly proves *motion* and *articulate ſounds* to be one and the ſame thing. In children, indeed, who have all their ſences, this *tranſition* is made as well by *ſight* as *hearing*, when they are inſtructed before they can underſtand; for out of the *Phancie* of the thing *ſeẽ* they may come through into the Phancie of the *ſound*, by joyning the viſion of wordes ſeen in their Horn-books, to the *repreſentation* of the *ſound* It being wel known unto us, that boys when they

learne to reade, they bring forth a *voyce* out of a *ſound*, and that is the reaſon why thoſe who are Deafe by Nature, are neceſſarily *mute*.

For although boyes do not conceive of or comprehend the *ſound of words*, yet hearing they learne to know: and although *wordes* are not underſtood by an Infant, yet this *Cognition* which conſiſts in *ſight* and *hearing* is proper to them; for, man hath underſtanding, as it perſpicuouſly appeares, even from his firſt Infancie, becauſe he learneth. Now how his underſtanding was framed out of *words thus ſeen or heard*, might be after the ſame manner as out of *writing*, which is alſo a kind of *viſible ſpeech* permanent as the *motions of the mouth*, are a *tranſitory ſpeech*; for, *viſion* is made out of *ſence*, *joyning* out of *viſion*, out of many *joynings* a *generall comprehenſion*, out of a *generall comprehenſion*; an *univerſall propoſition*, out of an *univerſall propoſition*; that kind of *joyning* which is called *reaſon*, when one thing is inferred out of another, is the underſtanding made; ſo that as *Cardan* ſubtilizeth the matter, there are *ſeaven*

orders

orders of Sences. The *Exterior*, *Phancie*, *junction*, *memory*, *generall comprehenſion*, *Vniverſall propoſition*, and the *univerſall it ſelfe* which is the property of the mind: ſo that what kind of *motion* went in by the *ſenſory* or organ of ſence, (be it Eare or Eye) ſuch as it were from one and the ſame *effigies of motion*, was returned and pronounced by his voyce; and what he thus *ſeeing heard*, he *learnt to ſpeake* the ſame.

But indeed as the *Verulamian* Oracle of human learning notes, it is a thing ſtrange in nature when it is attentively conſidered, how children learne to imitate ſpeech, they take no marke at all as he thinks, of the *motions of the mouth* of him that ſpeaketh, for they learn in the dark as well as in the light, the *ſounds* of ſpeech are very curious and exquiſite, ſo one would thinke it were a leſſon hard to learne; it is true, that it is done with time and by little and little, and manny eſſayes and proffers: but all this diſchargeth not the wonder. It would, ſaith he, make a man thinke (though this which wee ſhall ſay will ſeem exceeding ſtrange)

that there is ſome *tranſmiſſion of ſpirits*, and that the ſpirits of the *teacher* put in *motion*, ſhould worke with the *ſpirits* of the *learner* a *prediſpoſition to offer to imitate*; and ſo to perfect the *imitation* by degrees; which operations by the *tranſmiſſion of ſpirits*, is one of the higheſt ſecrets in nature. But as for *imitation*, it is certaine, that there is in men a *prediſpoſition to imitate*, for, no man (in effect) doth accompany with others, but he learneth (ere he is aware) ſome geſture or voyce or faſhion of the other. But labour and intention to imitate voices doth conduce much to *imitation*, and therefore we ſee there be certaine *Pantomimi*, that will repreſent the voyce of Players of enterludes ſo to life, as if you ſee them not, you would thinke they were theſe Players themſelves, and ſo the voices of other men that they heare; and indeed as he ſaith in generall, ſo in this particular caſe, men are to be admoniſhed that they do not withdraw credit frō the *operation* by *tranſmiſſion of ſpirits*, and force of imagination, that worke ſuch ſtrange effect at diſtance, by the *tranſmiſſion* or

emiſſion

emiſſion of the *ſpirituall ſpecies* of *words*: we will therefore ſuppoſe this ſtrange effect to have been produced by the *tranſmiſſion of ſpirits.*

Obſervation. XI.

THis learned Relator it ſeemes had often diſcourſed with the Prieſt, whilſt he waited upon the Prince of Wales (*now our dread Soveragine in* Spayne) *and he doubts not but his Majeſtie remembreth all he hath ſaid of him and much more: for his Majeſtie was very curious to obſerve and enquire into the utmoſt of it.*

This miraculous atchievment of Art, was not performed in a corner of the world, but in the imperiall City of *Madrid*, and in the face of the *Spaniſh* Court: and ſo conſequently there have been many honourable perſons witneſſes of the ſtrange effect of this new Art; among the reſt it ſeemes, it was honoured with the enquiry of his Majeſtie, when he was (being then Prince) in *Spaine*; and indeed the ſubtilty of this Art was worthy of the Curioſity

rioſity of a Prince; It being likely his Majeſtie (who is knowne to be an excellent Motiſt, as his judgement in Pictures and Statues witneſſeth: and who was ever vigilant for the advance and ſecurity of government) might apprehend this Art poſſibly to be tranſlated to a uſe of State, and to the advantage and improvement of king-craft; thereby to diſcerne the Trayterous motions of in-choat Treaſons in muttering and diſcontented ſubjects; and verily in this reſpect, it is a ſecret treaſure worthy of a Royall Cabinet.

Obſervation. XII.

