

London

THE DEAF and DUMB MAN'S DISCOURSE.

OR

A Treatise concerning those
that are Born DEAF and DUMB,
containing a Discovery of their
KNOWLEDGE or UNDER-
STANDING; as also the Method
they use, to manifest the sentiments of
their Mind.

Together with

An Additional Tract of the
REASON and SPEECH
of Inanimate Creatures.

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LONDON,

Printed by H. Bruges, for William Crook at
the green Dragon without Temple-Bar.

1670.





A

DISCOURSE

Concerning those that are born
DEAF and DUMB,
And of their
KNOWLEDGE.

1. **S**UCH is the calamity of Mortals in this state of misery, that they are invaded on all sides not only when they are born, by a vast army of Diseases, but are also troubled with many distempers whilst the Womb is their Lodging; there we often meet with the precur-
sory messengers of Death even in the very beginning of Life ; and whilst the formative faculty is framing this ma-
chin of our immortal Souls , some deformity , some irregularity in the structure, or other preternatural dis-
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2 Of those that are born

position obstructing the exercise of the parts immediately intermixeth it self with our birth. Which enormity of the parts, or constitution repugnant to the Lawes of Nature, prejudicing the operations, and contracted at our Birth, some have been so scrupulous as to think that it ought not to be called by the name of a Disease, but of a Defect, reserving the name of Disease for the defects of that which was once perfect.

2. And as this kind of defect is found to be in many members of man's body; so it most frequently happens to the sense of Hearing: Which was Aristotle's Observation long ago, who therefore in the first of his Problems, Sect. 11. moves this very question; Why the Hearing, of all Senses should be most prejudiced from our Nativitv? And submits it to Consideration, whether this may not be the reason or cause of it, because the Hearing and Voice seem to be derived from the same principle: For Speech

Speech (saith he) which is a kind of Voice , may easily be depraved , and not without great difficulty restor'd to its perfection ; a sign whereof is , that we continue mute for some time after we are born (for in our Infancy we cannot speak at all) then at length we begin to stammer ; since therefore Speech may be easily perverted , and that the principle of Hearing and Speaking is the same (for , saith he , 'tis the Voice that is the *primordium* of Hearing) it follows consequently , that , that Hearing , of all the Senses is soonest corrupted , as it were *per accidens* , not *per se* . We may (saith he) lay this down as an Argument taken even from other Creatures , that the principle of Speech may be easily destroyed ; for no other Creature can speak ; but Man solely is endued with this faculty ; yet he (as is premention'd) is a long while , before he begins to speak .

3. We will propose to our selves
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4. Of those that are born

three things to be thoroughly weigh'd in reference to this consideration of Aristotle. First, the reason it self, by which he maintains, that the Sense of Hearing may be easily injured from the very Birth above all the rest of the Senses; because, the principle of Speaking or of articulate speech may be easily prejudiced, the principle of Hearing being the same; and therefore Hearing may be injured from the Birth not *per se*, but as it were *per accidens*. viz. by reason the common principle of Speech and Hearing may be hurt. Secondly, we will take into our Consideration, that which follows by consequence from that very reason; to wit, that the Hearing is never damaged from the Birth, unlesse Speaking, or the articulate enunciation of the Voice be so likewise: because there is a certain common principle belonging to the Speech, as well as Hearing, which being injured, it necessarily follows that both of them must be prejudiced. This consequence

quence was so certain in the opinion of *Aristotle*, that in his fourth Book of the History of *Animals*, chap. 9. he ingeniously pronounceth, That they who are born Deaf, are also Dumb; and for that reason they may make use of a Voice, but not of Speech. Thirdly, we will subjoyn and inquire into their Understanding that are born Deaf, as also the way and manner of their Knowledge. Fourthly and lastly, we will Contemplate a little upon the reason, and discourse of brute Animals.

SECTION I.

*Why is Hearing, of all Senses
soonest prejudiced.*

4. As to the first, Aristotle layes down a certain common principle of Hearing and Speech : But doth not sufficiently declare what, or what kind of thing that is : Indeed he affirms that Voice is the principle of Hearing, as well as of Speaking, and withal saith, that the Hearing and Speaking seem to proceed from one and the same Principle. And truely the Voice is the material principle of Speech, as far as the articulate speech is framed by the Voice ; as if the same Voice were the principle by which the Hearing is stirred up

up to the act, or the Hearing had an actual being by means of the Voice, as *Peter Apponenfis* explains the meaning of Aristotle.

5. But this principle will not effect our Design, for this question will remain unsolv'd, why, where there is a Voice in Deaf men, yet there is no Hearing? and where those that are mute can frame a Voice? or brute Animals themselves, yet they cannot speak by virtue of that common Principle? And wherefore since Infants can hear, should they not also be able to speak by the assistance of that common Principle? For the particular cause, either of the obstruction of Hearing, or impediment or depravation of Speaking, is on either hand to be sought in the organs: the irregularity whereof, the vitiated conformation, or solution of the continuum, or the convenient influx of the animal spirits being impeded by any defect of the organ: obstructs the operation thereof. But we will see in our fol-

B 4 lowing

8 Of those that are born

lowing Discourse, whether there may not probably be some other principle found out, that depends upon the mutual conjunction of the nerves.

6. But the reason why New-born Babes can hear, but not presently speak, or pronounce articulate words, is, because there is more required to the framing of speech, or speaking, than to the reception of a sound, or hearing. For, the Hearing is merely passive, and the Sound arriving at the organ of Hearing (which is the very auditory Nerve, expanded to the internal parts of the windings of the *Auditorium*, presupposing a convenient disposition of the outward, as well as inward parts of the Ear) a Sound is immediately represented : but 'tis not the same when a Voice is uttered, the Speech is not immediately framed, or Discourse raised, nor doth it merely consist in passion.

7. Brute Animals that have Lungs and the *Aspera Arteria*, are able to utter a Voice, otherwise than those other

other Creatures, that onely make a Sound or noise; but yet they cannot therefore speak.

The *Dolphin*, saith *Aristotle*, in the 4th. Book of the *History of Animals* c. 9. hath Lung and the Arterie, and therefore can utter somewhat of a Voice, but yet hath not a free and volatile Tongue, nor Lips by which it might frame any articulate voice; therefore it only makes a noise and muttering.

8. But those that have Lips and a greater liberty of the Tongue, so as to be able to frame some one articulate Word (as Sheep do the word $\beta\eta$, Oxen and Cows $\mu\epsilon$, &c.) yet they cannot frame their Voice to several articulate words; for all Brutes want that aptitude of the organs, by which articulate words are made and formed; though there are some brute Animals that do imitate the words and voice of Man: Of which hereafter.

9. But Infants and Children, though they

10 *Of those that are born*

they have that aptitude of organs naturally, by which an articulate Voice may be pronounced, yet the use of those organs is not then made so familiar to them, as truely to frame words : for there must be exercise, and from thence a habit contracted to speak easily and readily ; just as when a man in time hath gained a habit, he sweetly playes upon a musical Instrument

10. Besides, the organs of Infants are then but infirm, and by degrees arrive to perfection. when Nature, or the innate heat by little and little consumes the superfluous moisture. And so *Aristotle* in his last forequoted place is in the right, where he saith, that as Children cannot rule and govern their Limbs, so their first impotency and imperfection appears in the Tongue, and 'tis long before they are freed from it; which is the reason that for the most part they stammer, and speak with difficulty. And hence it is that Infants cannot properly be said

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Deaf and Dumb. 11

to be mute, because there is no privation, but in a subject that is capable of the habit, yet they may properly be said to be born Dumb, whose organs are so dispos'd from their Nati-
vity, as that they have an ineptitude to speech when grown in years.

11. But this property of the or-
gans, as the Tongue, Palate, Lips,
Teeth and Throat, is only bestowed
on Man to the end that he may get a
habit of speaking any thing. Though
herein also is great variety by reason
of the Countreys and Kingdoms, in-
somuch that all men have not a ready
pronunciation of all Letters in use
with other Nations : Thus the gut-
tural Letters are appropriated to the
Eastern people ; and among them a-
nother, though no guttural letter cal-
led *Dad* (which is pronounced like
ddsb) is so peculiar to the *Arabians*,
that they can distinguish any forein
Nation from their own, by the pro-
nunciation thereof ; though they con-
verse with them never so long, and
the

the *Arabians* are meant by those that pronounce this Letter exactly, as when they say that *Mahomed* was the most Eloquent of all that pronounce the letter *Dad*, that is, of the *Arabians*. The same is every where obvious in the *European Tongues* : for, it is a matter of difficulty for the *French* to pronounce the *German G*, which is pronounced like the pointed *Kef* of the *Perſians* or *Turks* ; hence it is that they cannot without difficulty pronounce the *German* monosyllable *Tang* : and so in the rest.

