

Considerations concerning the distemper which still spreads itself among the horned cattle in this Kingdom ... / By a physician.

Contributors

Physician.

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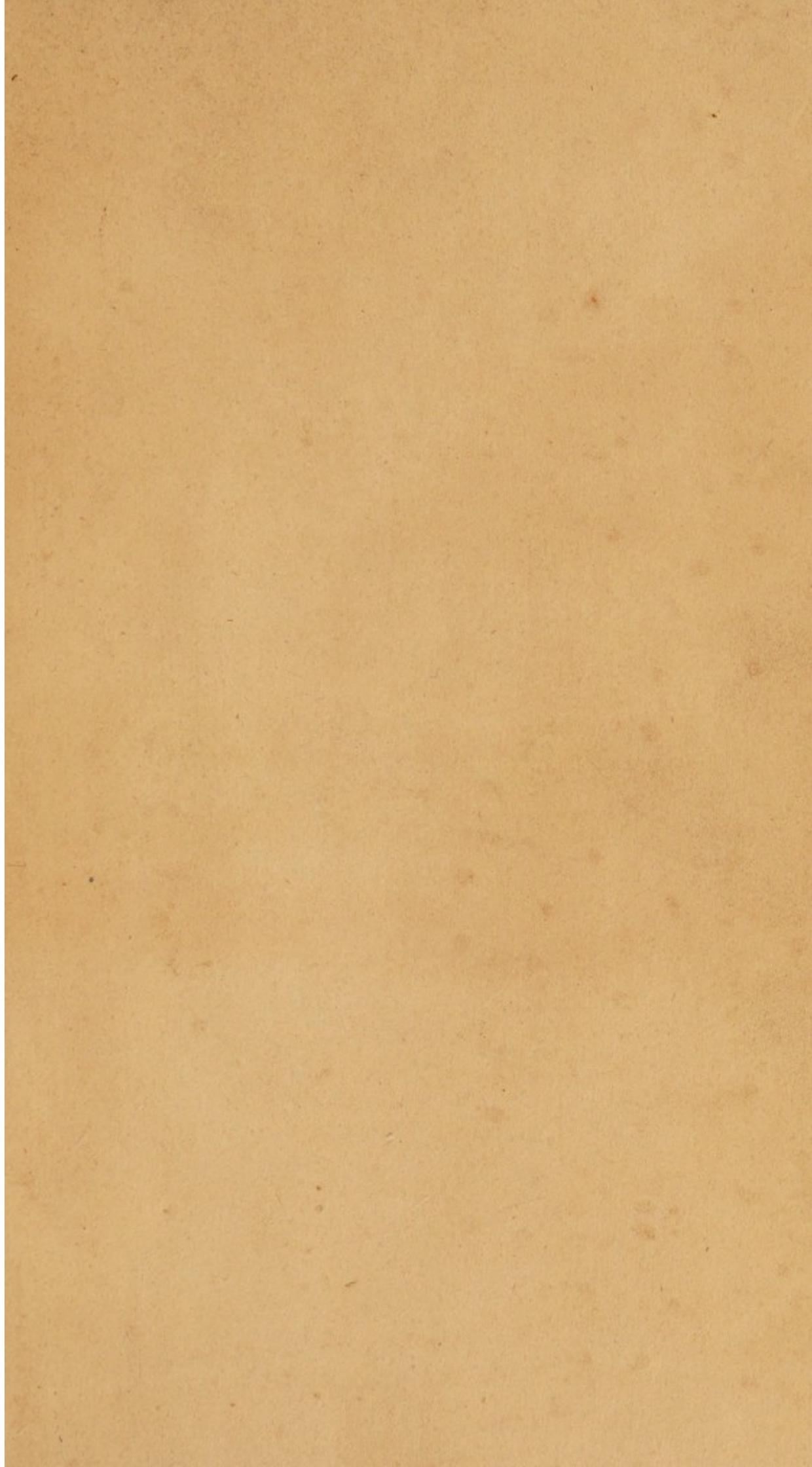


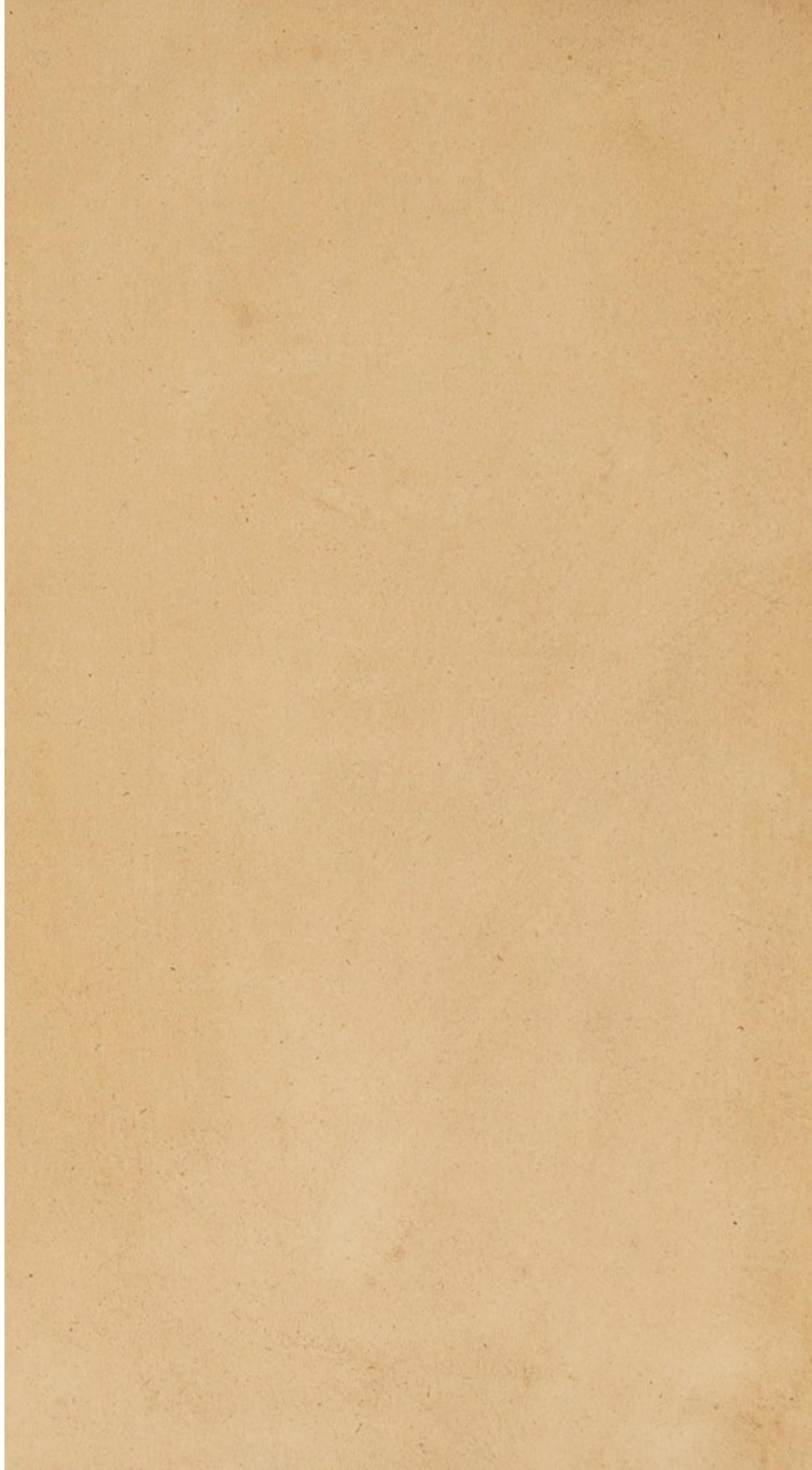
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CONSIDERATIONS.

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CONSIDERATIONS

CONCERNING THE

D I S T E M P E R

Which still spreads itself among the

HORNED CATTLE

In this KINGDOM.

S E R V I N G

To explain the Nature of PESTILENTIAL
CONTAGION in General,

To assert its Reality in the said DISTEMPER,

A N D

To establish the Probability of curing it at present.

BY A PHYSICIAN.

*— dedit hanc CONTAGIO Labem
Et dabit in plures —*

Juvenal Satyr. II.

L O N D O N :

Printed for JOHN and PAUL KNAPTON, at the Crown
in Ludgate-street. MDCCXLIX.

REGISTERED PATENT

WELLINGTON

W. B. T. M. P. E. R.

FORNED CATTLE

under this KINGDOM



BY A PHYSICIAN

Journal, Vol. II

Printed in London

LONDON

Printed for John and Paul Knapp, at the Crown
in Ludgate-street. MDCCLXII.

ADVERTISEMENT.

IN a Time of any Publick Calamity it is unquestionably the Duty of every Member of Society, whose Situation can reasonably be supposed to have qualified them for such a Task, to contribute their Advice and Assistance to the putting an End to it. The Author therefore of the following Considerations hopes he shall not be deemed Impertinent in presuming to offer his Judgment to the Publick, concerning a Matter, which cannot be denied to demand its most serious attention. The Importance of the Subject will probably procure him many Readers; and this Advertisement is not designed to bespeak their Favour, but only to inform such of Them, as shall find the Philosophical and Critical Parts of these Considerations not much to their Taste, that they may meet with something, which will be more likely not to disappoint them, viz. the Author's opinion of the present Means of Prevention, and the Method of Cure, from Pag. 119 to Pag. 130; to which They are desired to turn without giving themselves any farther trouble.

A D V E R T I S E M E N T

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 ment to the Publick, concerning a Matter
 of such Importance to the Kingdom of Great
 Britain, and to the Kingdom of Ireland.
 For many Years past, the Kingdom of Great
 Britain, and the Kingdom of Ireland, have
 been under the Management of a few
 Ministers, who have not only neglected
 the Affairs of the Kingdom, but have
 also made it their Business to oppress
 the People, and to enrich themselves
 at their Expence. The Author therefore
 thinks it his Duty to offer his
 Observations on the present State of
 the Kingdom, and to propose such
 Remedies as he thinks necessary
 for the Relief of the People, and
 for the Improvement of the Kingdom.
 The Author's Opinion of the present Means of
 Prevention, and the Method of Cure, from
 Page 110 to Page 130, to which they are
 referred to, without giving themselves any
 further trouble.

ERRATA.