ONe great misbecomingneſſe (it ſeemes he was apt to fall into, concerning the tone of his voice, whoſe pitch he could not readily governe, but it would be ſometimes higher, and ſometimes lower; which it ſeemes was not, but upon his firſt entrance upon his ſpeech, where earneſtneſſe to ſpeake, made chance Arbiter of

of his voyce; for otherwiſe, what he delivered together, he ended in the ſame Key as he begun: ſo that I ſee not but this which ſeemes to be the onely defect this Art cannot remedie, might by his obſervation have been rectified; but perchance he was not come to that point of perfection; for if he could diſcerne the pitch of anothers voyce, and know it to be the meaſure of that motion that appeared to him: one would thinke, with little difficulty he might have made that note his copie; yet were not this poſſibly to be remedied, becauſe he heares not himſelfe; it were not ſo great a blemiſh to this Art, ſince many men who have their hearing cannot moderate their voyce; and *Gracchus* was forced to uſe the pipe of a Moniter to tune his, when *Earneſtnes* had tranſpoſed it out of all moderation. And they that are but Surdaſtri, becauſe they heare not themſelves, are guilty of ſpeaking unproportionably loud: his error in this point was not ſo great as to deſtroy the *audible articulation* of his voyce, for had his voyce in other diſtinct kind been drawn *extreame ſmall*, or *extreame great*, it could not have

been *articulate*, for, as the advancer of Learning ſaith, *articulation* requireth a *Mediocrity of ſound*: for that the *extreame ſmall* ſound confoundeth the *articulation* by contracting; and the great ſound by *diſperſing*. And although a *ſound articulate* already created, will be contracted into a ſmall crannie; yet the the firſt *articulation* requireth more Dimenſion: we doe not heare of any other misbecomingneſſe, or that he ſpake through the Noſe, as Deafe men uſually doe; which *Ariſtotle* imputes to their vitiated lungs, which compells Deafe men to utter their voyce vehemently, whereupon their voyce breakes out at their Noſtrills. And ſo Deafe men ſpeake through the Noſe; But it ſeemes this affection is more peculiar to thoſe who are *accidentall deafe* through ſome diſeaſe; and therefore I like the other cauſe of Deafe mens *ſpeaking through the noſe*, which *Caſſius* gives us in his Problems; which is, that through that diſeaſe which makes them Deafe; they are conſtrained to dilate their Noſtrills, whence they dilated, the breath of their voyce, breakes out at their Noſe.

Obſer-

Obſervation. XIII.

He could yet diſcern in another whether he ſpoke ſhrill or low; which property he could not have had but by vertue of the Naturall knowledge all men have at firſt ſight of the paſſions and affections of mens minds, and by the ſame rule that we underſtand the articulate language of Beaſts, whoſe geſture, when there is a doubt of the ſence, affords a ſolution of their ſeverall tones.

Now *Shrillneſſe* being a note of the *earneſtneſſe of ſpeech*, though he underſtood it not by the Audibleneſſe of the tone: yet he might manifeſtly perceive it by the *extraordinary motion* required to ſuch a pitch of the voyce; for then the *Larynx* is drawn upward as we may evidently perceive in our ſelves whē we frame our voyce acute: whereas we may note, that the *Larynx* is drawn downwards, when we would ſpeake in a grave and baſe tone. Therefore beſides the

Muſcules ſhuting & opening by degrees the *riſt* of the *Larynx*, the *rough arterie* which they call the *pipe* of the lungs was made of many *cartilagineous rings*, not qu'te round, but figured after the manner of the letter C interwoven with a ſpherical membrane; ſo that the *Larynx* drawn upward the compas of the membrane by reaſō of the diſtraction is coarcted, & the extreame parts of the Rings come iu nearēr together, and the whole *pipe* is made ſtreighter; whereupon the little mouth of the Throat being ſtreined in, the breath being ſtrongly expel'd, iſſues forth with ſo great a force, that the colliſion thereof produceth an *acute* voyce: but when the *Larynx deſcends*, the *rings* and the *pipe* are *dilated*, whence the *cleft* of the throat being more widened, by a lighter emiſſion and colliſion of the breath, the voyce is made more *grave*. Hence it is that ſinging-men in riſing with an *acute* voyce, doe alwayes more *raiſe up their head*, and come to a *prohibited expiration*, which declares the *Larynx* to be both *raiſed upwards* and *obſtructed*; *diſcending* in a *baſe voyce*, they *incline their head*, and at length come to *expiration without*

a voyce, which demonſtrates the *Larynx* to *deſcend*, and the clift thereof ſo to fly open, that it no way reſiſts the breath in its paſſage; of which if you deſire to have a ſenſible aſſurance, lay your finger on the outſide of your throat, and you will ſoone be ſatisfyed in the truth hereof. Now theſe are not don witho ut motions of conſent in the Face and Neck, for, the *veines* in *ſhrillneſſe* ſwell, which denote s ſome heate of paſſion, which Deafe men naturally underſtand better then wee; hence it is that the *Aphricans* who are exceeding *cholerique* ſpeake alwayes with an angry and loud voyce, and the *Ægyptian* Moores are very ſhrill Tongued; But in a calme and moderate ſpeech there appeares none of theſe notes, which are not required to a naturall and midlin temper of diſcourſe.

Obſervation. XIV.

ANother ſtrange acquired property was, *That he could ſpeake and repeate after any body any hard word whatſoever*

ſoever what ever language it was of; for he was hereby made a *generall Linguiſt*, which neceſſarily implyes theſe *outward motions of ſpeech*, to come very neere to the nature of an *univerſall character*, they being *naturall* and *univerſall*; maintaining their Figure which ſprings from the pure Naturality of the letters whereof all languages are compos'd; for although the *words* of languages are from a *mutuall compact*: yet the *letters*, whereof thoſe *wordes* are compos'd, are Naturall, and the *lips* diſpoſition to the forming of them, keepes out any other. The riſeing of later Tongues is from the mixture of Tongues; but this of *motion* regulated by the *letters* which are naturall, admits of no mutation by Age, but remaines uncorrupted, and ſo will remaine pure, as long as there are *lips* and a *tongue* to *articulate*; for, no man ſhall be ever able to foyſt in any irregular and ſuborned *motion*, any way to alter the *univerſall forme* and property of their *pronunciation*. I have heard that the King at his being there among other hard words wherewith he tryed the certainty of his *ocular audition*, named *Artaxerxes*, which he easily