12. As to the reason or cause why the Hearing of all the Senses is soonest prejudic'd from the Birth, that cannot by any means be referred to any common principle of Hearing and Speaking ; because such a principle cannot be judged a sufficient principle of Hearing only, or it conferrs no otherwayes to the hearing then *objetti-
vè* ; in regard that at least it cannot possibly fall under the notion of the efficient cause, by which there is any per-

xception of the Voice ; therefore there must be some other reason or cause found out of the thing in question, if we hold it simply true, that the Hearing is soonest injured from the Nativity.

13. But the genuine reason of the thing must be found in the winding and truly labyrinthcan structure of the inward part of the Ear, which may be soon perverted or obstructed; into which the more tender Nerve hath a *meandrous* passage, which also is soon affected with the smallest thing and from the filth of those humors which descend thither partly and primarily proceeding from the moisture of the Brain.

14. Besides the drum of the Ear may it self be more grosse from the Birth, than ordinary, or be overspread with the sinews of the Brain, or some other grosse humour ; or there may be some thick membrane that may cover the auditory *meanders* ; but they, to whom this happens, are onely troubled

14 *Of those that are born*

bled with thickness of hearing, and do as it were receive the sound by the Mouth, the reason whereof shall be given in our following Discourse. And sometimes there may be some peculiar defect in the structure of the Ear, extending it self to the Jaws and Palat of the Mouth, which is the reason that those that are Deaf use to speak thorough the nose, as *Aristotle* affirms in his second and fourth *Problem s. I.I.*

SECT.

SECT. II.

*Whether those that are Born Deaf,
are Dumb also?*

Now we come to the examination of the second point, which seems to be the consequence of the former ; and which is confirmed by Aristotle, in the 4. Book *de Hist. Animal.* c. 9. viz. That those that are born Deaf are also Dumb. And as this is deduced and laid down as a Proposition by Aristotle, by reason of the former Assertion, though against reason : so it is admitted by very many, and those Physicians too, as an universal truth, without any further search into the truth of the thing or disquisition of the difference. Hence they presupposing

16 Of those that are born

posing on all hands, as a thing beyond exception, That all those that are born Deaf are likewise Dumb. (as *Sandor. comm. in Art. Medic.* and *Galen Part 2. Question 41.* are also of opinion) make an inquisition after the cause only of the thing supposed, or incontrovertibly true : But we will more narrowly discusse the *Thesis* before we pry into the cause, why it often falls out to be so.

16. Indeed, if by those that are Mute we understand such whose organs have in themselves an ineptitude to the framing of an articulate Voice, it is an absolute mistake to maintain that all that are born Deaf, are Dumb also : for the ineptitude of organs to the framing of Speech doth not immediately follow the want of Hearing. For where deafness depends not so much upon the defect which is common to the Hearing and Speaking, (which we have allowed may sometimes happen) as upon the imperfection rather peculiar to the very *adequate*

quate organ of Hearing (of which as there are many parts, so there may be many obstructions, that may destroy the Hearing) it doth not follow therefore that there is an immediate inability to speak.

But why rather as the Hearing is sometimes destroyed after the birth, the speech remaining perfect, so also at the very birth, or immediately after, may not such a constitution of the Organs happen, whereby they may be adapted to the forming of speech, and yet be incapable of Hearing?

17. Here we must consult with experience, which testifies that those that are born deaf, may learn to speak. For so *Vales. Philoſo. Sacr. cap. 3.* reports, that one *Peter Pontius* a Monk of the Order of St. Benedict, and his Friend, taught those that were born deaf to speak, by no other way, than instructing them first to write, pointing at those things with his finger that were signified by those Characters, and then putting them forward to

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18. Of those that are born

that motion of the Tongue, that did correspond to the Characters.

18. But if by those that are dumb we understand, such as have Organs fit for the forming of words, but yet understand no language, nor ever learn't such words as express the conceived sense of the mind; it is undeniably true, that many that are born Deaf, are also Dumb, who never were instructed in any Tongue, or significative words by the forementioned artifice, or some such kind of means.

19. Therefore as to the cause, why those that are born Deaf are also Dumb, (at least for the generality) *Albertus Magnus* in his 4. Book *de Anim.* Tract. 2. C. 2. saith, that those that are Deaf from their Nativity are also Dumb, because they could learn no Idiom by the sense of Hearing. And *Sanctor* in *Art Medic.* approves of this opinion. *Galen* part. the 2. Question 4. as also *Bartholinus* in the 3. book

book of his *Anatomy* c. 9. referring the cause of deafness to the Drum of the Ear, who saith that those who from their birth are thus affected, are also for the most part Dumb, because they can neither conceive in their mind, nor utter with their Tongue those words, which they never heard.

20. But *Laurentius* contradicts this opinion in the 11th Book of his *Anatomy* and the 11th *Question* where he saith, I do not allow of that vulgar conceit, that the reason why those that are Deaf are mute, because they can learn no language, and because Hearing is the Sense of Learning; for then saith he, if that be the only cause, why Deaf Men are Dumb;

First, Why do they breath out their sighs and groans, which are naturall passions with so much difficulty?

Secondly, whether or no, might not those that are Deaf frame words and speeches to express the sense, and conceptions of the mind, if they could

20 *Of those that are born*

pronounce them, as well as those, who were the first Inventors of them.

21. But in truth we may give this answer to *Laurentius* his first argument, that it is a fallacy, to say that Deaf Men groan and sigh with difficulty; because original deafness, hath no manner of communication with the parts subservient to respiration. But *Laurentius* his mistake seems to be grounded upon what *Aristotle* writes in his 4th *Problem. Section 11.* That deaf Men breath not without violence; by which *Aristotle* doth not mean a violent or difficult respiration which belongs to the Lungs and Breast, but a vehement spiration or breathing through the Nostrils; whereupon he addes, that the Nostrils become more large by the passage of the Spirits, and that's the reason they cannot speak but through the Nose. And so also in the second *Problem,* (saith he) Those that are deaf want but little of being dumb, and

and those that are dumb, speak through the Nose, for their Spirits are driven that way, because they cannot speak.

22. Now where there is a kind of ineptitude to speech in deaf Men, occasioned by some defect appertaining to the Palate, as well as the Organ of Hearing, they breath not without difficulty; and because their Spirits do bend their course more towards the Nostrils, by reason of the wideness of their passage, besides that, they breath out a kind of voice with their mouths, as *Aristotle* speaks concerning Elephants in the 4. Book *de Hist. Anim.* c. 9. yet that sound, they make with their Nose, resembles the hoarseness of a Trumpet.

23. To *Laurentius* his second argument it may be replyed; although man by nature, though deaf, is arm'd with reason to make him fit for invention; yet as *Plato* teacheth, it is not the property of a vulgar Genius to impose names upon things; much less is it in the power of every person, to

22 *Of those that are born*

invent an elegant speech or peculiar Tongue, to make the conceptions of the mind intelligible.

24. He that first gave creatures their names, to wit, *Adam*, was in his integrity, and in the supernatural state of innocency instructed with such wisdome, as transcends the capacity of prevaricated nature : The confusion of various Tongues was afterwards supernaturally sent by God at the building of the Tower of *Babel*; and then the variety of *Idioms* did gradually proceed from the commixture of Tongues, or had some other rise by the common use and consent of men.

Yet those that are mute, can find out a way whereby to explain the sense of their mind to others, as well as if they had the faculty of speaking, which is analogous to speech, as shall be manifested in i'ts proper place.

25. But possibly some persons believe that if deaf men had in them that aptitude of Organs whereby they might be capeable of speaking, that they

they should use some native Language, or speech, which Nature their School-Mistress should instruct them : for since Sermocination is essential to man, as subordinate to reason, so it is not improbable, that where the Organs are so adapted, there must be granted external speech. To which we answer, that 'tis true the very faculty of sermocination, which is subservient to them in the declaring the sense of their mind, by those significations that are set forth by words, whatsoever they be, is essential to man ; yet the names of things, and so consequently the Languages themselves, or the *Idioms* of speech are not to be learn'd by nature, but by instruction, exercise and custome.