PAGE 18. l. 16. for *wrote* read *written*. P. 45. l. 21.
for *equally* read *usually*. P. 64. l. (of the Note) 4.
for *par* read *pur*. P. 80. l. 11. for *Tbeist* read *Thirst*.
P. 83. l. 9. dele *Contagious*. P. 101. l. 19. for *marters*
read *matters*. P. 102. l. 12. for *it's* read *their*. P. 125.
l. (of the Note) 1. for *quos* read *quas*. P. 125. l. (of the
Note) 2. for *permistos* read *permistas*.

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 CONSIDERATIONS

Concerning the

DISTEMPÉR, &c.

I HAVE long thought that the Doctrin of CONTAGION, which is one of those Things, that have not been so well understood by the *Antient* as by the *Modern* Physicians, and which has never been so clearly comprehended by any of the latter as by Those of the present Age *, is not even yet arrived at that degree of Clearness and Consistency it is capable of. I have therefore determined, when my present Concerns shall allow me leisure enough for such an Undertaking, to offer to the World my free

* See an excellent Discourse of the *Plague* republished by its worthy Author Dr. *Mead* in the year 1744.

Thoughts on that abstruse Subject in another Form and Language. At present it is my design to consider this Doctrine principally as it concerns *Pestilential Contagion*, and That chiefly in relation to the calamitous Distemper, which has so long raged among the *Horned Cattle* in this Island, which I take to be PESTILENTIAL.

NOTHING in my humble Opinion did so much contribute to the spreading of this terrible Distemper at it's first breaking out as the belief that it was *not contagious*, and the Expectation of an *Effectual Remedy* for it; because both those notions had a manifest tendency to lessen the Care and Vigilance that were necessary to prevent it. In regard to the latter of Them, I am not ashamed to own I was *then* an *Infidel*; and I am so still as to the possibility of the cure before the *Malignity* of the Distemper began to decline; being fully persuaded that what *Virgil* says on a like occasion is too applicable to the present as well as every other *Pestilence* in its Beginning and its Height, *viz.* that it admits

admits of very little relief from the *Art of Medicine*.

— *Cessere Magistri*

Phyllirides Chiron, Amythaoniusque Melampus *.

Such of the most eminent Physicians, as were first consulted by the Government concerning this Distemper, were certainly

* *Georgic*. III. But we have a more unexceptionable proof of this matter, than any *Poet's* word can be in the Histories of all the great *Plagues* that ever were known, and especially in those of the Two dreadful ones of *Athens* and *Constantinople*, recorded by Two eminent Historians *Thucydides* and *Procopius*, who were *Eye-witnesses* of their Violence. The former expressly tells us, “ That the Physicians of
“ *Athens* (many of whom we may reasonably suppose
“ to have been men of considerable skill, as they lived
“ in the time of *Hippocrates*) knew not how to cure
“ it in the BEGINNING; but they especially
“ died because they came so often near the sick.”
—“ Ουτε γὰρ ἸΑΤΡΟΙ ἤρκεν ΤΟΠΡΩΤΟΝ θεωπέουτες
ΑΓΝΟΙΑ, ἀλλ' ΑΥΤΟΙ μάλιστα ἐθνησκον ὅσω καὶ μάλιστα
προσέειπον. In another part of the same Description the
Historian tells us, ΕΝ ΤΕ ἔδεν κατέστη ΙΑΜΑ, ὡς εἰπεῖν
ὅτι καὶ προσέειπον ὡς εἰπεῖν. “ that there was no
“ one method of cure, of which one could pronounce
“ that it would profit those who made use of it.”

of the same opinion as to the difficulty of curing it, and therefore very honestly advised their Superiors to employ their Authority in enforcing a punctual compliance with the most likely means to stop the progress of it : An attempt, which there was then some reason to believe as practicable as it was desirable.

But as reasonable as this opinion appeared to me in the beginning of the Distemper, the very different Success, which has for some time been observed to attend the Attempts to cure, and the Attempts to check the progress of it, have induced me to invert the opinion I at first embraced concerning those two points : So that I am persuaded the former in the *present* state of the Distemper is a feasible thing, and the latter scarce so. My reasons for thinking so will be produced in their proper place in these *Considerations* ; but my first purposes being to inquire into the Reality of the *Pestilential Contagion* imputed to the present Distemper, and in the course of That Inquiry to explain the general nature of such *Contagion*, I shall beg
leave

leave to introduce those principal parts of my Design by a Remark or two, which will serve to obviate some prejudices that have been entertained against the principal Doctrine of these *Considerations*.

IT has been suggested by an * Ingenious Writer, who some time ago undertook to confute the opinion of this Distemper's *Contagion*, that the Notion of *Contagion* may contribute much to the *Mortality* of the Distemper “ by putting the Dealers “ in *Cattle* upon an improper Method of “ treating it.” This may possibly be true, but it is no argument against the reality of the Distemper's *Contagion*. The same improper method has often been deduced from the same principle in the *Small-Pox*, and yet no body will scruple to own, That Distemper to be *Contagious*. Physicians are now generally too well persuaded of the falsity of the old *Galenical* notion of resisting *Contagion* by a combination of *Specificks*, and of the modern *indication* of expelling all sorts of *Malignity* by *A-*

* See *An Account of the present Distemper among the Black Cattle, &c.* printed for *A. Millar*, 1745.

lexipharmicks, to believe there is any necessary connection between a *Contagious Malignity* and either of those methods of curing it. They are too well acquainted with the more rational practice of the most Eminent of the Moderns, not to know that even in the most *contagious* and *malignant* of All Distempers the *Plague* itself; many of those have judiciously treated it in a method similar to That cooling one, which the Learned Author before-mentioned has skillfully recommended in this very Distemper *. From whence it is

* See *Botallus, Septalius, Massa, Mercurialis, Andernacus, Sydenham*. The Bleeding recommended by these Authors in the *Plague* among Men is still more adviseable in This among the *Horned Cattle*, because it is certain (as the Learned Author before-mentioned has observed, and as *Ramazzini* † has likewise remarked in That of 1711) that the *Pestilential* poison causes a contrary Effect in the Blood of these Animals to That which it often produces in ours; For in ours, the *Plague* frequently *dissolves* the Texture of the Blood, but in this present one among the Cattle it is universally allowed to *coagulate* it: From whence arises a necessity of lessening the Quantity and thereby enabling the Solids to reduce it to its due degree of Fluidity. Accordingly *Ramazzini*
in

is plain there is no more reason to destroy the notion of *Contagion*, to support the Learned Author's method of Cure, than there is to maintain the *Alexipharmick* method, in order to prove the existence of *Contagion*. For though this Distemper be *Contagious*, it appears that the Author's method is the most likely to cure it; and it is allowed that the *Alexipharmick* method is not the best way of curing it tho' it was ever so evidently *contagious*. I cannot therefore but wish that instead of patronizing the contrary Opinion, this Ingenious Author had endeavoured to confirm the *Farmers* in their notion of the Distemper's *Contagion*, and to convince them of the falsity of the Inference in respect of its cure, which they had been taught to draw from it. In this case he would have contributed more to the stopping of it by his *Theory*, than either He or any eminent Physician upon Earth

in the like Distemper is far from supposing it's contagion to be a *contra-indication* to the use of bleeding, but very justly contends for the necessity of it.

† P. 790,

could

could probably have done during its first Violence, by any method of *Præctice*.

I AM aware that the term *Malignity* has been very unwarrantably applied, and that like the word *Witchcraft*, it has frequently been made use of to cover men's ignorance of what they did not understand. But it by no means follows from hence, either that the word has not a proper determined Signification, or that the Thing signified by it does not really exist. It is very rational to suppose that there may be portions of *different, specifick, subtle* Poisons existing in different parts of our *Terraqueous Globe*, whose *Effluvia* are capable of raising *distinct specifick* commotions in the fluids of Animals, that is, such commotions as are peculiar to the operations of those several *Species* of poisonous Matter; and to these *Specifick* Poisons, I apprehend the term *Malignity* may very reasonably be affixed. *How* these *Specifick* Poisons, which are communicable, both from *inanimate* and from *animal* Substances, and are therefore stiled

contagious,

contagious, as well as *malignant*, first began to exist, is a Question, which however probably it may be determined, does not belong to our present Inquiry *. It is
 enough

* The opinion of the learned Author of the *Discourse* of the *Plague* concerning the original of *That* Poison is, that it was at first generated from *Animal Putrefaction*, heightened and increased by a most unwholesome complication of the Two sensible qualities of the Air, *Heat* and *Moisture*, (Page 34. last Edit.) To which we may add another circumstance, which in reasoning from *Analogy* seems no less necessary to the production of This evil, *viz.* the Confinement of Air thus loaded with noxious Vapours, in such a manner as to interrupt it's free circulation with the rest of the *Atmosphere*. For even in these *Northern* climates the mere Dampness of Air, pent up in *Vaults* and *Cellars*, mixed with a small degree of *Animal Putrefaction*, has been often found to create *malignant* Fevers; as several Gentlemen, who have had the good fortune to struggle through some Diseases of That kind, contracted by their attendance on *Dissections* in such improper places, can more than sufficiently testify. I cannot therefore but think the reason given by the celebrated *Fernelius*, why the *Plague* cannot arise from any *Putrefaction*, very unworthy so great a Philosopher. His reason is because *Putrefaction* would affect all Animals alike: But surely several different *Species* of *contagious* Poisons

enough for our Purpose to have it granted, that there are in *Fact* such different *Specifick* Poisons; which we have the greatest reason may be generated from the same substance, *Putrefaction*; which by being variously modified may have different Effects on different Animals. But whatever were the first causes of this dreadful malady, the continuance of it in the world may be accounted for, either from a periodical or an accidental concurrence of the same causes at different times, since it's first production, or from the constant preservation of some portions of the first *Pestilential Matter*. This latter way of accounting for it's continuance is most analogous to the means, by which some other *contagious* Distempers are generally thought to have been continued in the world, and is not at all contradictory to the Doctrine hereafter maintained in these *considerations*, viz. that the *Pestilential Particles* are so dissipated and wasted in time, as to be quite extinguished by the salutary principles of the Air, which are in some proportion always inherent in it. For there is an infinite difference between exposing any particles to the constant impulse of the Air, (which is the case wherein we suppose the Air to extinguish *Contagion*) and the confining them within a small space from the influence of the Air, (which is the case wherein we suppose them to retain their original Virulence.) That such a confinement of any *contagious* Particles can long preserve their malignity cannot surely be doubted by such as know how
many

reason to conclude from the different modes and degrees of Violence, that we daily observe in all those Distempers, which are allowed to be *contagious*; each of which have undeniably their different kinds and degrees of Violence; such as the *Plague*, the *Small-Pox*, the *purple Fever*, and the *Measles* *. Nor is it less agreeable, either to

many ages some substances will preserve their Odour, (their most distinguishing property) without the least sensible diminution of their Bulk, or even of their weight. *Fracastorius*, speaking of the long duration of some *contagious* substances, observes, that their extreme subtilty makes them capable of penetrating into such small spaces as afford them a safe harbour from the attacks of the Air, and many other extrinsecal causes, which might extinguish their contagion. *Propter subtilitatem igitur penetrant, & in foraminibus quorundam conduntur; unde neque acri subjecta sunt, neque multis extrinsecarum alterationum.*

De Contagione, Lib. I. Cap. iv.