eaſily perceiv'd & return'd. And indeed if we conſider the way he was taught, and the skill he attained in the *Formes of Letters*, from whoſe *Tranſpoſition* onely proceeds the infinite variety of languages; it was not more difficult to him then to diſcerne the language he was taught; for, *articles* in the *ſpeech* of man are *letters*, out of which, as out of its firſt elements, all *articulate* voyces or ſpeeches of what language ſoever were made, to wit *ſyllables* are made of *letters*, words of *ſyllables*; and at length of *words ſpoken* oration or ſpeech reſults; whereof all perfect and conſummate ſpeeches are conſtituted, and diſcourſe and communication maintained among all Nations, though of never ſo different languages. But ſince in thoſe Tongues we underſtand not we are all Deafe and dumbe, the quære is, whether he ſpake thoſe *hard words* with his *underſtanding*, or onely by a bare imitation? For, I doubt he underſtood onely the received ſignification of thoſe *worded motions* which are uſed in the language he was taught; ſomewhat like them (if I may ſo ſpeak by alluſion) in the Primitive time, who had the gift of *ſtrange tongues*

which

which they underſtood not, ſo as to interpret whereof St. *Paul* ſpeaking. I had rather, ſaith he, ſpeake two wordes with my underſtanding, then many in a ſtrange Tongue, yet you may hereby ſee, how apt this Art is to imitate miracles.

Obſervation. XV.

HE could perfectly eccho and expreſſe wordes in a high manner of exact imitation of the genuine Pronunciation of any language; Nay even of thoſe which imploy much the *gutturall letters*, as the *Welſh* and *Hebrew* doe, which when the Prince of Wales had tryed often by making ſome *Welſh-men* that ſerved his Highneſſe ſpeake words of their language the *Relator* who was preſent at the tryall, confeſſeth he more wondered at that, thē at all the reſt; becauſe the *motions* of that part which frameth the *gutturall letters*, cannot be ſeene or judged by the Eye, otherwiſe then by the effect they may hap-

happily make by conſent in the other parts of the mouth expoſed to view.

The difference of *Pronunciation* with divers nations is a ſubtlety worth the enquirie; *Cardan* among thoſe things that put a difference among men, and ſuch a diverſity as ſets them at a diſtance, reckons the *tongue* or language, neither is there any other thing wherin man differs more from man; for whereas all other animals with the ſame voyce demonſtrat the ſame affections: man is no more underſtood of man, then a Swallow is of a Lion; man indeed hath but one voyce, but there are many kinds of ſpeaking; but what diverſity of pronunciation there is, he confeſſeth he is ſcarce able to number. But there are ſix ſimple kinds; from the *mouth*, & theſe hiſſe as it were; from the *tongue* within the *teeth*; from the *tongue put out*: and this is twofold, as it is in the Lips, and in the Palate: from the Throate, and from the Breaſt; all which differences, almoſt, we may ſee in *Italy*; for the *Florentines* pronounce with the Throate; for, the *Florentine Dialect* of of the *Italian* is a little more *guttural* in the Pronunciation, then that if *Sienna* and

that of the Court of *Rome*, which occaſioned the Proverb: *Lingua Toſcana in Boca Romana*, the *Tuſcan* Tongue ſounds beſt in a *Romans* mouth. The *Venetian* with the Palate, the *Neopolitans* with their Teeth, and the *Genuenſians* with their Lips: or according to *Iſidors* general comprehenſion thus: all orientall Nations knock together their Tongue and words in their Throates, as the *Hebrews* and *Syrians*. All Mediterranean Nations ſpeake in the Palate, as the *Greeks*, and *Aſſyrians*; all occidentall Nations break their words in their Teeth, as the *Italians*, and *Spanyards*; All which may be ſuppoſed to happen by reaſon of their choice and frequent uſe of thoſe *letters* in their language, which are *gutturall*, *palatiall*, *dentall*, or *labiall*; Therefore the originall roote of the diverſity of languages, is well eſtimated by a moderne Author, to conſiſt in this, that *words* are compounded of *vowells* and *conſonants*: moreover the difference of *vowells* ariſe from the greater or more *configur'd apertion* both of the Mouth and Throate. And the *conſonants* out of the *interception* of the breath going out by the organs of

Teeth,

Teeth, *lips*, *tongue*, by their alliſion to theſe, and the *pallate*, with ſome helpe of the *noſtrils*, and *occluſion* of the *throat*, and it is apparent that theſe members and inſtruments of the voice, are compounded of the Elements, and which follows, by their temper to be more diſpoſed to one then to another motion; and this happens according to the ſcituation of the Regions wherein men live, to be more inclined to ſome *vowels*, or *conſonants* then others: whence it comes to paſſe without any further worke, *vowels* and *conſonants* were by little and little changed, and ſuch a diverſity enſued, that men no more underſtood one another: and this might happen without *confuſion of tongues*, of which (according to ſome) there is no very firme ground in the ſacred text; for whereas they were at *Babell* of one *lippe* and word, it is thought to imply no more; but that they were all of one *minde*, and reſolved to remaine united together; ſo that there needed no more to confound their *tongues*, then to diſperſe them into ſeverall *Countreys*: and becauſe divers Nations are affected after

after a diverſe manner, and have a peculiar manner of expreſſing the Ayer : the *Germans* ſpeake with a kind of *impetuoſity*, the cold retruding their breath, and therefore they pronounce many letters *conſonants*. The *Venetians* many *liquids* and many *vowels*, becauſe they dwell in a *liquid Countrey*. The *Spaniards prolix voyces* with *vowels* and hiſſing ſpirrits, out of the heat and acumen of their Region. The *Italians* in a midling climate in a meane betweene both: now although the *naturall Letters* by their *tranſpoſitions* are able to expreſſe any language agreed on by the inventive conſtitutions of men ; yet all *tongues* are not neceſſarily tyed to take in all the *Letters of natures Alphabet* ; for the languge of *Cuzco* wants B D F G J conſonant, and ſingle L, and makes ſhift with the other naturall Letters. B is not uſed by the *Chinoys*, and the *Tartars* cannot pronounce it, and the *Chinoys*, as it is ſayd, cannot pronounce R. The *Braſileans* cannot pronounce the Letters, L. F. R. the reaſon whereof one being demanded made anſwer, becauſe they had amongſt them neither Law, Faith, nor Rulers; yet a more