26. And really if any certain speech did depend upon nature, as every individual person of mankind hath one and the same nature : so all Nations whatsoever would use one and the same Tongue. But the contrary is known experimentally. Therefore their opinion is altogether vain and foolish,

24 Of thōse that are born

foolish, who, being ignorant of *phi-*
losophy, would needs oblige them-
selves and others to this persuasion,
that if a Child were taught no Lan-
guage in his Infancy, but left to his
own conduct, he would speak *Hebrew*,
that is, he would make use of this
Language by the meer instinct of Na-
ture, which is a conceit altogether
inept and foolish.

27. *Vallesius* in the forequoted place
makes a good objection to this phan-
tastical opinion ; saying, If Speech
were connatural to men, as many other
things are ; it would be so, though they
learnt any other Language, and con-
sequently all men would understand
two Tongues. For, if the Speech in
which a man was first instructed doth
not hinder his learning another ; (since
many men can speak two, three, or
four Languages) much lesse can that
which is natural, be impeded by that,
which is acquisititious.

28. Nay rather, if one Tongue
were natural to man, they could not be
docible

ducible of all the rest ; because that which is internal obstructs the external. Therefore as Nature made Man without Knowledge ; that he might be capable of all Arts ; it must necessarily follow , that she Created him without any Language , that he might learn them all. We also find that many men are more apt to learn other Languages, than the *Hebrew* ; and that many *Europeans* attain the true pronunciation of some *Hebrew* words with no small difficulty ; which could not be, if the *Hebrew* were our natural Language ; for all things do voluntarily tend to that which is natural to them.

29. We conclude therefore, that they who are born absolutely Deaf , though their organs are fit for the prolation of words , which frequently happens , yet they are for the major part , Dumb ; that is, they cannot pronounce significative words , because they could not learn any *Idiom* by the Ear : For it is very rarely known that

that they are taught to Speak by any such particular art as *Peter Pontius* made use of, which out of *Vallesius* we have before mentioned.

30. But in the mean time we do no way contradict, but agree with *Larentius*, when he ascribes it to another cause, why all those that are Deaf are generally Dumb, or at least speak with difficulty, taken from the mutual conjunction of the Nerves. For this we lay down, as another cause why Deaf men born, are Dumb, and so really dumb that they are altogether incapable of speaking articulate Words. For that communion of the Nerves consists not in this, that because the Nerve of the fifth Conjugation which is the auditory Nerve, and the Nerves of the sixth Conjugation, which are those belonging to the Speech (or rather of the seventh, for this is the Nerve of the Tongue) are mutually joyned together within themselves, before they are dispersed into their proper parts, as *Peter Apponensis* in

in his Explanation of the *propos'd Problem*, is of opinion; or because that the same Nerves are originally invested with the same Tunicle, which in the judgement of others, is no lesse repugnant to it self; for the Nerves of either of the prementioned Conjugations are found by a sufficient and long interval originally distant; and it cannot be said, that they have any other common Tunicle, than what all other Nerves are covered with, viz. the *Pia Mennix* from which far-fetcht communion of the Nerves we may also inferr, that those that are Deaf, are Blind, and those that are Blind, Dumb.

31. But that Conjugation of the Nerves is well demonstrated by *Laurentius* (which is also mentioned by *Baehinus* in the third Book of his *Anatomy c. 22. 60.* and others,) that the Nerve of the fifth Conjugation (commonly called the auditory Nerve) hath several branches issuing from it, the larger whereof is expanded to the Ear

28 *Of those that are born*

Ear and the membrane of that most exquisite sense, and carries all sorts of Sounds to the Brain, the lesser extends to the Tongue and *Larynx*, and is there embraced by the seventh Conjunction.

32. And from this Communion of the vessels proceeds the sympathy between the Ear, the Tongue, and Larynx, and the very affection of those parts, are easily communicated one with the other. Hence it is, that the pulling of the Membrane of the Ear, causeth a dry Cough in the party; which *Avices* takes notice of: and that is the reason, most deaf Men, at least those, whose deafness ariseth from the ill-affection of the Nerves of the fifth pair, are Dumb, or else speak with great difficulty; that is, are not capable of framing true words, or of articulate pronunciation, by reason of the want of that convenient influx of the animal spirits; and for this cause also, it is that those that are thick of Hearing, have a kind of hoarse speech.

33. In

33. In like manner, if there be any evil defect which usually consists in the inward structure of the Ear and the Palat (which makes them speak through the Nose; as we have before mentioned out of *Aristotle*) there follows a deafness and withall an impediment of Speech, the organ of speech, being vitiated, but not simply, because a Language cannot then be learn't by hearing. But contrarily, if the only structure of the Ear be defective or only that branch of the fifth pair, which is carried to the Ear be precernaturally affected ; the Hearing may be hindred, or Deafness may arise ; but the impediment is but by Accident ; because that when Words cannot be heard or received by the Ear , they cannot be learnt.

34. But if the Hearing be prejudic'd by the defect of the *Tympanum*, or by any particular Membrane that is over it, that is a peculiar Accident; for in this case there happens to be a thickness of Hearing, which is near-
est

est of kin to Deafness, rather than an absolute Deafness it self. And in such cases, those that are deafish use to hearken with their Mouth, or to suck in Words and Sounds with gaping, and so to pronounce without trouble those very words, by the help of those organs subservient to Speech, which they learnt by Hearing; and such are by no means to be call'd Dumb persons.

35. But the Sound flows to the inward part of the Ear, or the very organ of Hearing, by the help of the little *Cartilaginous* Pipe, which is conveyed from the second passage of the Ear to the Mouth and Palat, being appointed to convey the Excrements of the Ear through the Mouth, like an *Aqueduct*.

By the benefit of this Conduit-pipe it is, that we can exactly apprehend our own Words, when both our Ears are stopt; so also, if we hold a Stick in our Mouth, and therewith touch any musical Instrument, we hear the sound

found thereof more exactly; and if you are desirous to know, whether there be any person approaching near you in the Night time, place one end of the Staff on the ground, and hold the other with your Teeth, you hear then far better, though at a great distance.

36. By the same Pipe, when we blow our Nose, or hold our Breath, by stopping of the Ears and shutting the Mouth, we are sensible that the air finds a passage into the Ear, by which the Membrane of the *tympnum* is struck with the outward sound, and sometimes prejudiced thereby, if it be very violent, and by this it is that Smoakers puffing up their Cheeks having taken in the fume of Tobacco, send it out at their Ears, so as that they seem to Breath at the Ears. Therefore the Opinion of *Alcmaeon* is not ridiculous who held that she-Goats did Breath thorough their Ears, as *Aristotle* hath it in his first Book *de Hist.. Animal.* c. 11. And to

32 *Of those that are born*

to Physicians this conveyance doth
insinuate , that masticatory Medicines
are not to be slighted in the
inward pains of the Ears.

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SECT. III.

*Of their way of Understanding
that are Born Deaf.*

37. Before we come to the third point of what is to be discus'd concerning the propos'd *Problem*, we must Contemplate a little further on those that are Born Deaf, and see with what Knowledge they are endued, since men usually gain the major part of what they know, by Hearing.

38. First, those persons that are Born Deaf, and have the Visive faculty intire, they may gain the Knowledge of all Visible things, as visible, and may frame those universal con-

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ception of them by the abstraction of the Mind, as well in this case, as where the Hearing is perfect : Nay farther, and these persons as well as all other men in general may proceed from things Visible by the light of the Understanding to the Knowledge of the Invisible mysteries of the Deity ; so that they are left inexcusable, as well as any other persons whatsoever, if they do not glorify God, and return him thanks for Benefits receiv'd : Of these the Apostle speaks *Rom. I. v. 20, 21.*

39. Furthermore, if those that are Born Deaf, are also Blind, although they are depriv'd of the knowledge of many things, which come within the compass of the Senses, nor can arive at the knowledge of God by the outward Book of Nature, as the other, yet they may obtain the knowledge both of God and themselves, by those notions that are graft-ed in their minds. And it is very probable, that those whose Intellects are

are less disturbed in Contemplation by the appearance of corporeal things; the implanted Seeds that are in them of the Knowledge of Divine and immaterial Beings, do easily break forth into action; as we our selves are more apt for the search and Contemplation of Divine things, the less we are distracted by outward objects, and the fancies that result from them.