* It seems at first sight difficult to account for That perpetual Symptom of the *Measles*, the *Cough*, which attends all Ages and all Constitutions without supposing a peculiar propensity in its *Contagion* to

to Reason or Experience, to suppose that several of these *Specifick* Poisons may be so peculiarly framed, as to affect only one *Species* of Animals: Whence every *Species* may possibly have it's peculiar *Pest*, as well as Those which we know to have it. But concerning this matter I shall have an opportunity of saying more hereafter; and at present shall proceed in my remarks about *Malignity* in general.

IT

irritate the Lungs. For was it merely the effect of the Heat or Rarefaction of the Blood, or the consequence of a particular weakness in the Texture of the Lungs, which made them more liable to the impulses of a Disordered circulation than any of the other *Viscera*, I would ask why a Cough does not *always* attend the Heat and Rarefaction of the Blood in other Fevers? and why it attends *every one* in This Distemper, how different soever in the Frame and Constitution of their Lungs? Perhaps it may be owing to this, that the first impression of the *contagious effluvia* is always made upon the Lungs; which being the principal organ of *Respiration* are therefore more liable to be impressed by a less malignant *Contagion* than such parts as are not so immediately and forcibly acted upon by the Air, *viz.* All the other *Viscera*.

IT is very true that *Sydenham* (for whose merit no man has a greater veneration than myself) did very justly ridicule the too general application of the term *Malignity* which prevailed in his time; but as Men are always running into *Extremes*, I will venture to affirm, we are apt to allow too little to the Notion in ours: In which we are the less excusable, because we do not generally maintain, as the Physicians of our own Country in the last Age did, the necessary Connection between the *Malignity* of Fevers, and the no less *malignant* method of treating them in the *Hot* Regimen. For now I flatter myself, that even in the *Small-Pox* and *Measles*, (whose *Malignity* perhaps some may still be disposed to deny) a diligent attention to our own Practice has brought us to agree in a Point, concerning which *Theory* had too long and shamefully divided us, I mean, that the true *Curative Indications* in Both those Distempers are very far from being such as they were once thought to be, *viz.* quickening the circulation, and driving

driving the *malignant* particles *vi & armis* through the Emunctories of the Skin.

BUT to say the Truth, as great a Reformer as *Sydenham* undoubtedly was, yet it must be owned he has been too sparing of his Concessions in regard to the *Malignity* of some Distempers; as when he tells us, “ there is no *truly Malignant* Fever “ but what is of the very same *Species* “ with the *Plague* itself * :” Had he said of the same *Genus* his assertion might have been allowed; but the difference he observes in their several degrees of *Malignity* does certainly constitute a difference of their *Species*. He was once also inclined to deny *Malignity* in the *Small-Pox*, as appears from a letter of his to the Honorable Mr. *Boyle*, wherein one cannot but be surprized to read the following Paragraph. “ As it is palpable to all the “ world how fatal That Disease (the “ *Small-Pox*) proves to many of all ages, “ fo

* Atqui Febris *verè Maligna* non est omnium dierum morbus.—Reverà enim cum *ipsissimâ* Peste *Specie* convenit; nec ab eâ nisi ob gradum remissionem discriminatur. *Sydenham*. SECT. II. CAP. II.

“ so it is *most clear* to me, from all the
 “ Observations that *I can possibly make*,
 “ that if no mischief be done, either by
 “ *Physician* or *Nurse*, it is the most
 “ SLIGHT and SAFE of all other Dis-
 “ eases *.” It is true indeed this faithful
 Observer of Diseases (whose merit we
 ought never to forget, when we take no-
 tice of his Errors, *Quem nemo vituperare*
potest quin & eodem tempore laudet) does
 no where assert this Notion concerning the
Small-Pox in his Works; but so far did
 his Prejudices against the reality of *Ma-*
lignity carry him, that even in the last
 Edition of them he has almost ventured
 to deny it in the *Plague* itself; though he
 had more than once before admitted it.
 For he cannot forbear saying in his Chap-
 ter *de Peste*, “ that the great *Mortality*
 “ of the *Plague* might with as much rea-
 “ son be ascribed to our not having the
 “ same *certain* way of curing it, which
 “ we had of curing other Distempers, as
 “ to

* See the new Edition of the Honourable Mr.
Boyle's works in Folio. Vol. V. page 639.

“ to the *common notion* of its *Malignity**;” not considering, (such is the power of Prejudice over the Best Understandings!) that our not knowing such a *certain* way of curing it was a strong Presumption of its *Malignity*. For what is more probable, than that its *Malignity* should have hindered Those, who have employed much time and pains about it, from finding out the same *certain* way of curing this Distemper, which they have in regard to others, that are not *malignant*? †

BUT

* Ut ut sic hoc saltem planissimè constat, *cæteris affectibus*, à Dei Opt. Max. benignitate, *certam* amoliendæ causæ morbificæ, rationem, HUIUS autem Enormium delictorum flagello, non nisi *lubricam admodum & versatilem* adjunctam esse. Atque *hinc* fortassè non minùs commodè quàm à *Malignitate*, ut *loqui amant*, eximiæ perniciæ causa atque origo peti possit. *Sydenham de Peste*. p. 116. Lug. Bat. Edit. 1726.

† It appears to me not very difficult to assign a probable Reason for *Sydenham's* disbelief of *real malignity* in any Fever but a *Pestilential* one. As most, if not all, of our truly malignant Fevers are of foreign original, and generally imported into this Kingdom
from

BUT it is time to proceed in our Inquiry into the *Pestilential Contagion*, which we impute to the present Distemper.

IT is unquestionably the general opinion of *Naturalists* and *Physicians*, that the *Horned Cattle* have been subject to *Pestilential* Distempers from the earliest Antiquity

from *Camps* and such like places, where they are usually bred, it is not unlikely that *Sydenham*, who wrote at a time when our Political Situation allowed us little or no commerce with such places, had seldom or never seen any such Distempers. Of the *seven* stationary Fevers, which he has described, there is indeed one, wherein there were *Petechiæ*, and another, wherein there were both *miliary* Eruptions and *Petechiæ*: But whatever was the cause of these symptoms; whether they were the genuine product of the Disease, or whether they were, as he himself generally thought them, the mere effects of the *Hot* Regimen in very *inflammatory* Distempers, I think one may venture to conclude from the easy methods by which they were cured, that they were not the symptoms of *malignant* Fevers. And if he had never seen any *malignant* Fever but the *Pestilential* and the *Small-Pox*, it is less to be wondered at, that he should impute all the dreadful symptoms of That Distemper to mere *Inflammation*. And yet as much disposed to appropriate *Malignity* to *pestilential* Diseases as we see This Admirable Writer is in one part of his Works,

we

tiquity to this time. Thus *Lucretius* tells us as a Fact doubted by no Body in his time, which he endeavoured to account for, that this *Species* of Cattle contracted a *Pestilence* in the same manner as all others,

*Consimili ratione venit Bubus quoque sæpe
Pestilitas. —*

And *Fernelius* in a passage we shall have occasion to quote hereafter, where he appeals to the best Authors of *Agriculture* for the frequency of this very Fact, tells us, a *Pestilence* happened to the Horned Cattle

we shall find him in another acknowledging even more than we require of him, *viz.* that *Epidemical* Distempers are *for the most part* MALIGNANT. *Non Is sum* (says He in *Pag.* 247. *Edit.* Lug. Bat.) *qui receptam a Viris Doctissimis, sive hujus sæculi, sive Antiquioribus de Malignitate opinionem convellere aut possim aut etiam velim; cum ista indiciis plus satis se prodat manifestis in Epidemicis PLERISQUE:* Which Inconsistency appearing in the very same Work, and in every Edition of it, I must own myself at a Loss to account for it. Probably he altered his opinion of this Matter whilst he was meditating his Work, and forgot at the latter end of it how strongly he had expressed himself on the other side of the Question in the beginning of it.

Cattle in 1514. But the most remarkable one of All is That, which the Judicious *Ramazzini* has wrote a very exact History of, which he tells us was brought from *Dalmatia* into the *Venetian Territories*. It is very observable, that This Pestilence among our Cattle very much resembles That of *Ramazzini* in most of its Symptoms and Effects, as in the *stupidity in the Beginning*, the *flux from the Nose*, the *Looseness*, the *Shortness of Breath*, the *Coagulation of the Blood*, the *crisis* which sometimes happens by *Eruptions* *, and the

D 2

dry

* *Ramazzini* tells us, these pustules, which he calls *Tubercula variolarum Speciem referentia*, broke out over the whole Body on the 5th or 6th day, and that the Cattle generally died (as they do now) about the 5th or 7th; from whence it is probable these *Eruptions* were not *Symptomatical* but *Critical*, as they are in the present Distemper, wherein scarce any Beast that has them dies. It appears then that the Learned Author of the *Account, &c.* was mistaken in what he tells us, “ that This *Variolous Eruption* was the distinguishing mark of the Disease “ described by *Ramazzini*, and that either he was “ misinformed when he said no such *Eruptions* are “ seen upon the Skins of the Cattle, which are now “ *infected*, or that this Symptom is one instance of “ the present mitigation of the Distemper’s original “ *Virulence*.”