more Philoſophicall cauſe might be found out: for, that the *Chinoyſe* nor *Braſileans* can pronounce the naturall Leter R, is not by reaſon of the altered figure of the inſtruments belonging to *ſpeech*; for, thoſe parts which conſpire to *ſpeech*, are the ſame in them as in other men, nor by reaſon of the ſubſtance, ſcite, progreſſe of veſſels, or the hurt of their originall; becauſe the ſame ſubſtance of the inſtruments appertaining to *ſpeech* is preſerved in them as in others who have not this impediment; the ſame progreſſe and ſcite of particulars, and the ſelfe ſame beginning of inſtruments; neither doth this happen to them by reaſon of the moiſt temperature of their head or *tongue*, and other parts conſpiring to *ſpeech*; for their hard Heads declare them to be of no ſuch temperament: the ſpecificall cauſe of their naturall indiſpoſition to the pronuncation of this Letter is, either their over many, or more, and different ſcituation of pores exiſtent in the inſtruments appertaining to *ſpeech*: now the inſtruments appertaining to *ſpeech* are the Lungs, the rough arterie, the larinx, the *tongue*, the pallate teeth, and

and lips; in all which inſtruments there is none of the above numbred conditions obſerved in them, which are not exactly, ſeen in thoſe who ſpeake moſt perfectly; beſides that difference which conſiſts in paſſages or pores: therefore it is certaine pores that occaſion this impediment, and it is in them an affection in conformation and no way in diſtemper; for there are in the midle region of the pallate, that is in the fourth bone of the upper jaw, two holes which are not found ſo open and obvious in thoſe who are without this affection: thoſe two opẽ paſſages being the imediate cauſe of this their impotence to pronounce the Letter R. nor were it impoſſible perchance to aſſigne a ſpecifique cauſe of the *Braſileans* inability to pronounce L. and F. and the *Tartarians* inability to pronounce the Letter B but peradventure that might be as prepoſtrous a worke, as to aſſigne a cauſe to the golden Tooth.

Wee neede not all the Letters in our Language, and leſſe of them in ſpeaking then in writing: many Northerne Dialects have rejected ſome of the naturall Letters, as B. G. D. V. *conſonant* which is

is thought to have happened through the *nature* of the Regions, propriety of the *Idiom*, and ſtrength of men, together alſo with cuſtome, which is that they might perpetually ſpeak with vehemency adhibiting every where a kinde of impetuous force in ſpeaking, which cannot be done without a vehemnet exſufflation; hence neceſſarily uſurpe P. for B. F for V. *conſonant.* T. for D. C. for G. the cauſe of which vehement exſufflation is no other then that which is aledged by *Gallen* in theſe words: the *Celts*, and all kinde of *Thracians* and *Scythians* have a ſoft white skinne without haire, therefore their naturall heat together with their bloud, flies back into the inner parts; where while it is agitated, preſſed, and growes hot, they become couragious, bold, and of a precipitate judgment, therefore the internall heat boyling, excites a valid *reſpiration*, and this cauſeth a valid *exſufflation*, and this powers out a vehement voyce: hence comes ruſhing forth *letters* which are formed with a vehement force of the breath, that for B. it thereby becomes P. for G. C. for D. T. for V. *conſonant* F. for Northerne men

men who are ſtrong and have a ſtrong Tongue, they chooſe and utter more ſtronger *letters*, that is, thoſe to whoſe *prolation* both a ſtronger *tongue*, and *ſufflation* is required, whence their *ſpeech* ſeemes to be more *rough*, and *rigid*: for they that inhabit cold Countreys, have a *tongue* coreſpondent to the reſt of their actions: therefore they are vehemenr; *rigid*, ſevere, and couragious; whence *Charles* the fifth Emperour was wont to ſay, that the German *tongue* was military: and therefor if he were to threaten, or ſpeake more roughly to any, he would uſe the German *tongue*, becauſe that *tongue* is minatory, harſh, and vehement: whence a Moderne ſayes of the Germans, that they have a full mouthed language; and that they ſpeake as if they had Bones in their Tongue in ſtead of Nerves. Note that in all theſe *varieties* of *Pronuntiation*, the *Letters* which conſtitute words, are made by the ſame *motions*, but that they admitted more of ſome Letters then other into their Idioms, hath hapned through their Different Exſufflations. There are alſo ſome ſtrange kinde of pronuntiations, with divers Nations,

which

which I take to be rather *affectations*, then enſuing upon the former recited cauſes. The people in the Bay of *Soldania* have a *chattering* rather then a language, their words, for the moſt part, are *inarticulate*, and in ſpeaking they clocke with the Tongue, like a Brood Henne, which *clocking* and the *word*, are both pronounced together very ſtrangely. In *Mexico* their language, eſpecially uſed by Theeves and Lovers, is a kinde of *whiſtling*, whereby they underſtand one another.

They of *Guinea* when they *ſpeake*, they put out their neckes like Turky Cockes, and ſpeake very faſt. The generall language of *Peru*, hath three maner of pronunciation of ſome ſillables, in which variety of Pronuntiation, lieth the different ſignification of the ſame word. One way in the Lips, another in the Palat, and the third in the Throat. The *Catayans* ſpeake much through the Noſe. That which was wondered at moſt of all was, his diſcerning the *Gutturall motions of the Welch Pronuntiation*, becauſe the *motions* of that part could not be *ſeene* or judged by this *New-taught-Hearing Eie*, other-

otherwiſe then by the Effect thoſe Motions might happily make by a Motion of Conſent, in the other parts of the Mouth expoſed to view. Certainly, it muſt bee confeſſed, that thoſe languages that uſe moſt the *Labiall Letters*, muſt neceſſarily be the moſt remarkeable and eaſie to diſcerne, and they that much uſe the Gutturall, to be ſomewhat more difficult to apprehend: and it ſeems his Maſter confeſſed, that the Rules of his Art reached not to produce that effect with any certainty, and therefore concludes this in Him, muſt ſpring from other Rules He had framed unto himſelfe, out of his own attentive Obſervation.