40. Certainly it is not at all consonant to reason, that the rational Soul, or Mind is altogether unactive in such persons, and lies as it were lurking in the lethargy of a benumm'd security, or that they do not according to their capacity incline their minds to the Knowledge of the Deity, by virtue of that innate light that is in them, as well as the Celestial Angels, and Divels; since the Soul is to be reckoned in the number of Intelligences (though perhaps placed in the lowest rank of Intelligences) and in reality is not so deeply plunged in matter or material fun-

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36. *Of those that are born*

ctions, by reason of its defect of Sight
and Hearing.

41. But what is to be thought of those who are born Deaf, as to their Knowledge in things that concern the Mystery of our Salvation ?

These things as they are too sublime, either for Universal, Humane, or Angelical knowledge, cannot be found out, or understood by those notions implanted in the mind. And as *Faith comes by Hearing*, according to the Apostle, where this is wanting, it may possibly seem very agreeable to truth, that there can be no Faith, and therefore no saving knowledge ; and the consequence is undeniable, since no man can be saved without Faith.

42. Oh this is indeed a very hard saying, which shipwrecks the Soul ! Truly since those that are born Deaf are no more guilty of neglecting the means of their Salvation, than Infants (concerning whom however the Sacred Pages advise us to be more charitable) what reason I wonder can there

there be, why we should think God less merciful to them, who are also born of faithful Parents, than to Infants ! We will leave the disquisition of their Faith, or the manner thereof to Divines. Hath God therefore, who according to his Will hath elected some out of all Mankind corrupted by the Fall, to be Vessels of mercy, and others Vessels of his wrath, strictly registered all those that are born deaf in the number of those that are Vessels of wrath ? Yet God's Promise and Covenant belongs to these, as much as to the children of the faithful.

43. The Holy Ghost in truth is the chieftest cause of Faith, who begets it in our hearts by the preaching of the Word, and consequently by Hearing. This is the ordinary way of God which he commands us to follow ; he that neglects this, is excluded from Faith by his own fault. Yet God is not wholly tied up to this one way of operation. He hath extraordinary ways which we are ignorant of, and

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38 Of those that are born

he will not reveal to us. Yet God made use of peculiar means to bring St. Paul to the christian Faith, and made him of a Persecutor of the Church, become an Apostle, *Acts.* the 9. He proceeded after another manner to the conversion (at least in part) of the Eunuch of Candace the *Aethiopian Queen.* *Acts* the 9. viz. By the reading of the word of God.

44. And shall we judge that no persons can be saved, that live where there is no publike preaching of Gods Word, and so by consequence where the mind gains no spiritual knowledge by Hearing? May we not affirm, that by diligent reading, and co-operation of the Holy Ghost, Faith may be engendred in the Souls of the Godly? Now therefore if this means be without Hearing, why may not God manifest other ways, that so at least his operation may not be confin'd to the hearing solely?

45. But let us examine whether there are not other means appointed by God,

God, by which those that are originally deaf, may attain the knowledge of divine Mysteries sufficient for salvation.

There is no necessity, why speech, which is usually acquir'd by Hearing, should precede writing; but speech useth to be in the first place by reason of it's facility, for those that have all their senses perfect, are more apt to speak, than write. But where there is a defect of Hearing, they may begin with writing, and so by writing come to speaking, as is manifest by the fore-cited example out of *Vallesius*. Now external speech is a kind Messenger or rather representation of the internal, or of the intellect it self.

They therefore that are born Deaf may by writing inform their minds with the knowledge of those things, which must be obtained by hearing in others, whose senses are all perfect; and so they may make use of writing instead of speaking, which is otherwayes attained by Learning; and they as *Vallesius* speaks in his third chapter de-

40 Of those that are born

Phil. Saer. Do gain the knowledge of Divine things by the sight, which others do by hearing, which I my self (saith he) can testify, in thole Scholars which my friend *Peter Pontius* undertook, who first taught them that were born Deaf to write, or to express the conceptions of their mind by writing, and then to speak.

46. The same reason there is for those that are born Deaf, if Dumb also; they may by writing understand things, although no external writing is subsequent to speech; for the speech in Man conduceth not to the gaining of knowledge to themselves, but only to communicate the Conceptions of their own mind to others. This is clear by an example taken out of *Fel. Platerus* who in the first book of his Observations pag. 118. reports, that a certain person who was born Deaf and Dumb, could with Chalk draw out his mind in a Table-book, which he carried continually about him, and understand what others writ thereon.

47. But

47. But as writing, or the reading thereof, may serve in stead of speech, by which the Conceptions of the mind are laid open to the sight, as well as they are by speech to the Ear ; so there may be other signs made imitating the outward speech, and Sucedaneous to hearing ; as those are which Mutes themselves always make use one in lieu of speech, and by which they conceive the Sentiments of other mens minds. For experience teacheth us, and there are also many obvious examples among us, that those that are originally Dumb, and Deaf do by certain gestures, and various motions of the body as readily and clearly declare their mind, to those with whom they have been often conversant, as if they could speak, and likewise by such gestures of other Persons, they do absolutely understand the intentions of their mind also.

48. The Emperour of the Turk maintains many such Mutes in his Court ; who do express the Con-

42 *Of those that are born*

Conceptions of their minds one to another, and as it were interchange mutual discourse, by gesticulations, and variety of external significations, no otherways than we that have the faculty of signifying our own thoughts, and conceiving those of other Persons by outward Speech. Nay the Turkish Emperour himself, and his Courtiers, take great delight with this kind of Speech shadowed out by gestures, and use to employ themselves very much in the exercize hereof, to make them perfect in it.

49. *Cornelius Haga* Embassadour to the Emperour of the Turks sent thither by the States of the United Provinces did once invite all those Mutes to a Banquet (as I observed from the relation given me by the most Noble and Worthy Dr. Brinkins Senator of Hardwick) where though there was not a syllable heard yet they did exchange several discourses, as is usual at other Treats, which the Embassadour understood by an Interpreter on both sides by

by whose assistance he himself did discourse with the Mutes upon all subjects.

50. But those very significations of things, which Mutes make use of, proceed not from nature, but from their own institution no more, than our speech; Therefore they attain unto them by Study and exercise.

Although however most of them do shadow out some outward manner, of the things which they aim at. As when they close one hand, and move it up towards the Nostrils, thereby they signifie a Flower. Now the significations of those Mutes (which is as it were their Speech) are not like the Languages which vary among several Nations, nor are so absolutely different.

51. And as the Mutes do by their gestures exactly and distinctly understand one another, and those Persons also that use such a kind of analogous Speech among them; so they conceive many things by the gestures, motion of the Lips, and such like things in those

those that really do speak, and sometimes understand a great part of their conceptions by such outward things. So saith *Platerus* in the place above-mentioned : that his Father told him, that that Deaf and Dumb man (whom we discouſt of a little before) when he very devoutly heard *Oecolampadius* Preaching , did apprehend many things from the motion of his Lips, and gestures ; and so from others.

52. And there is now at this very time in the City of *Gronning*, such a one who being born Deaf and Dumb, constantly frequents publike Sermons, and doth as it were contemplate upon the Words of the Preacher with his eyes fixt upon him , so that he seems to receive them in at his Mouth as others do by the Ear. This person when he earnestly desires to receive the Holy Sacrament , I do not at all question, but that he hath that knowledge of those Divine things, that concern his Salvation , insomuch that he cannot be debarr'd from it without some

some scruple of Conscience. Although I am of opinion that he ought to be examined as to this his knowledge and Confession, which may be done, by means of his Wife, or Servant, his Interpreters, whom he alwayes hath with him, and who discourse with him very nimbly by signs, of any thing whatsoever.

53. We will subjoyn one example out of *Phil. Camerarium*, which is in *Horæ Subcisiæ 1 Cent. 37.* ‘We have now among us (faith he) a young Youth and a Maid born of the same Parents, and indeed of a Noble and honest Family, who have an extraordinary acuteness of Wit: and though Nature brought them forth Deaf and Dumb, yet they can both of them Read distinctly, Write an excellent hand, and keep Merchants Accompts. And as he dexterously perceives by a Nod what you would have him to do, and if he wants a Pen, will express himself by gestures; and is very cunning at all Games that

‘that are usually plaide among us up-
‘on the Dice, which cannot be man-
‘aged without great subtility; so she
‘very much exceeds all Maids at her
‘Needle and curious Weaving. But
‘among other their admirable quali-
‘fications, which Nature hath be-
‘stowed upon them; this is wonder-
‘ful, that they seem to understand
‘what any one speaks by the motion of
‘the Lips; Wherefore they are of-
‘ten at Church, hearing the Word
‘Preacht. So that it will be no ab-
‘surdity to say, that ‘tis probable
‘they take the Words in at their Eyes,
‘they are so intent, which others use to
‘do by the Ear. For they can at plea-
‘sure without any suggestion, or o-
‘ther help write the Lords Prayer,
‘and other pious Oraisons. And can
‘remember the Gospells appointed
‘to be read on Holy-days as well as
‘others, and readily Write them.
‘And if the Holy Name of *Iesu* be
‘mentioned in the Church, he, a-
‘bove all the rest, will in a posture
‘of

'of Reverence uncover his head, and bow the knee. Thus Nature like an indulgent Mother was solicitous and studious to recompense their defects, that she might free her self from the injurious accusation of a cruel Step-mother.