dry hard Substance constantly found in the *Omasus* or *Paunch*, which *Ramazzeni* supposes, but in my opinion, unjustly, to be caused by the first impression of the *Contagious Miasmata* on That part. For it appears to me as if it proceeded meerly from the violence of the Fever, which causes an entire Defect of the Juice that is naturally secreted there for the moistening and lubricating the Food and the *Paunch*; for want of which juice I can easily conceive the dry Food to be capable of being baked by the *preternatural* Heat of the Body into a Substance of the greatest hardness. But as generally acknowledged as this Fact is both by the Ancients and the Moderns, a late ingenious Writer has not scrupled thus flatly to deny it. " 'Tis highly probable, says he, that *Kine* are not subject to any Diseases of so violent and *malignant* a nature as the Human Species:" And *no Disease has ever appeared among them, that deserves to be compared to the Plague among Mankind for Malignity.* The learned Author deduces the Fact he so strongly asserts from the Two following Suppositions, *viz.* " that
 " Fear

10 " *Fear* and *Despair*, from which *Kine*
 15 " are exempt, occasion great Dejection
 20 " of Spirits, unbrace all the Springs
 25 " of Life, and render up the *Human*
 30 " *Frame* an easy Prey to *Contagion*; and
 35 " that the *Blood* of Animals feeding
 40 " upon *Grass* is not liable to such *dele-*
 45 " *rious Putrefactions* as Those which live
 50 " upon *Animal Food* *." The former of
 55 these Suppositions I will not dispute, but the
 60 Inference drawn from it, that therefore the
 65 *Kine* are not liable to as violent Diseases
 70 as the *Human Species*, I cannot admit;
 75 for though *Fear* and *Despair* may be al-
 80 lowed to contribute to the Power of *Con-*
 85 *tagion* over such Animals as are capable
 90 of their habitual Influence, yet it is cer-
 95 tain that *Contagion* can often operate on
 100 Animals without their assistance: For it
 105 cannot be denied the Brute Creation are as
 110 susceptible as Mankind of several *Conta-*
 115 *gions* less virulent than *Pestilential*; and if
 120 so, why not likewise of *Pestilential*? Surely
 125 we may conclude they are so *à fortiori*,
 130 notwithstanding the learned Author's *second*
 135 Supposition, " that the blood of Animals
 140 " feeding on *Grass* is not liable to such
 145 " *dele-*

* Essay on *Pestilential contagion*, P. 54.

“ *deleterious Putrefactions* as Those that
 “ live on Animal Food :” For this asser-
 tion understood in the sense wherein it is
 pertinent to the Argument, *viz.* that they
 are not liable to such *deleterious Putrefac-*
tions from Poisons introduced into their
 Blood from other Bodies ; in this Sense,
 I say, the Assertion begs the Question,
 and only *supposes* what ought to be *proved*.
 But this I apprehend to be impossible ; for
 we know from innumerable experiments,
 that though Diet, as well as an exemp-
 tion from some inordinate Passions, may
 possibly *lessen* the power of *Contagion* in
 some degree over Animals, yet it will not
 quite destroy it : And the more virulent
 the *Species* of any Contagion is, the less
 will any kind of Diet enable any *Species*
 of Animals to resist it. But the learned
 Author was willing to take a Fact for
 granted, which was so necessary to the
 Support of an *Hypothesis*, that is not only
 contradicted by most other Writers, but
 even by our own Experience ; the latter
 of which seems to me to have sufficiently
 confirmed what the former could not but
 incline us to believe, that *Kine* are liable
 to *deleterious Putrefactions* as well as *Men*.
 The excessive mortality of the present
 Distemper under every method of cure in
 its beginning is sufficient to prove its *Ma-*
lignity,

lignity, if any thing can; and from the *degree* of its *Malignity*, I think we may safely infer the *Species* of it: For as *pestilential* *Malignity* is the most mortal of all others, and no *Malignity* was scarce ever more mortal than this among the Cattle, it is surely good *Logick* to infer that the *Malignity* of the present *Distemper* is no other than *Pestilential*.

BUT though the Learned Author thinks the present *Distemper* among the Cattle is not quite a *Pestilence*, yet at last he seems willing to allow it to be *nearly* related to one, when he says it *bears a great* affinity to a *Pestilential* Disease*; by which I suppose he means that it bears great Affinity to a *Pestilence* of a milder sort, (for a *Pestilential* Disease differs not in *Genus*, but only in *Species*, from a *Pestilence*†) and what grounds there are for this opinion may be seen from what I have just before observed, that

* Essay, &c. P. 55.

† Excessive Mortality is a property so essential to every *Species* of *Pestilential* Diseases that no *Distemper*, which is not very uncommon in the *degree* as well as in the *manner* of its Mortality, can have a title to That Appellation. There may indeed be different degrees of Violence in some of the several *Species* of them; but the *least* of these degrees will always be great enough to distinguish their *Genus* from every other *malignant* *Species*, and to ascertain their real *Pestilence*. Several Foreign Physicians seem not to have sufficiently attended to this real difference between *Pestilential* *Malignity*, and *Malignity* of a much milder kind;

that very few *Plagues* among Men have been attended with greater mortality. We see then the Learned Author seems willing to allow the Distemper among the Cattle to be of the same *Genus* with the *Plague*, though not of the same *Species*; and what *Species* it bears an *Affinity* to he has not omitted to tell us, *viz.* the *Pestilential Augina* described by *Severinus*, which he likewise supposes to be the same with That which prevailed in *London* in 1739.

WHETHER the *fore-throat* described by *Severinus* was *Pestilential* I will not now inquire; but I think I may venture to affirm that the *Sore-throat* of 1739, referred to by the learned Author, was not so. For the truth of this assertion it would be sufficient to appeal to the most eminent Gentlemen of the Faculty who then attended That Disease, but I will also give the candid Reader an incontestable proof of it from the reason of Things, which is, that it had not the two distinguishing marks of a *Pestilence*, *viz.* the extensiveness of its *Contagion*, and the excess of its *Mortality*: Both which are essential to every *Pestilence*. The truth of the case

with

kind; and have therefore given the *former* name to some Distempers which appear to me to belong to the *latter* class: Which Inadvertency has indeed introduced a Latitude of Expression in regard to some *malignant* Diseases, which is by no means reconcilable to the *Philosophical* exactness that ought always to be observed in medical Writings.

with regard to the *Genera* and *Species* of Distempers I apprehend to be this, that as the *Genus* of every Distemper has always some general symptoms, which are common to all of the same *Genus*; so there are always one or two *Pathognomonick* signs peculiar to some of every *Genus* which denominate their *Species*. Agreeably to this account I am of opinion, that as the *Pathognomonick* sign of the Distemper described by *Severinus* was a *Sore-throat*, so the distinguishing one of this among the cattle is a *Peripneumony*, or *Inflammation* of the *Lungs*. Neither is this sign of a *Peripneumony* less familiar to a *Plague* than any other *Topical* Inflammation is. For in the *Plague* of *Athens* *Thucydides* informs us, that in a short time after its first attack it seized the Breast with a violent Cough and Pain *; and we have likewise several modern Histories of *Plagues*, whose distinguishing sign was a *Peripneumony*; examples of which may be seen in *Andreas*

E *Gallus*

* His words are these, καὶ ἐν ἑπιπέδῳ χέρον κατέβαινεν, (it descended, that is, from the Head, which it first affected, to the Breast) ἐς τὰ στήθη ὁπότε μεταβηχὸς ἰσχυρῶς, &c.

Gallus and *Wierus*. I will not pretend to say there are no *Apthæ* in this general Inflammation, they being very common in many Inflammatory Disorders, where they are not the *Pathognomick*; but that the general and most obvious symptoms of this Distemper are such as belong to a *Peripneumony* will not be controverted by any Physician who has either seen it, or heard any Description of it. Nay the Learned Author himself has at last determined this Distemper to be a *Gangrænous, Contagious Peripneumony*. Why then needed he to have taken so much pains to prove its affinity to *Severinus's* fore-throat, which is of as distinct a *Species* from a *Contagious Peripneumony* as a common *fore-throat* is from a common *Peripneumony*? The learned Author's perplexity seems to have arisen from hence, that he had not well digested his opinion of the Disease before he published it; for in one page he tells us it is not so violent as the *Plague*, in another it bears great affinity to a sort of a *Plague*, that is, to a *Pestilential fore-throat*; and in the next, it is a *Gangrænous, contagious*

tagious Peripneumony. I will only add one thing more concerning the learned Author's determination, which is, that with submission to him I think a *Pestilential Peripneumony* is a more discriminating name for this Disease than a *Gangrænous contagious* one; For the most striking circumstance in this Calamity, *the prodigious mortality of it*, is not so strongly implied in the Author's *two Epithets*, as it is in the *One* I have given it, which likewise expresses every circumstance implied in *Both* those of the Learned Author.

BUT we shall be more able to determine this Question concerning the *Pestilential Contagion* of the present Distemper, after we have taken a short view of the nature of *Contagion* in general.

IT cannot, I imagine, be denied that to give *Contagion* a power of infecting an Animal there must be a Disposition in the Animal itself to be acted upon, as well as in the *Contagion* to act upon it. For if the simple power of *Contagion* was able to

infect, it would not be possible for any Animal, that lived within its reach, to escape its Influence: But it is a known Truth that *some* escape it, who live in the midst of it, in *all*, even the most virulent of *Contagious* Distempers. In what this Disposition in an Animal to be acted upon immediately consists, we are not enough in the Secrets of Nature to explain, any more than we can tell what constitutes the *Specifick* Effence of any *Contagion*. It is not unlikely, since an Ingenious Author *, before referred to in these *Considerations*, has in one of his learned Works, made it very probable that all kinds of *Poisons*, as well *Contagious* as others, exert their *Malignity* first on the *Animal Spirits*; it is, I say, not unlikely that this Disposition to be infected depends chiefly on the state of That *Subtle Fluid*, as well whilst it is mixed with the *Blood*, as in its passage through the *Nerves* after it is secreted from it. This is still more probable if we consider how much the excess of any passion

which

* Dr. Mead in his Introduction to his Mechanical Account of Poisons, *last Edit.*

which always produces an immediate and important alteration in this subtle Fluid, disposes the Body to be affected by *Contagion*. It is not improbable then if this subtle Fluid be (as he reasonably supposes) at different times differently *Elastic* according to the different State of the *Secretory Organ* and the different condition of the finest part of the Blood, with which he observes it to be incorporated * before it is secreted from it; in this case, I say, it is not improbable that the *Effluvia* which are able to make some impression on it at one time, may have no power to do it at another †. So likewise the different conditions of this *elastic* Fluid in
Animals

* See the Introduction to the Mechanical Account of Poisons, pag. xxxiv, & xlv.