Obſer-

Obſervation. XVI.

THe exquiſite and admirable perfection of his *judicious hearing* eye, which he attained unto by Art, is well *imputed to the advantage that nature had juſtly given him in the ſharpneſſe of ſenſes to ſupply the want of this*; *endowing him with an ability, and ſagacity, to do beyond any other man that had his Hearing.* *Zuinger* ſpeaking of this *mutuall ſuppeditation* of the ſenſes, ſaith, that if one ſence (as the *Eare*) prove defective, more ſpirits are caried unto the reſt, which makes their Actions though diverſe, more powerfull; for, *multitude of Spirits* makes much to exquiſite *hearing*: an argument whereof we have in *Blind men* and *Moles*: for you may ſee that *Blind men* allways moſt exquiſitly *heare*; and the *Mole* alſo which is *Blind* by Nature, is thought to have the ſence of *hearing* moſt exquiſite, becauſe thoſe

ſpirit which ſhould have ſerved the viſory vertue, they all are turned over to the *Eare*, and thereby make the *hearing* moſt exact. Examples of theſe advantages in *Blind men*, and the notable qualification of their *obſervant Eare*: *Camerarius* can afford you many, and the learned Relator in his Treatiſe of Bodies, one moſt remarkable of a blinde Schoole-Maſter. So likwiſe they who want their *hearing*, ſee more exactly, and their obſervations are more pregnant, becauſe the ſence of *hearing* doth not diſtract them other where, and being they can heare nothing, they looke alwayes more attentively, being Nature recompenſeth in one ſenſe the loſſe of another; and therefore we uſe when we would view a thing more exactly, to ſhut one Eye, and thereby the ſight becomes more accurate. And if a man would *heare* more attentively, and with leſſe diſtraction, let him ſhut his Eyes, and if he would ſee with leſſe diſtraction, it were good for him to ſtop his Eares: for any one ſenſe is more vigorous in ſenſation, when the other ſenſories are ſuſpended from action.

Hence

Hence, as my Lord *Bacon* obſerves, ſounds are meliorated by the intention of the ſenſe, where the common ſenſe is collected moſt to the particular ſenſe of *hearing*, and the ſight ſuſpended; wherfore he ſuppoſeth ſounds to be ſweeter to Blind men then to others. The like perchance may be ſaid of viſible objects to *deafe* men, and that the ſubtleties of articulate ſounds, or motions, are with more inquiſitive delight and attention, contemplated by them.

As for the other ſenſes, they do divers things beyond their ordinary function; ſo as one might ſay that perfection conſiſteth not in the diſtinctiō of the Organs of the ſenſe; but in the continuall uſe of them: ſo carefull is Nature like a good mother, to make amends for a fault, that none ſhould accuſe her to be a ſtepmother: for what ſhe taketh away in ſome of the ſenſes, ſhe allows, and recompenſeth in the reſt: inſomuch as *deafe* and *dumbe men*, having a *double defect*, to wit of *ſpeaking* and *hearing*, they uſually have double recompence: this makes them good *naturall Phiſiognomers*. For as concerning the notes of the

affections which appeare in mens Faces, by inſtinct they know and diſcerne them readier then we can; and as we know we are often beholding to the countenances of Men for the explanation of their Mindes; ſo they know by the *motions* of affections and paſſions that accompany the *motions* of ſpeech, the paſſions that are vented in thoſe *locall motions of Articulation*, made in the parts about the Mouth. And it may not bee ſo difficult to them as unto us, to conceive and diſtinguiſh of each *motion* and *ſignification* of the *lips*: for wanting the ſenſe of *Hearing*, their *Eie* is more accurate, and apt to obſervation; ſo that wondring what thoſe *motions* of mens mouths meane; and heedfully obſerving at ſeverall times, noting both the occaſion and the returne of that occaſion, they ingeniouſly frame out of their owne obſervation, many things Art could not with any certainty inſtruct them in: ſo that the *apparent motions* of the *lips*, the *formes* of *words* ſeeme to have beene diſtinguiſhed by the obſervation of ſome *deafe* and *dumbe* men, without the helpe of a Teacher. Nature (the Patriarch of phyſick ſaith) being

being many times skilfull without a Teacher : for it ſeemes by ſome ſtories of *deafe and dumbe men* as they are recited by certaine Authors , that ſome, even of themſelves without teaching , have fallen upon obſerving the *motions* made in *ſpeaking* , and ſo have come to the underſtanding of the *received ſignifications* of thoſe *motions.*

Wee have , ſaith *Camerarius* , in Nuremberge a yong man and a yong maide, borne of one Father and Mother, of a good Houſe, and well knowne , that are endued with a ſingular quick conceit; for although they be *Deafe and Dumbe by Nature* , yet can both of them reade very well, write, cypher, caſt account: The young man conceiveth at firſt by ſignes that are made him , what he is required to doe, if his pen be wanting , by his countenance he ſheweth his thoughts, being the quickeſt and cunningeſt at all Games , both at Cards and Dice , that one can finde among the Germans , although they there uſe great adviſement and be marvellous ready and quick. His Siſter paſſeth all other Maydes for working with her needle all kinde of Semp-

ſtry, Tapeſtry, Embrodery, *&c.* But above all the wonderfull *recompences* of Nature, this is remarkable in them; that moſt commonly as ſoone as they *ſee ones lips ſtir*, they *underſtand* his meaning: They are oftentimes at Sermons, and a man would ſay that they *draw* and *conceive* with their *Eyes* the *wordes* of the Preachers, as others uſe to doe with their *Eares*; for they will oftentimes, no body ever teaching them or ſetting them any Letters or Copies, write the Lords prayer, and other godly Prayers: Know by heart the Texts of the Goſpels that are read upon Holy Dayes, and write them readily, when in the Sermons the Preacher maketh mention of the name of *Jeſus*, the yong man is ready before any of the Hearers to take off his hat, and to bow his knee with all reverence.