The

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The Fourth SECTION,
 Being
 A DISCOURSE
 Concerning the
 REASON,
 AND
 SPEECH
 OF
 B E A S T S.

54. These things, concerning those
 that are born Deaf and Dumb
 being thus determined, we will pro-
 ceed

ceed to a further Illustration of the rest which occur in the *Problem* propos'd, and the *Explication* thereof; And the third point which Aristotle hath offered, to our meditation concerns the *Speech* of *Beasts*, where he lays down this, as an Assertion.

That the faculty of Speech (which presupposeth reason) is only bestowed upon Man, and that no other Creature can speak: Which we will take into our Consideration.

55. To speak truly, the inward Speech is no more, than the *nuncius* or a certain image of internal reason, which goes to the *Idea* of the reason express; whence the *Græcians*, and that not without reason, call *rationem* and *sermonem*, Reason and Speech by the same name *λόγον* absolutely, i. e. Speech which the Philosophers distinguish into *ἐνδιαστον* & *τερπευον* into internal and external, and the one must necessarily accompany the other, unless there be an imperfection, or defect in the organs. Therefore this is

50 Of the Reason and Speech

a necessary Consequence, That where there is no Reason, there can be no external Speech; and so on the contrary.

56. And 'tis from this strict copulation of *Reason* and *Speech*, that Τὸν ἀριθμὸν *rational* is express'd in the Arabick Version, by the word *Natthack*, which signifies Speaking, Gen. 2. v. 7. as its opposite "Αλογόν", irrational, *Chares*, which signifies Mute, is so named in 2 Pet. 2. v. 2. to which the Dutch phrase answers, *een stotom Beest*; (and our English exactly, *a Dumb Beast*) i.e. an irrational Creature.

Nay, the Holy Scripture calls irrational; dumb Creatures, or Creatures without Speech, 2 Pet. 2. v. 16. where the Ass of the Prophet Balaam is said to be "Ταράχυνος ἀπαντεῖσθαι τοῦ φρεγάκου, subjugate mutum humana voce locutum; which our English Translation renders, *The dumb Ass speaking with Man's Voice*.

57. But here our Galen suggests a difficulty, who, whilst he seems to deny

ny Brutes external Speech, yet he affirms, that they have Reason, from whence external speech indisputably proceeds; so that if any Brutes have fit organs for the uttering of articulate words, it seems that they must not be denied external speech, reason or ratiocination being suppos'd; For thus *Galen* expresteth himself in the beginning of his Book intituled *Exhort. ad Art. lib. Stud.* It is not yet certain, whether Beasts, which are called Brutes, are altogether void of Reason. For though peradventure they have not that Reason in common, with us, which is understood by the Voice, and call'd denunciative; yet certainly, they all of them have that which is taken according to the Soul, which they call Reason, capable of Affections in common, as well as we, though some more, some lesse.

58. But here we must make a halt for a while, to the end that we may more exactly determine what is to be

52 Of the Reason and Speech

thought of the Reason of brute Beasts commonly so called, and also of their Speech. Indeed the inost profound Philosophers, *Porphyrius*, *Plutarch*, and *Galen* (saith *Bodin* in *Theatr. Nat. lib. p. 476.*) have proved by almost an infinite number of Arguments, that Nature hath bestowed Reason upon Beasts. And *Huan-
tius in Scrutin. Ingen. ca. 6.* ' There is no doubt (saith he) but that brute Animals have a Memory and Phantasy, and a certain Power besides, which is correspondent to the Intellect, as an Ape resembles a Man.

59. How many things do we meet with, concerning the Ingenuity and Reason of Brutes (of which *Plutarch* hath writ a peculiar Treatise, as also many things are mentioned in *Grylio*) as well by Tradition from Authors, as those which are obviously known to us, which certainly seem to argue some kind of Reason, or somewhat analogous to Human Reason.

Pro-

Prodigious things are related of the Elephant by *Pliny*, *Aelian*, *Plutarch* and others, which *Lipsius* hath Collected out of several Authors in his first *Century* ch. 50. Where among many other observable things this following Story, which is almost beyond belief, yet faithfully quoted out of *Acosta*, and *Garcias ab Horta Hist. Arom. lib. I. c. 14.* relates it also.

There was an Elephant in the City of *Cochin*, who wanting his food at the precise accustomed hour, complained, and bray'd. His Master excused it by shewing him that the Brazen Vessel, which usually contained his food was leaky and run out, and that the occasion of this delay was, because, that it could no longer hold his Drench or Wash : And therefore commands him, if he would eat, to carry it to the Braziers to be mended. He obeys, takes it upon his Trunk and brings it to the Brazier. Who either through negligence, or

to make sport with the Beast, did not mend it well, and stop up the Chinks. The Elephant brings it back again, his Master spying the fault, grew angry, and exclaimed both against him and the Elephant; and in fine, bids him carry the Vessel back again. He doth so, and with a querulous tone throws it at the *Brazier*. He being a pleasant fellow, endeavours to put a Cheat upon him the second time, and makes, as if he did stop the holes, but did not: Yet he mist his aim; for the Elephant was so cunning, as to carry the Cauldron to the River, and there puts it into the Water and fills it, to try whether it would hold, but he found that it did run out. He being hereupon highly incensed, runs back to the *Brazier*, and bellowed out with a thundering voice, so that the Neighbours came about them, and among the rest the King's *Vice-roy*. The *Brazier* pacifies the Beast with fair words (and here saith *Lipsius*, I know not whether

ther I dare proceed any further ; and at last he takes the Vessel into his hands and mends it well and strongly. But the Elephant being mistrustful, carries it again to the River and fills it with Water ; when he saw that it would hold, he turns himself to the standers by and shews it, calling them as witnesses to the matter of fact ; and so went home.

61. *Garcias* adds further, who travelled into those parts, that there are some yet living, who affirm they saw it done. And he testifies, that Elephants do not only understand the Language of their own, but also those of forein Countreys, if taught them. And a little after ; In summe, there is nothing wanting in this Creature to make him appear rational, but only Speech : although this also (as the same *Garcias* witnesseth) is by some attributed to it. Of which hereafter.

62. And lest that any one should make a doubt of what is reported concerning Elephants ; hear *Iac. Bonitus*.

an Author of very great credit ; who was some few years past in the *East-Indies*, and chief Physician to the *Belgian Society*, and himself an Eye-witness thereof ; who, in his Notes upon the forementioned place in *Garcia*, declares expressly, That whatsoever is said of the Elephants docility ; is true : The same things in some measure are related by *Pliny*, *Scaliger*, *Camerarius*, *Lipsius* and others, concerning the tractableness and ingenuity of Dogs and Horses, and also of their fidelity to their Masters, which almost exceed all belief ; and yet are every where made manifest by daily experience.

63. There was in *Holland* not many years ago, a comely Horse carried about by a fellow to be seen, being by custom brought to that which *Scaliger* mentions of another in his 209 *Exercitation* ; who did very strange things ; at his masters command, or single Nod ; among other things being commanded to shew him the greatest wenchef

wencher, or drunkard, &c. in the Company, he was not much out of the way, being without doubt, directed by some private sign from his Master.

64. Scaliger in his 236 *Exercitation*; reports, That he saw a Dancing *Parrot*, who did with the gesture of his head, and by hanging down and fluttering of his wings imitate a *Savoyard* (that was a Songster) dancing; which he assures us a *Crane* did also very pleasantly.

Ionstonius in Thaumaturgus Naturae. reports of another *Parrot*, that she would say over the Apostles Creed before the Cardinal, and answer questions. Also of another that belonged to *Henry the Eighth King of England*, who being fallen into the River cried out for help, and promised twenty pounds to those that would save her, but being taken up, he bid them give the man a Groat.