† This opinion of the *Plague's* principally affecting the subtle *elastic* Fluid, whilst it is incorporated with the finest part of the Blood, seems likewise in effect to have been entertained by one of the greatest Physicians of the last Age as well as of This; who in his Chapter of the *Plague* defines it thus: *Pestis est Febris peculiaris & sui generis, quæ a particularum sanguinis Spirituosiorum originem ducit, ut potè cujus naturæ subtilissimæ præ tenuitate suâ maximè proportionatæ ac adæquatæ videntur.* Syd. pag. 110. Edit. Lug. Bat. 1726.

Animals of different *Species*, (which depend on the different frame and condition of the *Secretory Organ*, the *Brain*, as well as on the state of the Fluid from which it is secreted) may possibly be one principal reason why different modifications of *Pestilential Contagion* are necessary to infect different *Species* of Animals. I mean all such different *Species* of Animals as are infected by *Effluvia*. For the same *Modifications*, which may impress this *elastic* Fluid, as it is constituted in *one* *Species* of Animals may not be at all adapted to attract it in *another*. The reason why I say All such as are infected by *Effluvia*, is, because I take that way of *Infection*, as it is the usual *mode* of communicating *Contagion*, to be likewise the *Test* of its equal Power over any Two *Species* of Animals. For it is possible that any kind of *Pestilential Contagion* may operate on several, perhaps on every *Species*, if the *Contagious* Matter be communicated immediately, especially in a very *putrefactive* vehicle, to the Blood or *Animal Spirits* by *Inoculation*, or any other means *analogous* to it. Thus from
the

the Experiments made in the *Plague* of *Marseilles*, it appears that a Dog, which had greedily devoured the Carcasses of People killed by the Distemper, and Pledgets dipped in *Pestilential* Ulcers for three Months together without receiving any hurt, took the Infection immediately from pouring the *Bile* of a Person dead of the *Plague* into a wound made for that purpose*. If it be objected that the simple act of *infecting* and not the *mode* of communicating *Infection* is the *Test* of its equal Power over Animals; I answer. All *Pestilential* Contagion may possibly agree in this *generic* property of being able to hurt every *Species* of Animals by some *mode* of communication or other; and yet as it never hurts any Two *Species* of Animals at the same time in its usual mode of *Infection* by *Effluvia*, it is undeniably divisible into different *Species*, each of which seem to differ at least in the peculiar *modifications* of their *Effluvia*; which peculiar *modifications* are sufficient to constitute

† See *Philosophical Transactions*, No. 370.

stitute a new *Species* without any other Difference. But to pursue this Argument a little further.

I THINK, it cannot be doubted that *Brutes* differ more from *Rational* creatures in the constitution of this fluid in the Nerves than in That of any other, provided, as is generally allowed, that the *Animal Spirits* are principally concerned in the operations of the Soul, whilst it is joined to the Body, as well as in those of the Body itself. And this Consideration makes it still more probable that it is in a great measure owing to the different Constitution of this *subtle fluid* in *Man* and in *Brutes*, as well as the different *Modifications* of the *contagious Effluvia* themselves, that *Men* and *Brutes* have each of them their *peculiar* Pestilence. And though *Men* and *Brutes* may be supposed to differ *most* in the condition of the Fluid of their Nerves, yet there is reason enough to believe from the different formation of the Brain in different *Brutes*, that they themselves differ so much from one another in the nature of the

the

the Fluid secreted by it, as to contribute towards rationally accounting for the Fact I am contending for, *viz.* that as no creature but *Man* is liable to be infected by the PLAGUE in the *ordinary* way of Infection, so Brutes have most of them a Pestilence *peculiar* to each of their several *Species*, which only *one* of them can take in the common way of Infection by the natural motion and introduction of *Effluvia*. This opinion is very much countenanced by the declaration of a celebrated *Philosopher* and *Physician* of the XVIth Century *; who upon the Testimony of the Best Writers of *Agriculture* has asserted the Fact in regard to *four Species* of Brutes, and maintained the difference of *Species* in the *Plague* among Men from them all. Agreeably to this Doctrine may the words of the Author

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* Compertum id *Omnes* habent, quod ab optimis *Agriculturæ* autoribus memorizæ proditum est, Pestilentiam *aliam* incidere, quæ solos *Boves* jugulet, qualem meminimus anno 1514. irrepisse: *aliam* quæ *sues*; *aliam* quæ *Gallinas*; *aliam* quæ SOLOS HOMINES. *Fernelius* de abditiis rerum causis, LIB. II. CAP. XII.

of the Book ΠΕΡΙ ΦΥΣΩΝ commonly,
 but I think falsely, ascribed to *Hippocrates*
 be interpreted; who in answering the Ob-
 jection to his main principle, that, if the
 Air was the cause of All Disorders, it
 would necessarily affect All animals alike,
 maintains “ that T H E S E *Impure Par-*
 “ *ticles* floating in the Air, are not Equal-
 “ ly hurtful to all kinds of Animals; but
 “ that when such are in the Air as are
 “ pernicious to Man, then our *Species*
 “ suffers; and when those, which are a-
 “ dapted to infect any other *Species*, exist,
 “ then That particular *Species* only is af-
 “ fected by them.*” We shall see here-
 after how far History will oppose our opi-
 nion

* Ἄλλ' ἴσως φήσεται τις, διατί ἔν ἐχ' ἅπανσι τοῖσι ζώοισιν
 ἀλλ' ΕΘΝΕΙ ΤΙΝΙ αὐτῶν ἐμπειρίησιν αἱ τοιαῦται
 νόσοι; διότι φαίλω ἄν, διαφέρει σῶμα σῶματος, καὶ ΦΥ-
 ΣΙΣ ΦΥΣΙΟΣ, καὶ τροφή τροφῆς. ΟΥ ΓΑΡ ΠΑΣΙΝ
 ΤΟΙΣΙΝ ΕΘΝΕΣΙΝ ΤΩΝ ΖΩΩΝ ΤΑΥΤΑ ΟΥΤ' Α-
 ΝΑΡΜΟΣΤΑ ΟΥΤ' ΕΥΑΡΜΟΣΤΑ ΕΣΤΙΝ ἌΛΛ' Ε-
 ΤΕΡΑ ΕΤΕΡΟΙΣΙΝ ΞΥΜΦΟΡΑ. ὁκόταν μὲν ἔν ὁ αἰρ
 τοιστέοισι πληθῆ μιάσμασιν ἃ τῆ ἈΝΘΡΩΠΙΝῃ φύσει
 πόλεμα ἐσιν, ἈΝΘΡΩΠΟΙ τότε νοσέουσιν. ὅταν δὲ
 ἕτερω τινι εθνεῖ ζῶων ὁ αἰρ ἀνάρμοστος ἢ, τὸ
 νόσημα ΚΕΙΝΑ νοσέουσιν.

nion of this matter ; but at present let us proceed in our reasoning concerning the *Disposition* of Animals to *Infection*.

THOUGH we cannot positively say in what this Disposition to be infected really consists, yet thus much we may safely conclude from our Experience (the safest Guide in our Enquiries after *Natural Knowledge*) that it is not interwoven in our original *Stamina*, but depends on the condition of those fluxile parts of matter, which our Fluids and Solids are continually changing. For if it was otherwise, where this property of resisting *Contagion* once existed, *there* it would constantly exist: But this we know to be contrary to Experience, because there are many People, that would not take infection at one time, though equally near it, who have not been able to resist it at another. I make no doubt that a different Temperament of the *Atmosphere* may have some share in producing or preventing this Disposition in an Animal to be acted upon by *Contagion*, as it may contribute to promote or obstruct the *Secretion* and Mo-

of the *Animal Spirits* ; but that no sensible quality of it alone can produce this Disposition is evident from hence, that People do often resist *Contagion* in every sensible constitution of it, and consequently in *contrary* ones. In like manner I believe that our Air may sometimes be capable, according to its various degrees of *Rarefaction* or *Condensation*, and likewise according to its various proportions of the *Nitro-aerial Spirit* (which is thought by a learned writer of the last Age * *solely* to constitute and maintain its *Elasticity*) I say, I believe it may sometimes be capable, according to these differences, of either extending or contracting any kind of Contagious *Effluvia*, and thereby of either promoting or restraining its progress among Animals in general † ; but that

* See *Mayow* de Spiritu Nitro-aereo, Cap. vii.

† *Ramazzeni* thinks the influence of *heat* and *cold* on *Pestilential Diseases* is not to be depended on. *Scio* (says he) *equidem calori & frigori morbos pestiferos non admodum auscultare, cum alias fuerit observatum in summo aestu & frigore pariter sæviisse Hominum Pestem.* But notwithstanding the certainty of the
Facts

that the Air itself was ever *corrupted* (as it is commonly expressed) so as to infect Animals by any other means than as a *medium*

Facts from which he draws this Inference, I cannot doubt but the extremes of *Heat* and *Cold*, *cæteris paribus*, have great power in promoting and restraining the progress of Infection, not only as they must rarefy and condense the matter of the *Infection*, but also as they must produce those effects in the *Air* itself, and thereby make it more or less fit to spread the *Contagious Effluvia*. Whenever therefore it happens that the Plague rages more in cold weather, I apprehend it must be from other accidental causes which are able to over-rule this powerful property in the Air; such as the more than ordinary *malignity* of a particular *species* of *pestilential Contagion*, which is not so easily resisted by the *nitro-aerial* spirit, or by this *manifest* quality of *Cold*; or perhaps this effect may be produced by a greater Disposition to *infection* in the Objects of it, which Disposition in the Object as well as in the Agent may be effected by many means not perceptible to our Senses. There are likewise some *extrinsic* causes, which must have great influence in the spreading or checking contagion in every temper of the *Air*, *viz.* the greater or less confinement of *Infectèd Goods*, or the freer or more restrained communication of *Infectèd Animals*. Neither can it be denied that there must be a great difference between the effects of Heat and Cold on
any

dium to convey *Contagion*; much less, that it ever produced a *Contagious* Distemper without some powerful *extrinsick* concurring cause, is in my humble opinion very far from being true. I cannot therefore assent to the principle of the Author before mentioned of the Tract ΠΕΡΙ ΦΥΣΩΝ, “ that the *Air* is the cause of all Diseases,” in any other Sense than this in respect to *Contagious* ones, that it is the *medium* thro’ which they are conveyed. Ever since Philosophy has been placed upon it’s true foundation, *Experiment*, we have certainly been able to build much firmer opinions concerning the works of *Nature* than

any *Pestilential* particles, whilst they are in a state of confinement, and after they are once spread abroad, and have multiplied themselves by their Action on a great number of Animals. And it was probably owing to this confinement of the *Pestilential* effluvia, as well as the operation of the *Cold* upon them, whilst they were confined, that the *Plague*, which was brought hither from *Holland* in 1664, did scarce exert it’s *malignity* at all ’till the spring following, when the goods in which it was conveyed were probably exposed, and consequently more communicated.