Platerus makes mention of one borne *Deafe* and *Dumbe*, who nevertheleſſe could deſcribe his minde in a Table book which he alwayes carried about him, and could underſtand what others alſo wrote therein. *Platerus* his Father reported of him, that when he with great zeale heard *Oecolampadius* preaching by the motion

motion of his lips, and his geſture, he underſtood many things, as he alſo could by any others lips that laboured before him. *Zuinger* ſpeaking of this *Deafe* and *Dumbe* man (who was according to his relation) a Poyntmaker, ſayes, that he heard *Oecolampadius* preaching, ſeeming *to hear with his very eies.*

The like ability of preception gained from his owne attentive obſervation (as I am informed by a Philoſophicall Friend) had one *Gennet Lowes* a woman dwelling in *Edenburge* in *Stotland*, who being *Deafe* and *Dumbe* by Nature, could underſtand any one in her Houſe, meerely by the moving of their lips. So that by their motions alone without a voice, or ſpeaking aloud to her, ſhe could exactly perceive their meaning.

The Civill Law ſeemes alſo to have tooke notice that men that are *Deafe* and *Dumbe* may come to heare others ſpeake, by obſerving the moving of their Lips: For among their extraordinary Law Caſes, they have inſerted this recondit, and very ſeldome heard of notion touching *Deafe* and *Dumbe* mens perceiving the efficacy of others *wordes*, by the moving

of their lips, concerning whom their Inſtitutions run thus:

A *Deafe* and *Dumbe* man cannot be appoynted a Tutor, although he may *heare* by the moving of lips. *Etiamſi audiat ad motum Labiorum.*

A *Deafe* and *Dumbe* man although he *underſtand* another by the *moving of his Lips*, yet he cannot *ſtipulari*, that is, *interrogatus ſpondere ſtipem*: For it is *verbum interrogandi & ad promittendum inducendi*; yet they may contract, although not by *ſtipulation*, for if they underſtand others by the *motion of their lips*, they may contract in thoſe things which are performed by conſent, which is the opinion of *Bartolus*, and others who have commented upon the Body of the Civill Law.

The word of the Text of the Civill Law is *Surdus*, which I confeſſe is ſomewhat ambiguous, as the Civill Lawyers uſe it: Yet here as I conceive, it is meant of men originally *Deafe*, and ſo conſequently *Dumbe*, which in the Caſe of ſtipulation is plaine, a *Deafe* man being excluded from that Act, for his defect of ſpeech, and therefore I have enlarged the Text,

Text, by making it ſpeake out plaine.

Yet if there be two men *borne Deafe and Dumbe*, alike qualified by Art as the Spaniſh Lord is, they might *ſtipulari*, becauſe they could both ſpeake, for the Rule that excluds mutes is, *ſtipulatio nulla niſi uterq; loquatur*, and this would prove a new Caſe. And this Spaniſh Lord, who is yet living, may without breaking the Rule, doe as much with any man, which is another new caſe too.

And ſo may any one accidentally *Deafe* who retaines his ſpeech, and can *audire ad motum labiorum*, which is the caſe of Mr. *Criſpe* the Brother of Sir *Nicholas Criſpe*, whoſe dexterity in perceiving the meaning of men by the motion of their lips, is very well knowne to Merchants upon the Exchange, whom by this Art, which he hath gained by his owne attentive obſervation, he hath driven many a bargaine: And it is very probable that ſometimes this faculty was of great advantage unto him, for he might chance to overheare with his eye newes of the arrivall of ſome ſhippe and of ſome good bargaine; when others who would perhaps keepe the intelli-

gence to themſelves were not aware of it, and amid the buzzing noiſe of the Royall Bee-hive of our *Emporium*, where many ſpeaking together, one articulate voyce confounds another, his eyes being vigilant upon the motions of mens mouthes, and no way diſtracted with that bartering noyſe is there made, he might perceive a motion, which being a Merchant, he might eaſily turne to his owne profit; this and many other advantages might be much furthered by the nimbleneſſe of his hearing eye, it being conceived by ſome that ordinarily converſed with him, that by his eye, he many times apprehended a conceit or jeſt uttered by the Mouth, and was thereupon advanced to laughter, before they who had their hearing had any intelligence of it, who are faine to expect the ſlow information of a duller Organ of Senſe; and there is good reaſon he ſhould have the ods of them, ſince he hath two Senſes united in one, and a double proportion of ſpirits to inable one Organ. Among other very ſtrange things I have heard related of him touching this rare faculty; I was told by Mr. *Hurſt*, who keepes

keepes the Swan behinde St. *Nicholas* Shambles (upon occaſion of ſome diſcourſe with him about a ſonne he hath, who is *Deafe* and *Dumbe*) that he being an Officer of the Traine Bands, and appoynted to keepe the Scaffold cleere upon Tower Hill at the execution of Sir *Alexander Carey*, perceiving Mr. *Criſpe* to preſſe on for a convenient place of Audience, he ſpake to him to forbeare; who not hearing him, becauſe his eyes were not upon him to minde him, continued to endeavour for a place of accommodation, untill Mr. *Hunſt* being told by ſome who he was, and what defect he had in his hearing, he converted his reſiſtance into obſervation, and ſuffered him to plant himſelfe right againſt the front of the Scaffold; And he told me that when Sir *Alexander Carey* ſtood up to ſpeake to the people, Mr. *Criſpe* ſetled himſelfe ſtedfaſtly to obſerve the motions he made, and kept his eyes riveted upon Sir *Alexanders* face during the time of his laſt ſpeech, which he ſo perfectly underſtood and carried away with him, that he was able to relate it againe to others, who much wondred at the

way.

way of his perception; therefore if any man doubt of the certainety of ocular Audition, one houres acquaintance with Mr. *Crisp:* would have reſolved him in the truth of this buſineſſe, for it was a plenary ſatisfaction *ipſo facto*, but to have once beene in his company.