65. I my self at present, have a little Dog at home; who not long ago seeing the *Cat* licking a large Ladle

idle that was hung up by the Chimney; he first leapt at her, and endeavour'd to drive her away by barking; but she fell still to her work not minding him, by accident he finds me out a great way off from that place, runs to me, and ever and anon lawns upon me with his forefeet, and then runs towards the *Cat*, as it were to shew me his meaning, that I might see her, and drive her away; so that the Whelp took notice of this unworthy act of the *Cat*, though not used to do it, and would out of envy have her driven away. I had formerly another small Cur at *Hardervick*, who would very hardly be kept at home when I went abroad, insomuch that if he had slept in the Kitchin at any time longer than ordinary, being uncertain, whether I were gone out in the interim, or no; starting up of a sudden, he would run into the Parlour, and look about for my Cloak, which as soon as he spied, he returned into the Kitchin satisfied, gathering as it were from hence, that I was in my Study as yet within.

66. We may daily observe, the gestures of *Apes*, and their imitation of Mens actions without any fraud or deceit, though not accustomed to it formerly. *Oornithographer* affirm that *Cranes* observe a kind of discipline in their flight, and keep a Watch or stand Sentinel. Every dayes experience openly proclaims the admirable ingenuity and policy of *Bees* and *Ants*. The Spinning of *Spiders*, and the way they have to ensnare *Flies*, or trap them sometimes unawares. I omit a thousand other observations of brute Beasts, that are daily obvious to our sences, which do seem to declare that there is some *Idea* of Reason, or some kind of ratiocination in them.

67. I will only annex one thing which *Fort. Licet. lib. 2. de Monst. c. 68.* relates out of the *Portugal Annals of Castaneda*; to wit, That a certain Woman for some Crime was by Sea transported to a Desart Island, when she was set a shore there, a horrid company of *Apes* (which that place

place abounded with) came and stood round about her ; and that there was one among them bigger, than the rest, to whom all gave place ; who taking the Woman very gently by the hand led her into a vailt Cave, and that he and the rest, did set before her store of Apples, Nuts, and variety of Roots, and with a comple-mental Nod invited her to Eat ; at length she was Ravish'd by the Beast; who continued the act a long time, in-somuch that she had two Children by him ; and that she lived in this misera-ble condition for some years ; till (God commiserating her case) a Por-tugal Vessel was driven thither, and the Soldiers coming a shore for Wa-ter, which they had out of a Foun-tain next adjoyning to that Cave, and by great chance the Ape being absent, the woman ran to the men, having seen none of that Sex a long time, and falling suppliantly at their feet , beseeched them to free her from that wicked and miserable servitude; they pitying her
con-

condition, did condescend to her intreaties, and she came aboard of them. But behold, saith he, the *Ape* unexpectedly coming after her, and with strange gestures and noises calling back his *Consort*, and yet no *Consort*: When he saw them hoise up the Sails, he runs back with great speed, and brings one of the Children and shews it to the Mother, threatening to throw it into the Sea, unlesse she would return; and did so imme- diatly; then he runs back to the *Cave*, and returning to the Sea-shore with the same speed shews the other, threatens, and then drowns it; and at last he himself swims after her, and was drowned.

68. As to the Speech of Brute Animals; 'tis confirmed by daily experience, that some of them may by custom imitate in some measure an articulate Voice, or Humane Speech. This is a very familiar observation in the *Parret*, *Pie*, and *Sterling*. *Plutarch*, *Pliny*, *Ovid*, and others, testi- fie

fy the same thing of the *Nightingal*. I my self (saith the Author) have obſerved (at *Mersa* in my native Countrey *Anno 1646.*) at the House of the most Noble and Strenuous Gentleman *Wilhelmus Reinerus a Clou*, who was a Peer and Governour of that Ci-ty and County) in that kind of Finches, which they call a *Goldfinch*, and *Aristotle* *χρυσομήλην*, that could imitate Man's Speech articulately and distinctly enough : This little Bird was so accustomed by hearting people speak frequently, that as often as she did prepare to sing, she would utter these words distinctly, *Sing Manneken, sing man*, but in a lower tone, as if she were hoarse ; and after she had often repeated them, then she would proceed with a most sweet harmo-ny.

We have given you an account of the *parret* that could rehearse the Apostolick Creed ; and of the other, that falling into the River desired help and promised a reward, in the fore-going

going part of our Discourse.

69. We will not here take any notice of the *Serpent's* discourse with *Eve*, immediately after the Creation, Gen. 3. nor of the Speaking of *Balaam's Ass*, Numb. 22. and 2 Pet. 2. v. 16. because we are satisfied that the one, was done by Diabolical, and the other, by Divine operation; we will only briefly insist upon those things which the Naturalists, as *Pliny*, *Aelian*, *Plutarch*, and others, report concerning the Speech of *Elephants*, and of their writing too. Among which possibly we might reckon the ingeminated Words that were heard to be spoken by the Statue of *Juno Moneta*, and *Fortuna*, as *Valerius Maximus* reports, but that the more inward recesses of Nature are first exactly to be discussed by us, that we may the more clearly discern the illusions of Satan from the Works of Nature.

70. Concerning the peculiar Speech of *Elephants*, *Oppian* delivereth himself, as followeth;

φίμων

φήμη δ' αι: Ἐλέφαντες εἰποῦσιν οὐλάροις λαλέσσοι,
οὗτοι γάρ εἰποῦσιν μεγάθιδα τορσοφύεντες.

'Tis fam'd, that Elephants with their own
kind.

Talk, and in proper terms express their
mind.

Acosta affirms (who lived a long time in *East-India*, and did diligently examine the nature and towardness of *Elephants*, and receiv'd it from those who made daily observations of their nature) That in the Kingdom of *Mala-bar*, 'tis a general received opinion, that these Creatures do Talk one with another.

71. Nay, it is believed that they can learn Humane speech, and express their inward conceptions by familiar Words. There was (saith the same *Acosta*) an *Elephant* in the City of *Cochin*, who did, at his daily work in the Haven about marine affairs; who though tir'd, was however urged by the

the *Praefet* of that City, to draw a light Vessel, (or Pinnace,) into the Sea, which he had already begun to do, but the Beast refused it, and he prest him with many fair words; and at last (not prevailing) he intreated him to do it for the King of *Portugal's* sake. At which (O incredible!) the *Elephant* being moy'd (saith *Acosta*) repeated these two Words *Hoo Hoo*; which signifies in the Tongue of the People of *Malabar*, *I will, I will*; and drew the Ship into the Sea without any further delay.

72. *Garcias ab Horto* in the place above mentioned, saith, That there are some People in *Cochin*, who affirm they saw a publike Register (called an *Attestation*) which did mention, That there was an *Elephant* there that could Speak, and did ask his Governor for food, but he answered, that the Cauldron in which he boyl'd Rice for him was full of holes, &c. which story is related before by *Lipsius* out of *Acosta*.

66 Of the Reason and Speech

73. But let us speak something of the Writing of *Elephants*, which is a representation of the external speech; *Pliny* out of *Mucianus*, reports, that one of these Creatures learnt the *Greek Letters*, and Writ in that Language, *Ipse ego hæc scripsi & spolia Celtica dicari.*

And *philostratus*, They write (saith he) and Dance, nay, to the Pipe also. But *Aelian* saith, I my self have seen an *Elephant* Writing the *Roman Letters* in a Table-book with his Trunk, and that withal, they were writ very even, not crooked; Nay, whilst he was Writing, his Eyes were earnestly fixed upon the Table-book, that you might plainly say, they were intent and accustomed to Writing.

74. Although the major part of Brutes have no articulate Voice, and so do not make use of Speech properly so called: Yet we see on all sides, that they express their inward conceptions one with another, and with Men also, by the Gestures, Sounds,

Sounds, and Noises which they make with their Bodies, and such other kind of means ; even as Dumb Men use gesticulations and various motions, in lieu of Speech , whereby they discourse very significantly among themselves, as well as with other persons.

75. Hither is to be referred that of *Philostratus* in the Life of *Apollonius*, in his 4. Book ch. 1. concerning the Sparrow, who, as a messenger, by the raising of his chirping tone, did signify to the rest, that he had found out some place, where there was good store of scattered Corn , and so did communicate the food he had discovered to the rest of the Sparrows, who hearing that Voice of his, they all making a sudden noise , immediately flew after him.

The like example was related to me by the most Noble and renowned *Brinkins*, p. m. Burgomaster of *Har-dervick* when living, concerning a *Goose*, who when she had found in any of the Fields a Stock of Corn, took her

F 2 flight

flight immediately to the rest of her Comforts , and making a noise among them , the whole Flock followed her , she flying foremost , and shewing the rest where their food was . We may daily observe in Dogs greater remarques whereby they signify their inward sense to others .