than the wisest of the Ancients could without such assistance. From these Experiments indeed we know that a small portion of Air pent up may be *corrupted*, in the proper sense of the word, as in *Mines* and *Caverns*, where the *Nitro-aerial Spirit* may be overcome by a vast disproportion of *poisonous Vapours* constantly surrounding it. But this is a very different case from what is supposed to happen in that great Expanse of Air which encompasses our Earth : where there is probably such a perpetual Succession of *Nitro-aerial* particles that they continually assist each other in repelling any poisonous corpuscles that may attempt to penetrate the substance of the Air. In like manner the *Elasticity* of a small portion of Air, as we know from innumerable Experiments, may be so impaired, as to become unfit for Respiration ; but this, for the reason before given, can never happen to any quantity of Air, whose free communication with the whole *Atmosphere* is not intercepted. So likewise in *Camps* and *Fails*, where some portions of *Air* are confined

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in too narrow a Space, and constantly too much loaded with *Animal Effluvia*, many of which become *putrefactive*, it is easy to conceive how a *contagious specifick Substance* may be generated, and become the material cause of a *Fever*; which may float about in the *Air* without being able to *corrupt* or impress it. And as the *Air* alone never *produces* a *contagious Distemper*, so neither does it seem necessary to suppose a *corrupted* State of it during the height of the *Plague*, and an amendment of it afterwards, to account for its ceasing when once it has seized any place without the destruction of all its Inhabitants. For admitting the *Plague* to be a *subtle material Substance* generated at first (as Dr. Mead no less truly than ingeniously seems to suppose) from *Animal Putrefaction* assisted by the highest degrees of the very worst *sensible* qualities of the *Air*, why may we not imagine it to spend itself in time like any other portion of matter? Why may not the volatile *Effluvia* of the *Plague* be dissipated into infinitely small particles, which may be diffused at such
a distance

a distance from each other, that the *Nitro-aerial* Spirit, so essential to the healthful constitution of our *Atmosphere* may gradually extinguish their *Contagion*? Why in short may not the continual afflux of this Spirit as effectually meliorate the pernicious *Effluvia* of this *pestilential Putrefaction* as it does the offensive vapour of any common Stink? So that by degrees the former may become as little hurtful to our *health* as the latter gradually ceases to offend the *smell* *? This appears to
me

* The learned Author of the *Essay on Pestilential Contagion* thinks a *Pestilence* may grow milder merely by a proper method of treating it, or to speak more explicitly, that the *pestilential miasmata*, when communicated from Bodies which are managed according to the true rational Indications of cure do lose a certain degree of their *malignity*, and consequently would in every subsequent communication from the same kinds of Bodies become milder and milder, till they at last were quite deprived of their power of *infecting*. This Theory may be allowed to be prettily imagined, but without practice, or at least the strictest Analogy to support it, it ought not to be received as an *Aphorism*. And since the Author does not pretend to offer the former as a foundation for his Theory, we presume he means to have it tried by the latter; but

me a less difficult way of solving the Extinction of a *Pestilence* than by supposing it to proceed from an emendation of *corrupted*

this I fear is expressly against him. For in all *petechial* malignant Fevers, which come the nearest the *plague*, both in the degree of their *Contagion* and *mortality*, we do not find that the most approved method of treating them renders them at all less violent or fatal to those who receive their infection from persons, thus properly treated. Neither do we find that any of these Distempers, when caught from persons, where the effects of their *malignity* have been ever so much aggravated by injudicious treatment, discover any more *malignity* in the Persons thus infected, than where the Distemper is communicated from such as are treated in the most unexceptionable manner. Nor is this at all to be wondered at; for it is highly probable that the treatment of a *Pestilential* Distemper does not effect a cure, whenever it happens to succeed, by altering the *specifick* nature of the virulent particles, and assimilating them to the sound humours, as may be sometimes done in other less *malignant* Diseases, but only by assisting nature to expel them by some of the common *Eminetories*; and therefore no method of cure can have any influence on the degree of Virulence, though it may have some on the Effects produced by it, and consequently they will always be the same in the same kinds of Constitution until the Virulence be mitigated by some other adequate cause.

rupted Air; for if the fluid substance of Air was once assimilated to the nature of the *pestilential* particles (which is the only proper sense I can affix to the word *corrupted*) I cannot conceive how any Person, or even any Animal who breathed such Air, could possibly escape the *Contagion*; nay I cannot possibly see how *any* Animal in such a state of Air could possibly live *. For Air with such qualities could

* It is surely more reasonable to suppose the Pestilential Particles floating in the Air without penetrating it's Substance, than to strain as *Diemerbroek* does to prove the Air may be *poisoned* without any Putrefaction of its Substance. His principal Argument for this opinion is founded on a comparison, "that as the Body when a Man dies by a violent Death loses its Vitality without losing its Corporality; so the Air may lose its healthful constitution without suffering any corruption of its Substance." But the misfortune of this Argument is, that there is no analogy between the things compared; for in the first place Healthfulness is not the same thing to the Air as Vitality is to the Body. To make the comparison just it ought to be thus. As a Body may lose its Vitality without losing its Corporality, so the Air may lose its power of sustaining life without suffering any alteration of its substance: A Position which a

could no longer be fit for Respiration. And this opinion is still more probable if the notion of those Philosophers be true, which is very rational, that besides the comminution of the Blood from the regular Dilatation and Compression of the Lungs, there is also another circumstance requisite to its *Vitality*, viz. a constant communication of the same *Nitro-aerial* particles to it, which are necessary to the subsistence of *Fire* and *Flame* *. For in this case the salutary power of the *Nitro-aerial* Spirit, which is continually diffused thro' the Air, and is constantly maintaining such a degree of *Elasticity* in it, as is necessary

Philosopher will scarcely undertake to prove. 2dly, There is no analogy between the Corporality of the Body and the Substance of the Air; for if by Corporality be meant the outward form of the Body, *That* is only a *Quality*, and consequently cannot be compared with the *Substance* of the Air; and if by Corporality *Diemerbroek* means the whole of That Texture which constituted it a Body before Death, then it is not true that it may lose its *Vitality* without losing its *Corporality*: For the very stoppage of circulation instantly introduces a great many alterations in many of its component parts.

* See *Mayow de Respiratione*.

cessary to repel any *putrefactive* Impres-
 sions, would as far as it was incorporated
 with the pestilential *Effluvia*, be convert-
 ed into a poisonous Substance, equally in-
 capable of dilating the Lungs or supplying
 the Blood with these supposed *Vital* Par-
 ticles. It is true indeed the more the con-
 tagious *Effluvia* abound the longer will
 the *Nitro-aerial* Spirit be in destroying
 their *Contagion*. Thus, (to illustrate the
 truth of This Proposition by an analogical
 Fact) it sometimes happens after a violent
 Eruption of Mount *Vesuvius* that the
 noxious Vapours thrown out from thence
 (probably into some close encompassed
 Plains not easily accessible to the Winds,
 that should disperse them,) are so copious
 as for some time to destroy the gravity
 and elasticity of that small portion of Air
 in which they float, till by some artificial
 concussions of it, which are ~~equally~~ *usually* made
 on those occasions by the neighbouring
 People, the Vapours are dispersed into
 such smaller portions as the *Nitro-aerial*
 Spirit can sooner overcome *. So likewise
 in

* De Castera *Histoire de Mont Vesuve*, p. 296.

in the breaking out of any *Pestilence* the more impure exhalations float in the Air the less will it's *Nitro-aerial* Spirit, and consequently it's *Elasticity* be, where those exhalations abound, and therefore the less able will such Air be to resist and break the first *contagious* Matter : But that any such Exhalations when not pent up can produce any *contagious* Distemper, or any other but such as arise from improper degrees of its *Elasticity*, or the Excess of some of its sensible qualities, is what I see no reason to conclude.

Diemerbroek seems to have been aware of these Objections to the notion which then prevailed and continues to do so still, that the Air is *infected* in times of *Pestilence*, and thinks to evade the principal of them, (*viz.* that which is founded on the exemption of some Animals of the same *Species* from the power of the *Plague*, which could not possibly happen if the substance of the Air itself was *infected*) he thinks, I say, to evade this Objection by supposing that the Air is *not equally infected in*
all

all it's parts, nor at all times during the course of any one Pestilence *; from whence he seems to infer, that as some Animals require a larger quantity of Infection to infect them than others, they will not be infected but when the Air is all over so; whereas such as will be infected by less (which are far the greatest part) suffer when the Air is less so. To which I reply; this *Hypothesis* cannot be supposed to account better for the escaping of some few Animals of the same *Species* in time of *Pestilence* than That more natural one of the different Disposition to *Infection* in such Animals at different times; because when the Air is ever so much infected according to their notion, that is, when it abounds with the greatest quantity of *Pestilential Effluvia*, it will often not infect a great many of the same *Species* at that time, and will do it with a less degree of Infection at another. But if this *Hypothesis* of *Diemerbroek* would account for this Fact better, yet as there is no kind of connection in nature between an unequal

Distri-

* LIB. I. CAP. XI.

Distribution of *one* particular kind of *Infection*, and the effects of *various other* kinds of it, the Air's containing *less* of *one* kind of Infection cannot possibly be a reason why no more *Species* of Animals than *one* should suffer from it. And this reasoning is confirmed beyond all contradiction by matter of Fact; for if the Air be infected at all, it cannot be denied that it is so in all it's parts within a given Space at some time or other in the course of every Pestilence, and consequently is then capable according to the *Hypothesis* of *Diemerbroek* of infecting many more *Species* than one; and yet it is certain, (as we shall prove hereafter) that no such time ever happened. As to the Fact whereby he attempts to illustrate his notion concerning the unequal infection of the Air, *viz.* that *Sulphur* when burn'd in a small quantity in a Room, only affects such as have any disposition to an *Asthma*, whereas if the quantity be increased to a certain degree it suffocates all around it. I reply, that this case will serve to illustrate my opinion better than His. For is it not
more

more natural to suppose that the *Sulphur* in Both these cases hurts Animals merely by floating in the Air in various proportions according to the various power of resisting it's *Effluvia* wherewith Animals are indued, than to imagine that the Air suffers any alteration of it's substance in either case? or what is more irrational than to believe that any poisonous particles capable of assimilating one part of the Air to their own nature, should not by this assimilation acquire the same power of assimilating it throughout the whole extent of it, which they are confessed to do in all other such Bodies as they are capable of assimilating at all?