But betweene the writing and printing of this Tractate, this vowcher of Labiall interpretation by a ſad accident is withdrawne from us, with the fatall fall of an overburdened ſeeling, whoſe danger-threatning crack (he being unfortunately *deafe*, and wanting the common Sentinells which were ordained by Nature to watch againſt the motion of all approaching dangers) could not ſo well evade, as otherwiſe he might have done: And however wee have beene thereupon enforced to alter the Tenſes of the Relations concerning him with a (*vixit*) he hath left behinde him many living witneſſes of his ability in underſtanding the efficacy of Labiall motion.

The ſame ocular faculty of Audition (as I am informed by a Philoſophicall Friend) had one Dr. *Staple* a Phyſitian, who being incidently *Deafe* through

ſome

ſome Diſeaſe yet retaining his ſpeech, could tell any ones meaning by the motion of their lips.

And it may be the capacity that *Deafe* men have of ſupplying their defect of hearing by obſerving the motions of mens mouthes, may be the cauſe of that which I have partly obſerved in *Deafe* and *Dumbe* men', and have heard others relate more fully, that they will ſeeme diſcontented and be angry, if in your relations to them, among other motions and ſignes you make unto them, you doe not therewithall uſe the motions of ſpeech which are made with the mouth; as if you defrauded them of the meanes of underſtanding you, and out of a ſlight regard held back from them the Key of your beſt intelligence.

Obſervation. XVII.

HE could at the diſtance of a large chambers breadth, ſay words after one, that another ſtanding cloſe to the ſpeaker, could not heare a ſillable of. This argues

argues, that diſtance of place hinders not, if it be within the diſcernable reach of the *eye*: and that the Low pitch of an unaudible voice of ſpeech, was no impediment unto him, being equally eaſie unto him, who uſed his *eye* for an *eare*, to perceive and diſcerne a *ſilent*, or an *audible Articulation* of ſpeech; ſo he he had in view the *motion* of the lips, with which *ſpeech* is as perfect and abſolute in its *articulations*, as it is by any *audible enunciation*, the Eye being capable of the *ſounds* thoſe *motions* make, as they are bare *motions*; and I believe his information was more certaine then the *Auricular* uſually is, which puts the *tongue* to ſo many what ſay you's: the *Eare* being duller and deceitfull, *ſed verba oculis commiſſa fidelibus*, muſt needs afforde better intelligence: and I doubt not but he had one quality more then is here ſpoken of him; for, his *improved Eye* muſt needes be very quick in conceiving the *viſible ſound* of ſpeech: and therefore I thinke, that if he that ſpoke to him had ſpoke loud that the Relator might have heard him, this inſtructed *hearing Oculiſt*, or *Ocular auriſt*.

riſt, would have underſtood the ſpeakers minde by his *Eye*, ſooner then the *Relator* could poſſibly have done with his *Eares*.

Obſervation. XVIII.

IN that the knowledge he had of what men ſaid, ſprung from his obſerving the motions they maae with their mouthes. This ſhewes he was inſtructed in the *Art* of *Labiall Augurie*, which we have proved to be a *rationall* and *uſefull Art*, well grounded upon the principles of Humane Philoſophy; and not only full of notions to delight ſpeculation, but *uſefull* and poſſible to be put in practiſe. Hence there was a neceſſity (as it follows in the Hiſtory) that if he would concurrently converſe with any, there was light required as the *medium*; for if he were in the darke, the objects of his *attentive Eye* were ſtrait loſt: or if he turned away his *face* out of his ſight that ſpoke unto him for then he was render'd uncapable of what was ſaid: ſo that this *Art* inabled him not to tenebrize,

brize, or to performe any *audible Act* in the night, and Nocturnall Lucubrations of ſpeech, or candle light diſcourſe, might perchance prove deceitfull unto him: for it being a manifeſt, and *apparent motion*, which guided him to the *knowledge* of their *words*, the time proper for his obſervation, muſt be the all-revealing day: and it muſt be *day* in his body too, for if he ſhould be ſtrucken blinde, goodnight to all the Notions of this *Art*. A double care therefore had this Lord neede have of preſerving his ſight, ſince that loſt, he would looſe two ſenſes in one; Naturall ſight, and unacquired *hearing*, which would prove a double dammage unto him. We ſuppoſe alſo that ſome difficulties may encounter him in perceiving the naturall affections of the voice, and diſtinguiſhing the *literall motions of their mouths*, who have any impediment in their ſpeech, by reaſon of the ill conformation, or conſtitution of the inſtruments of ſpeech, by Nature, or any unhappy accident: for as in ſuch caſe the judgment of the *Eare* will be uncertaine: ſo likewiſe would the *hearing Eye* of this Lord,

Lord, be ſomewhat put to it, to judge upon ſo imperfect an evidence: as for example, if he were to converſe with one borne with his upper lip too ſhort, that it ſufficeth not afterwards to cover his *upper teeth*, not without ſome deformity of aſpect, as, *Schenckius* knew an honeſt Matron of Patrician ſtock, was, whom he had long converſed with, in the Hague, who, although conſcious of the defect, when ſhe ſpoke with any by a wonderfull induſtry, and civility which ſhe uſed to thoſe that ſtood, or ſate by her, by extending downe her *lip*, and drawing it over her *teeth*, ſhe covered that deformity of Nature, with ſo great and faire an Art, that unleſſe one had ſtudiouſly obſerved her, it was not perceived: yet no queſtion it cauſed ſome alteration in the forming of her words, and conſequently might ſomewhat impede our Artiſt in diſcerning the *exact ſenſe* of the *moving of her lips.* They alſo who are borne with haire lips, that is not whole, but racher cloven, muſt neceſſarily *falter in ſpeech*, and conſequently exhibit but an *uncertaine motion* of their *lips*, from which, nothing