76. And since it is so , what must we think of the Reason of Brutes , and their *Sermocination* whatsoever it be ? What is there wanting to make them rational Creatures , or make them accounted to be of Humane society ? Are we not bound to acknowledge that there is in Brutes a kind of analogical Reason or estimative faculty that resembles Reason , from whence their Ingenuity is derived , and by virtue whereof , they seem to be in some respects prudent .

77. And truely since we see that Brute Animals do sometimes Rave , and Dote (for Apes when Drunk , have a kind of delirium ; Dogs are troubled with the *Hydrophobia* or Madness ,

Madness, which happens (as is reported) to *Horses*, *Oxen*, *Affes*, and *Camels*) it must needs also follow, that they have Wit, and the use of Reason in some measure; for natural Potency and Impotency are to be referred to the same subject: Hence we find, that as that analogical Reason is in some, more exquisite and vigorous, so some Brutes differ from others in Ingenuity. Prudence, Docility and Stupidity. Of which Subject I have variously Discoursed in *Theatr. Natur. Univers. part. 2. Disputat. 5. s. 29.* and the following Sections.

78. Yet this Reason of Brutes is absolutely different from Humane Reason in its very essence, for the former is a kind of sensitive or material faculty of the Soul, to which, that which is vulgarly called Cogitative in man, or the estimative faculty it self, illustrated with Reason, from the presiding, and hypostatical union of the rational Soul with the sensitive,

70 Of the Reason and Speech

Body, doth in some measure agree : and yet this very Cogitative faculty in Man, though it be material, it is far more noble and excellent, than the Reason in any species of Brutes can be ; and doth by many degrees surpass the Reason of *Elephants*; then this Reason is apprehended to transcend the Reason of *Gallus Africanus*, insomuch that there is herein a kind of irradiation, or a represented Image in Man, flowing from the Immortal Soul, which also by its Native and Essential Reason is capacitated to imitate the Cœlestial Intelligencies ; which bright light of Reason in Man communicates it self to the estimative faculty, by reason of the intimate connexion of the Rational Soul with the Sensitive Body, by which the whole *Suppositum* becomes Rational.

79. And therefore 'tis not without reason that *Aristotle* saith in the First Book of his *Ethicks* to *Nicomachus*, the last Chapter; That Man hath a

two-

twofold Reason; the one, he hath principally in himself, viz. $\tauὸν τὸν$ the very Mind or rational Soul: the other, that he is obedient to Parents, and that he hath Reason by participation, to wit, that which he calls in Man $\tauὸν ἀλογὸν$ or that part that is without the Humane Soul, as the Sensitive faculty; this first Reason of Man is the very Intellect it self, so call'd by Aristotle, which he saith, 3. *De Anim.* cap. 5. t. 20. is separable, immortal, and impassible; the latter, the passive Intellect, which he doth not affirm to be immortal and eternal, because it perisheth with the universal sensitive faculty, when the rational Soul is separated from the Body.

80. The former sort of Reason in Man, which is proper to the rational Soul or Mind, and is its native faculty, as the Mind of Man is an immaterial substance, not at all enveloped in matter, so that makes use of no corporeal organ in the exercise of its functions; but soaring above all the

Senses, contemplates upon Divine, Immortal, and Eternal Beings; and understands those things which no Sense of the Body can conceive; and still desires that which the sensitive faculty wholly abhors. So that *Calvin* in the first Book of his *Institutes* c. 5. S. 5. reprobates those (and that not undeservedly) who being addicted to preposterous subtleties would fain wrest that saying (which teacheth that the Faculties of the Soul are organical) to a contrary sense (viz. from the sensitive faculty, to the very rational Soul) as well (saith he) to destroy the immortality of the Soul, as to rob God of his proper right: for (saith he) because the faculties of the Soul are organical: by this pretext they so link it to the Body, that it cannot subsist without it.

81. The latter Reason of Man; which is communicated to the sensitive or estimative faculty by participation; as it is not corporeal, nor intermixed

termixed with the Body (as Aristotle shews *de Anim.* l. 3. c. 4. text 6.) because that it is a kind of communicated image, and represented as it were in the Mirror of the Mind; so neither doth it use any organ in its operations (according to Arist. in thefore cited place) although 'tis busied about outward appearances, as the object of its operations, and can understand nothing without them (as Aristotle teacheth c. 8. text 39. And in truth that which he hath in the last quoted place, belongs to this passive Intellect, or rather to Man, as he is of a sensitive nature, adorned with an active Intellect; that an Intelligent person must Contemplate upon outward *Phænomena*, according to that common saying, *Nihil est in Intellectu, quod non fuerat prius in sensu.* Nothing can be in the Intellect, that hath not been first received by the Senses.

82. For this sensitive faculty in Man, though illustrated with Reason, understands nothing of it self, but is like

like a blank Paper, or Book, that is susceptible of any inscription, 3. lib. de Anim. 4. text 14. for it is capable of all things that are cognoscible, by virtue of that light which darted from the rational Soul, whereby it is illustrated, and extends it self to all material, immaterial, individual, abstracted, Mortal and Eternal objects.

For as it is sensitive, it perceives v.g. the Water, Fire, Flesh, Magnitude and the like; and forms an imagination of them (which is also common to Brutes, as well as Men) but since Flesh is one thing, and the Essence of Flesh another; Magnitude, is one thing, and the Essence of Magnitude, another; and so of the rest; it doth by another part of it self, or by it self in another capacity (viz. not as it is sensitive, but cogitative, or as it partakes of Reason, and is enlightened by the rational Soul) distinguish the Essence, from the things themselves, which fall under our Senses.

83. But the former Reason of Man, or the genuine faculty of the rational Soul, as it is altogether immaterial, so it challengeth a Knowledge proper and natural to it self, not any way proceeding from Matter, or the Senses of the Body (For there is not alwayes one and the same, but a different reason of the supernatural Knowledge of Divine Mysteries, or of those things which exceed our Human Capacity, and want the support of Faith) whilst in the *interim* it renders that very Knowledge which is drawn from the Senses and inferitur Reason far more illustrious, and more clearly discerns the truth it self.

84. For this genuine faculty of the rational Soul, hath within it self the connate principles and seeds of all manner of Knowledge (which do not involve Divine Mysteries.) or else furnished with such an Understanding, that it can extract the truth of things out of their Womb by discourse and ratiocination. So also the know-

knowledge of God is engraven in the minds of men, yet not so, as if every man did acknowledge a Deity, or that the existence of God is as it were written in their minds so soon as Born (of which opinion *Anselm* and *Hieronymus* were, according to *Suarez Disputation 19. S. 2. q. 3.*) but that by Nature there are such principles of a Deity implanted in our minds, and such an intellectual light connate with them, that we may by the strength of our own Genius, without any assistance from the Senses attain the knowledge of the Power and Divinity of the Supreme Deity. Just as we do truly assert, that Geometrical truths are connate in us, though we do not originally understand the *Elements of Euclid*.

§5. And as the dull and rude Vulgar, who use not to abstract the Mind from the Body (and therefore have no other knowledge but what is exerted by the Senses, and the dictates of inferior or cogitative Reason) under-

understand and conceive the invisible things of God from the Creation of the World by Works, so that the *τὰ γνῶσθαι τὸν Θεόν* that which may be known of God (as our Version hath it) in the *first* to the *Romans* may be understood by the very *Plebeians*; so Philosophers and such as are conversant with more sublime Speculations, or have learnt to free their minds from this terrene incarceration, attain unto the knowledge of the Deity by the inward qualifications of their minds, without being obliged to the testimony of Sense.

And really those very seeds that are naturally planted in the minds of men, do sometimes so powerfully exert themselves into action, that they bind the very Consciences of the most obstinate, and such as deny the very dictates of Senses. And herein we may affirm with *Calvin*, in the first Book of his *Institutes*, c. 3. q. 1. That beyond all Controversy there is by a natural instinct, a kind of sense of the Divinity

Divinity in the mind of Man, for God hath endued all persons with the Intelligence of his Deity , that no man should shelter himself under the pretext of Ignorance , who by a constant recollection of his memory , furnisheth him with fresh instillations.