I HAVE neither room nor leisure to offer the Judicious Reader any more probabilities in support of this opinion of mine, concerning the Exemption of the Air itself from *Corruption* in *Pestilential* Diseases within the compass of this Pamphlet. I will only beg leave to observe in this place one great use resulting from this *Idea* of the nature of *Contagion*; which is, That

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it

it has a plain tendency to prevent, or at least to alleviate That Consternation and Horror, which are observed to seize the minds of men upon the first breaking out of every *Pestilence*, and which are generally allowed to have a great share in spreading it. For who does not collect from this notion of *Contagion*, if it be true, that the infinite Goodness of our Creator has qualified This worst of natural Evils with a most merciful Consolation arising from the very nature of the Evil itself; insomuch that it is to the nature of *Pestilential Contagion* itself, that the *Species* is to fly for an assurance of its preservation at a time, when it has reason, if ever, to fear its extinction, *viz.* when the Individuals daily perish by it without number. Because it is evident, that if *Contagion* can only be propagated by *Effluvia* acting to a certain distance, there is an infallible way for the Animal Creation to escape its natural power, *viz.* by withdrawing beyond the Sphere of its Action. Whereas if it could either be generated by the Air alone, or when generated could *corrupt* the Air,

who

who can say it would not happen often in some places where the sensible qualities are often excessive ? or who could prescribe limits to the rapidity of its progress whenever it did happen ? for if any part of this unconfined *Atmosphere* was once corrupted, what should hinder the Air thus corrupted, from corrupting the Air next to it, and so on *ad infinitum* ?

BUT after all this reasoning it may perhaps be said that matter of Fact is still against it. For that there are many instances, in Writers on this Subject, of People being infected, who not only lived at some distance from the infected places, but had likewise no communication with either Animals or Things infected. And particularly *Fabricius Hildanus* * relates a case of this kind, which happened in the Plague of *Lausanne* in *Switzerland* in 1613, “ where the country People, who lived “ secluded from all commerce with the “ infected Town upon the highest Moun- “ tains, were no less subject to the *Plague* “ than

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“ than

* *Cent. 4. Observ. 23.*

“ than those who lived in the city.” To this I reply ; I never denied it to be possible in the height of some very violent Plagues, (when a great quantity of *Pestilential* Vapours are continually exhaling from innumerable Bodies both living and dead) for some of the *contagious Effluvia* to be carried from the Places of their Emission, by a current of wind constantly moving in the same direction, to a considerable distance ; by which means I can easily conceive it possible for some people, who have no commerce with the infected to live within the limits of the progress of these *contagious Effluvia*, and consequently within the influence of their power. But supposing these Facts could not be thus accounted for, I would beg leave to ask, whether these Authors do not seem to have been too hasty in affirming there was no communication between these people living at a distance and the infected places? For what they affirm is a *Negative*, which cannot be *proved*, and therefore ought not to be admitted. If by no *communication* they mean only no communication

communication of the same *Species* of Animals, *That* will not answer their purpose; because *Contagion* may undeniably be communicated by many other ways, many of which might be practised without falling under the observation of the persons, who received the Infection. All other *Species* of Animals may carry it without being infected by it themselves, and as nothing is known to retain *Infection* more than Hair, it may and doubtless has been carried by Animals who have strayed from the Infected to the Sound.

HAVING now endeavoured to vindicate the *Air* from the imputation of being *corrupted* by, or suffering any alteration in its *Substance* from any kind of *Contagion*, and having therein, as far as the compass of such a Disquisition would admit, explained the nature of *Contagion* in general, let us proceed to examine how far the Ancients oppose our other opinion concerning the unequal power of the *Plague* over *Men* and *Brutes*; which will give us an opportunity of taking a general view of the nature

ture of *Pestilential Contagion*; and thereby the better enable us to judge how far it may reasonably be imputed to the *present Distemper*.

THE first great *Plague* we have any particular History of, is the memorable one of *Athens*, which happened in the *second* year of the *Peloponnesian War*. We have an elegant *poetical* Description of it in *Lucretius*, who evidently borrowed the principal figures of his Picture from the Historian *Thucydides*, who lived in *Athens* at the time, and had recovered from the Distemper *; as he himself expressly tells us in the Introduction to his account of it. But as the Poet has greatly heightened the colouring of his Piece, it is worth while to observe the difference of the two relations, as to the point we are now enquiring into. The *Poet* tells us, “ that scarce any Bird was to be seen
“ in so pestilent an Air, that the wild
“ Beasts dared not to roam abroad in the
“ night

* Ταῦτα δὴ λέγει ἌΡΤΟΥΣ τὴ νοσήσας καὶ αὐτὸ ἰδὼν
ἄλλας πύργους Thucyd. Lib. II.

“ night as usual for their prey, and that
 “ Dogs were still more the Objects of the
 “ Plague’s malignity than any other *Spe-*
cies of Brutes; for every Street was filled
 with their Dead Carcasses.

*Nec tamen omninò temerè illis solibus ulla
 Comparebat Avis, nec noctibù sæcla Fe-*
rarum

*Exibant sylvis : languebant pleraque morbo
 Et moriebantur : cum primis fida Ca-*
num Vis

*Strata viis animam ponebat in omnibus
 ægram.*

ACCORDING to this *Poetical* account, this *Plague* was equally fatal to *Man* and *Brute*. But let us see how *Thucydides*, from whom the most *probable* part of it is borrowed, differs from the Poet in his Relation of it. He only tells us “ that such *Birds*
 “ and *Quadrupeds*, as feed on Human
 “ Carcasses, either did not come near
 “ them, or if they tasted them, they
 “ died. And that Dogs were more sen-
 “ sible of the Evil than any other Brutes,
 “ because

“ because as they are a domestick Ani-
 “ mal, they were more exposed to feed
 “ on human Carcasses *.” We shall see
 presently what this whole account a-
 mounts to; but in the mean time it is fit
 we should observe that whatever is im-
 plied in it seems to be offered to our Be-
 lief, not upon the Historian’s own know-
 ledge, but as a Rumour, which then pre-
 vailed. For if the Historian had meant
 to tell us these Facts upon his own know-
 ledge, he needed not to have given us an
internal proof of them; in doing which
 he has left us at liberty to admit or reject it
 according to our opinion of its evidence.
 But this he has done in adding immedi-
 ately after his relation of these Facts, that
 this single circumstance was a proof or
indication of their Reality, viz. “ That
 “ there was a *manifest Defect* of these
 “ *Birds*, none of which were to be seen
 “ either

* Τα γδ ὄρνεα κὶ τετράποδα ὄσα ἀνθρώπων
 ἀπύετο, πολλῶν ἀτάφων γυνομένων, ἢ ἔπεισται ἢ
 γασσάμενα διεφθείρετο· οἱ δὲ κότες μᾶλλον αἰδοῦσιν πα-
 ρεῖχον ἢ ἀποβαίνοντες διὰ τὸ ξυνδιατῆσθαι. Thucydid.
 Lib. II.

“ either about any of the *Carcasses*, or elsewhere *.” If then this *internal* proof of the Historian’s Facts should not appear to us sufficient to establish them, we may reject them without impeaching his Veracity. Now in regard to this internal proof, let me ask the Intelligent Reader how the Defect of these Birds can prove that such as tasted the *pestilent* Carcasses died? I can easily conceive that such a Defect is a proof that they did not approach the Carcasses; but surely there might be a Defect of them without their dying by the pestilent Food. Nay, it is probable from the Historian’s own suggestion, that the Defect was for another reason. For he tells us, that many of them did not approach the City; and what reason so likely can be supposed for their not approaching the City, as because they were sensible of the *putrefactive* Stench continually exhaling from the (πολλῶν ἀτάφων) the many *unburied Carcasses*? But let us grant these

I

Facts

* ΤΕΚΜΗΡΙΟΝ δὲ, πῶν μὲν ποιέτων, ΟΡΝΙΘΩΝ ἐπιλειψίς σάουης ἐγένετο, καὶ ἕκ θωρῶν ἴσθ' ἄλλως, ἔτε πρὸς ποιστον ἕδεν. Thucyd. Lib. II.

Facts to have been proved, and see the utmost which can be implied in them. The whole then, which can be collected from them, concerning the effects of this terrible *Plague* on *Brutes* is this ; “ that
 “ the *Birds* avoided the stench of the un-
 “ buried Carcasses, and that some *Birds*
 “ and *Beasts* which feed on Human Car-
 “ casses were killed by eating these con-
 “ tagious ones.” From whence it does not appear that these Animals died of *Con-
 tagion* ; for since the Historian is silent as to the effects of this putrefied flesh upon them before Death, it is very possible its fatality might be occasioned by a mere *Surfeit*. And this is the more probable, because, if these Animals had discovered any symptoms of the *Plague*, it is scarce to be supposed the Historian would have omitted *all* of them. For though, as *Galen* has truly observed, *Thucydides* has wrote his account of this *Plague* rather *as a common Observer than as a Physician* *, yet any remarkable
 symptom

* Θεωροῦντος μὲν γὰρ, τὰ συμβάντα τοῖς νοσῶσιν ὡς ἰδιώ-
 της ἰδιώταις ἔγραψεν. Ἰπποκράτης δὲ ὡς τεχνίτης τεχνί-
 ταις. De Respirat. difficultat. Lib. II. C. vii.

Symptom of the *Plague* in these Animals cannot well be supposed to have escaped even a *common Observer*. This however is *certain*, that the *Putrefaction*, occasioned by this *Plague*, differed in its effects from That in the *Plague* of *Marseilles*; in which, as I have before remarked, *Dogs* eat the dead Carcasses for three Months without receiving any hurt from them. It appears then upon the whole, that we cannot learn from this Historian's account of this *Plague* that it infected Brutes as well as Men, at least, not in the *ordinary* way of communicating *Contagion*, that is, by its *Effluvia*: But that to produce the same mortality among *Brutes* as among *Men* it was necessary for the former to take actual *pestilential* putrefaction into their Stomachs, and from thence into their Blood. It must be owned indeed that a modern Writer of no small Reputation, often mentioned in these *Considerations*, has told us in an elaborate Treatise on this Disease, “ that about twenty Hens, which
 “ were raking into some of the Nastiness
 “ thrown out of an infected House in

“ the time of the *Plague* at *Nimeguen*
 “ contracted the *Distemper* and died * ;
 “ some of which had the *Pathognomonick*
 “ signs of the *Plague*.”