can

can be exactly collected to infer the verball meaning of the *endeavoured motions of the lips*. *Trincavellus* affirmes, He had ſeene ſome with ſuch lips, who faultred not a little in their ſpeech. Great *Blabber-lips* may cauſe a little alteration to puzzle the *ocular conſtruction*, that is to be made upon the *lip-labour* of the ſpeaker. They alſo who are troubled with the diſeaſe Diarrhæa or a Humerall lask of the belly, and with a Catarrh which makes them wreſt and writh their lips in ſpeaking, their lips will not preciſely anſwer the Rules of this obſervation. The like would a *Plaice-mouth* in the *Cynick Spaſme*. Old men in the defect of their Teeth, which are one of the deſtinated implements of ſpeech, their breath flows not out repercuſſed, wherefore it ſounds the leſſe; therefore to remedy this evill, they preſſe their lips together inward, as it were to ſhut up the voyd ſpaces of their Teeth, which muſt neceſſarily cauſe ſome alteration from the *naturall* and *perfect* garbe of *verball motion* And thoſe who are edentuli by age, ſo thoſe Nationes who pay little homage to the Goddes Dentilla, as they of Gagas, and the ſubjects

jects of *Huacchacaviac* in *India*, who have a *Tooth-Right* of beating out their fore teeth, were likely to put our Artiſt to it in diſcerning the pure naturality of their pronounced Letters. Thoſe Nations that have any notable defect or exceſſe in the *extant parts of their mouth*, muſt needes prefer exceptions againſt the generall Rules of this Art.

They of *Gambra* not far from *Jay*, are deformed, their *neather-lip*, hanging downe towards the breaſt, and is apt to putrifie, of which deformity being conſcious, they trade with their Neighbors the Arabicks, without ſight or conference, leaving their commodities in a certaine place, for which they have gold in exchange: their upper lip little as ours.

They report of Nations in the Inland part of the Eaſt that want their *upper-lip*. They in the Iſle called *Dodyn* in the Indies, and the adjacent Iſles (if we will beleeve Sir *John Mandevil*, who hath not ſo much intereſt in the whetſtone as ſome imagine) have *flat mouths without lippes*. And others, their *lips* ſo great, about their mouth that

that when they ſleepe in the ſun, they cover all their faces with them. And Dwarfes that have no mouthe, but a round little hole, have no tongue, nor ſpeake, but they blow and whiſtle, and ſo make ſignes one unto another. But above al, the language of Jamuli Iſland if it be as true, as ſtrange, which is reported of them, would cauſe a great impediment and diſtraction in the perceiving the *Litterall and Verball meaning of their mindes*, whoſe Tongues have ſomewhat peculiar by Nature or Art; for they have a cloven Tongue which is divided in the bottome; ſo that it ſeemes double from the Roote, ſo they uſe divers ſpeeches, and doe not onely ſpeake with the voyce of men, but imitate the ſinging of Birds: But that indeed which ſeemes moſt notable, and indeede would puzle our Artiſt moſt, They ſpeake at one time perfectly to two men, both anſwering and diſcourſing, for with one part of their Tongue they ſpeake to one, and with the other to another: But theſe Hiſtoricall exceptions or likely impediments of this Art, I have admitted and

and inſerted rather for their ſtrangeneſſe then any weight of argument they have againſt the certainety of our Art, ſince all men know *exceptio firmat Regulam.*

To conclude theſe obſervations, the *Prieſt* who by his *Art* wrought this Miracle on this Spaniſh Lord, as is reported, was ſince in the ſervice of the Prince of *Carignan*, where he continued with ſome that have neede of his paines, the ſame imployment as he did with the Conſtable of *Caſtiles* brother, who as I heare is yet alive, as his Tutor alſo is; the ſteps whereby he proceeded in teaching friendſhip, and three hundred Ryals may ere long informe me in, which produced in our intended Academy, will ſoone aboliſh all apprehenſions of impoſſibility in this matter, by vertue of the countenance and juſtification of the event.

The firſt principles indeed are but ſimple and naked; but it is a wonderfull thing to conſider the great diſtance betweene them, and the ſtrange readineſſe and vaſt extent of ſpeech reſulting in proceſſe of time out of them:

Whereof

Whereof it is enough for us to finde a ground for the poſſibility of the operation, and then the perfecting of it and reducing of it to ſuch a height, as at the firſt might ſeeme impoſſible and incredible, we may leave to the energeticall power of Art. Hee that learneth to read, write, or to play on the Lute, is in the beginning ready to loſe heart at every ſtep, when he conſidereth with what difficulty and ſlownes he joyneth the Letters, ſpelleth ſyllables, formeth Characters, fi:teth and breaketh his Fingers (as though they were upon the Rack) to ſtop the right frets; and to touch the right ſtrings; And yet you ſee how ſtrange a Dexterity is gained in all theſe by induſtry and practice; and a readineſſe beyond what wee could imagine poſſible, if wee ſaw not dayly the effect.

Since therefore wee have arrived to decypher the Characters of Natures Alphabet, and can ſpellingly read the firſt ſyllables of it, wee neede not doubt that Art with excellent cunning can diſpoſe all circumſtances ſo aptly, as to ſpeake readily a compleat Lan-

guage

guage riſing from thoſe Elements ; and that ſhould have as large an extent in practiſe and expreſſion, beyond thoſe firſt principles, which we like children onely liſpe out, as the vaſt diſcourſes of wiſeſt and moſt learned men are beyond the ſpellings of infants : and yet thoſe diſcourſes ſpring from the ſame root, as the others ſpellings do, and are but a rayſing them to a greater height : as the admired Muſique of the beſt player of a Lute or Harpe that ever was, is derived from the harſh twangs of courſe bowe-ſtrings, which are compoſed together and refined, till at length they arrive to that wonderfull perfection. And ſo without ſcruple, we may in this buſines conclude, that the admirable and almoſt miraculous effect we heare of in this Relation, are but the elevating to a wonderfull height, thoſe very actions and motions which we have heere produced as cauſes and principles of them.

FINIS.