87. But as to the Reason of Brute Animals ; being it depends upon the sensitive Soul , it is absolutely material , and drowned in the Body , it is altogether inseparable from it , and perisheth with the *Individuum* , and therefore is conversant with nothing but what is Corporeal and Mortal . The same faculty is in all the species of Brutes employed about some certain and determinate object , to which all of them are hurried by a natural propensity ; and not as it is in Man , indifferent to any thing . So Nature instructs *Swallows* to build their Nests of Clay ; Beasts to get Covers or Dens ; Dogs hunt the *Hare* ; and Cats watch for *Mice* ; which neither the Reason of a Cow , nor an Ass prompts them

them to; nor can they by Art be brought to it.

88. And although probably some species of these Brute Animals are more freely exercised, about various objects by raciocination, than others, as we find in *Elephants*, *Apes*, *Monkies*, the *Cynocephali*, and *Dogs* themselves, and the like; yet they are apprehensive of the objects themselves no otherwise, than under the notion of singulars: For they perceive the Water, Fire, Flesh, Magnitude and the like; and then frame some fantasms of these very things; and these they, either compound or divide, and so judge or esteem of the species so receiv'd : but Flesh being one thing, and the Essence thereof, another ; Magnitude, one thing, and the Essence thereof, another, &c. as Aristotle speaks, they cannot discern the Essence of things from the things themselves, nor can they abstract individuals from universals. So that their universal Reason consists in particular and material things; and there-

80 Of the Reason and Speech

therefore they are incapable of Learning, which is comprehended under certain Maxims and Rules.

89. Besides if it could possibly be maintain'd, that some Brute Animals have a kind of Sense of Divinity (it is reported that that Idolatrous Religion consisting in the Worship of the *Sun, Moon, and Stars,* did proceed from *Elephantis*) or that some faint image or shadow of Piety may be distill'd into them, yet by that they cannot conceive any thing of God, unlesse it be by corporeal reason, and so have no Conception of God, nor can they ever be able to dispute concerning God by the deduction of Causes, or by the successive end, nor by conclusions drawn from the principles imprinted in their minds; but only by the singular commodity or use, or the more splendid appearance of the particular individual body, viz. of the *Sun or Moon,* and so they cannot apprehend the invisible things of God, but can only frame a conception

tion or imagination of the corporeal Idea of those things which proximate- ly move the Senses.

90. Undoubtedly that which is purely Incorporeal and Divine, or which is the true Essence of Divinity, which is only Religiously to be Wor-shipped, cannot fall under the apprehension of a faculty merely corporal. But if there do appear in *Elephants*, as well the shadow of many Virtues, as a certain kind of imaginary Idea of Religion (as *Lipsius* hath heaped together many Examples out of divers Authors to that purpose) what won-der is it, that the Celestial Bodies strike the Senses with greatest admi-ration and yet are not exquisitely ap-prehended by the Senses, that that representation of Religion whatsoever it be, should be directly apprehend-ed? And so they be believed by *Plu-tarch* and *Aelian*, to Worship the *Rising Sun*; and by *Pliny* and *Aelian*, the *New Moon*.

91. Finally, the Wisdom of Brutes
G 2 consist

82 Of the Reason and Speech

consists only in that part wherein they also suffer a *delirium*; but Man's Wisdom also consists in the mind or active Intellect, in which they never dote, and herein they evidently differ from Beasts; who have not this faculty. So that that passage of *Hippocrates*, *Aphor.* 6. *Sect.* 2. belongs only to the passive Intellect, so far as it resides in the sensitive faculty; where he saith, That those who are troubled in any part of the Body, and are hardly sensible of the pain, their mind (*νηστεία* or as *Galen* interprets it in his Commentary *διάνοια*) is distempered, for they are deceived by a defect of the inward Senses, which Brutes have in common with Men, and stand always in need of their Ministry, whilst tied to the fetters of the Body.

92. Therefore Men are truely said to be distinguished from Beasts by Reason; because Brute Animals have not any foot-steps of that Reason that is natural to the rational Soul, or the active

active Intellect; but they only have some kind of shadow of that Reason which is communicated to the sensitive faculty, or of the passive Intellect; so that they are said to have Reason Analogically.

93. Now as to the Speech which is apprehended to be in some Brutes, that have organs fit for the emission of an articulate Voice; what kind of Reason that may be, and how it differs from Humane Speech, is the thing to be discussed; And as the speech of *Parrets*, *Crows*, and other Birds, wo are taught by Art, is nothing else, but a certain articulate Voice without any mental understanding, to which they are trained up by Custome, not knowing for the most part what is signified by this or that word. So that *Parret* that rehearsed the Apostles Creed; did not at all understand the things signified by those words. And therefore this sort of speech, is not at all a representation of the intrinsick reason, and so conse-

84 *Of the Reason and Speech*

quently no true speech.

94. But if sometimes it so fall out that they seem appositely to appropriate the Names of things to the things themselves, or retain the signification of them, that is the wortk of the Memory, by which they do accommodate those things which they by their docility have gained to particular things, as they have been accustomed to them, and according to their often repeated appellations : But their speech extends no farther to other things, than Custome hath directed them. And as that *Parret* which fell into the River call'd for help, and promis'd a Reward, it must necessarily be, that she had by practice learnt those words being oftentimes before in the like danger.

95. And since it is undeniable that not only *Elephants*, but some other Creatures, as *Dogs* and *Horses* (though these are not altogether so capable) do in some manner conceive the Speech of Man, to which they are accustom-ed

ed, or understand what is meant by such and such words, as they are taught (and as they by the motion or gesture of their Masters, know what they would have) though some more exactly, than others. Is it a greater wonder for these Brutes, if they have organs fit for Speech, to be able by outward expressions (as they have learnt by Custom) to signify the single conceptions of their estimative faculty to others, which they frame within themselves according to the common speech they are accustomed to, than that they should by the usual gestures of the Body, and other various ways (which is also the Speech of Mutes) be able to adumbrate their inward conceptions to others? Or what wonder is it for a *Parrot*, *Pie*, *Crow*, or *Starling*, to express what they inwardly conceive or desire by an articulate Voice, or such as they have learnt by custom?

96. And those Creatures that have been us'd to Speech can count numbers

bers; and yet they have no formal conception of those numbers; because that cannot be done but by abstracting; and so consequently by the immaterial faculty. For in the numbering of any thing proposed, or the collecting a desire multitude out of unities, it is requisite necessary that the mind have an *Idea* of some numbers; and so that the abstracted number be known, and that it appear, how the third differs from the fourth, and the fourth from the tenth, and so on; to the end, that the number may be rightly appropriated to any multitude propos'd, according as the thing requires. But this does not at all come within the reach of the material faculty, with which Brutes are only endued.

97. Since therefore number is not properly form'd but by the Intellect, which Aristotle himself confesseth, 4. *Phys. t. 131.* it must necessarily follow, that the names of Number are only repeated by the Memory in Brutes

Brutes that name it, but the Essence of Number, or difference, of the fourth, and fifth, or twentieth, is not in them.

98. As to the Writing of Inanimate Creatures, since that *Elephants* use the *Proboscis*, as a Hand, and almost as readily as we do (for they will take the smallest peice of Money off from the ground, and ordinarily manage a Sword like a Fencer, handle a Gun, level it and discharge, as we our selves, that have been eye-witnesses, can testify) it need not seem an impossibility for them to Write some Letters, whose figures they have been taught, either singly, or joynly, and so reduced them into words, and perhaps by Writing to express their conception of any particular thing according to custom, as other Brutes use to notify their conceptions by gestures, or other wayes suitable to their nature.

99. But it is sufficiently apparent by what hath been said, how infinitely the

the Speech of Inanimate Creatures, and the adumbration thereof by Writing, doth differ from Human Speech; whereas Man doth not appropriate this, or that word, to this, or that particular thing by custom only; but can use his Tongue volubly, and can exercise it in the expressing of any thing whatsoever, upon all emergent occasions, in a far different manner from that of Brutes: And as Mans Reason it self, or the internal Speech, doth not only aim at particular and material, but universal, abstracted, and immaterial things, which Brutes by their Reason cannot do, so the external Speech, which is the *nuncius* of the internal, is assisted thereby, which indeed the Speech of Brutes cannot aspire unto.

100. So that there is, as vast a distance between the Reason of Inanimate Creatures and Humane Reason, and their Speech, or the signification of things which is designed by Speech, and the Speech of Man, as there

there is between the Material and Immaterial Faculty. And therefore we may truly conclude, that no Creature is endued with the faculty of real Speech, or true Reason; but Man only; but the Speech of Brutes may be said faintly to resemble the true Speech of Man, as also their Reason, Human Reason, by some kind of Analogy.



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