THIS FACT indeed, well attested, will prove the possibility of communicating the *Plague* to *Brutes* by some mode of infection or other ; which I never yet denied : But the occasion of their contracting the *Distemper*, as related by *Diemerbroek*, appears to me a sufficient proof that they did not contract it in the ordinary way of receiving *Effluvia*. For, if they were raking into the *Filth* for the sake of Food, it is very probable that they took some infectious matter along with it, (whose virulence was much exasperated by lying so long in the *Filth* of an infected House) into their *Stomachs* ; or, if it be supposed that

* Ex his fordibus (sc. è Domo contaminatâ ejeētis) Gallinæ forte aliquid nutrimenti quæsierunt iisque se immerferunt et involverunt, atque hinc omnes contagium contraxerunt et peste correptæ mortuæ sunt—atque ita omnes gallinæ circiter viginti numero peste interierunt. *Diemerbroek de Peste. Hist. cxii.*

that they took mere *Effluvia* into their Stomachs, yet surely there may be great difference between the power of some *Effluvia* when applied to the Body *externally* in their common motion through the Air, and when impressed upon the nerves of the Stomach by its own constant *vermicular* motion. And this way of reasoning will also account for a Fact of the same kind related by *Boccace* in his Description of the extraordinary *Plague* at *Florence*, which ravaged all *Europe* in the time of our *Edward III.* For the two *Hogs* which, he says, “ he saw fall down
 “ dead in the Street, soon after they had
 “ mumbled and shaken some Rags that
 “ belonged to a poor Man just dead of
 “ the Distemper *,” may not only very reason-

* Che essendo gli stracci d'un povero huomo da tale infirmita morto gittati nella via publica, & advenendosi ad essi due porci, & quegli secondo il lor costume prima molto col grifo & poi co denti presigli & scoffigli alle guancie in piccola hora appresso dopo alcuno auvolgimento, come se veleno haveffer preso, amenduni sopra gli mal tirati stracci morti caddero in terra.

Decameron. p. 4. Edit. Lond. 1727.

reasonably be supposed, by rubbing the *Pestilential Effluvia* violently against some branches of the *Olfactory Nerves* to have impressed the *Animal Spirits* contained in them, but also to have mixed some of the same *Pestilential Effluvia* with their *Saliva*, and to have swallowed Both together, The Inference indeed which he draws from it, *viz.* “ that the very touch of
 “ any thing belonging to a Person either
 “ infected with or dead of this Disease
 “ was sufficient to kill any other Ani-
 “ mal *, is not consistent with our Do-
 “ ctrine ;” but it may be easily proved to have been drawn from insufficient premises. For as he tells us from what kind of Facts he draws his Inference, it is certain
 that

* Dico che di tanta efficacia fu la qualita della Pestilentia narrata nello appicarsi da uno ad altro, che non solamente l'huomo à l'huomo, ma questo, che è molto piu, assai volte visibilmente fece, cio è che la cosa dell' huomo infermo stato, di tale infermita, *tocca da un altro Animale fuori della spetie dell' huomo*, non solamente della infermita il contaminasse, ma quello infra brevissimo spatio occidesse, di che gli occhi miei (si come poco davanti è detto) presero tra l'altre volte un di cosi fatta esperienza, &c.
Ibid.

that the utmost which can be drawn from the Fact related is, that *Brutes* may sometimes be destroyed by taking *Pestilential Effluvia* into their Stomachs, or by rubbing them violently against their *Nerves*; which we never pretended to deny: But to conclude from hence, as *Boccace* does, that the very touch of *Infectèd* Things or Persons was able to kill Animals of any *Species*, is evidently a conclusion too wide for the premises; and therefore unworthy the *Logick* even of a *Novelist*. Nay the Writer himself has furnished us with an express Testimony against his own Inference in what he relates (p. 11.) concerning the general condition of *Brutes* during this dreadful Mortality. For he not only says nothing of their Destruction where he describes the greatness of That which happened to Mankind, but he expressly says that “ many of the Brutes, as if they
 “ had been *rational Creatures*, having fed
 “ themselves plentifully in the day-time, re-
 “ turned home satiated at night, without
 “ any care of the Herdsmen * :” which be-
 ing

* Perche divenne che i Buoi, gli asini, le Pecore,
 le

ing represented as their daily custom, surely implies that they were not liable to take the *Infection* in the same way with Men, which is all we maintain. Neither is the extraordinary manner in which these *Swine* are said to have died, *viz.* after turning round, as if they were poisoned, at all inconsistent with this opinion; for since I do not deny the *Plague* to be capable of killing any *Species* of Animals in some way of communication or other, it is natural to imagine that these Animals receiving the *Infection* in a more virulent way than by the natural motion of *Effluvia* from one Body to another, that is, by the direct and forcible Introduction of them through the Nerves of the *Nose* to the *Brain*, it is natural I say to suppose that

le Capre, i Porci, i Polli, & i cani medesimi, fedelissimi a gli huomini fuori delle proprie case cacciati, per li campi, dove anchora le biade abbandonnate erano, senza essere non che raccolte, ma par segate, come meglio piaceva loro, se n'andavano. *Et molti quasi come rationali, poi che pasciati erano bene il giorno, la notte alle lor case senza alcune correghimento di Pastore si tornavano satelli.*

Decameron.

that in such an immediate and violent application of *Poison*, it should produce as violent effects as it is ever known to do in any mode of communication whatsoever.

THAT Birds may possibly have some sense of the putrid *Effluvia* exhaling from *pestilential* Carcasses, which may dispose them to leave the places where such Carcasses abound, as *Thucydides* insinuates, may possibly be true. But that they take *infection* from such *Effluvia* in the Air, or from those of *Pestilential Contagion* in *infected Goods*, is what does not appear to me to have been sufficiently proved. There is another story reported by *Diemerbroek* which may possibly be thought to favour this opinion, but falls very short of proving the Fact when it comes to be examined. He tells us in his Chapter, *De signis Pestem præcedentibus & præsagientibus*, “ that though
 “ there were many presages of the Plague’s
 “ Destruction to the *Publick*, yet there
 “ were few or none to *Individuals*: For,
 “ the only one he observed, was, that in
 K “ several

“ several Houses, where Birds were kept
 “ in Cages, they died not long before,
 “ nay very often within two or three days
 “ before the People of the House were
 “ seized with the *Plague* *.” Here we see
 the Author does not pretend these Birds
 died of the *Plague*, but only that they
 presaged the Death of others. For this
 reason he puts this Story into his Chap-
 ter of *Presages*, and not into That of the
Subjects of this *Pestilence*, to which it cer-
 tainly belonged, if he had meant to re-
 present them killed by *Infection*. On the
 contrary, when he comes to treat of the *Sub-
 jects* of it he expressly says, that the *Plague*
 he intends to write the History of, affect-
 ed scarce any other *Species* but ours ; in
 which

* Pro singulis autem *Individuis* invasuræ *Pestis*
 paucissima vel *nulla* dabantur præfagia ; nam ferè
 omnes ex improvise ferebat, nec nisi effectis &
 eventis deprehendebatur. Hoc *unum* adhuc obser-
 vavimus, ubi *Aviculæ* (quas nonnulli caveis inclusas
 delectationis & cantûs gratiâ alunt) moriebantur,
 in illis ædibus, *etiam non diù post imò frequentissimè*
intra duos tresve dies inter inhabitatores homines
Pestem dominatam fuisse ; idque multis in locis seu
 ædibus contigisse vidimus. Cap. vi.

which words he seems to have provided for his exception contained in the Story of his *Hens. Pestis hæc Bruta ferè intacta relinquens solis HOMINIBUS bellum indixerat!* All then *Diemberbroek* means to inform us of by this story of the Birds is, that as many other signs had foretold the approaching Destruction to our *Species*, so the Death of these Birds was the only Omen he had observed to presage the Death of any *Individuals*. We will leave then this extraordinary story to the Faith of such as depend on the *credibility* of *Prefages*, and only observe what an amazing instance we have in this very *Chapter* of the Power of Superstition over the Human Mind; where the Author is so weak as to dishonour a very useful work with a disgraceful collection of presages to the Publick, as *the falling of Stars, Lightning without Rain, Flames in the Sky* of a very odd appearance (such as *Livy* had related to have happened before a Plague at *Rome, Ann. 290. ab U. C.* and *Paracelsus* had fancied were the *Excrements* of *Stars*, (for a very pleasant reason, *because* they were like the

Bowels of Animals) and is *childish* enough, because *Gallus of Trent* and *Forestus* will keep him in countenance, to relate the Diversion of Children, which they call *playing at Funerals*, as a certain *prognostic* that *Funerals* in good earnest were approaching *. And as this superstition is implanted in our Nature, it has never failed to exert itself in every Calamity of this kind, though its mode of operating has been diversified according to the Difference of the several Places and Ages wherein it has broke out †.

BUT to proceed in our examination of the ancient Testimonies for this opinion of the equal power of the Plague over *Man* and *Beast*. It is true indeed the Antients had not such true and precise notions of the different *Species of Contagious Distempers* as we have. It is no wonder therefore All the Poets, who never fail to

* See *Diemerbroek*, Cap. vi.

† See *Procopius's History*, translated by Mr. Cousin, Lib. H. Chap. xxii. and xxiii. and *Hodges de Peste*, Sect. I.

to take the advantage of any popular Error, that will embellish their Descriptions, have generally represented one *Species* of Pestilence as tyrannizing with equal fury over every *Species* of Animals. Hence not only *Lucretius*, as we have shewn, but *Ovid* also in his *Metamorphosis*, and *Virgil* in his *Georgicks*, have given us the Description of a *Pestilence*, which according to them made equal havock throughout the *Brute Creation*,

*Et genus omne neci Pecudum dedit omne
Ferarum.*

Ovid indeed, who was less of a Philosopher than *Virgil*, has made his Pestilence to extend through the *Animal Creation*: But the latter only carries the matter so far in respect to our *Species*, as to affirm that Men contracted the same Disease as oft as any of them ventured to use any cloaths made of the Fleeces of the *Sheep* which died of the Distemper*. But

as

* *Nec tondere quidem morbo illuvieque peresa
Vellera, nec telas possunt attingere putres*

Verum

as these circumstances in *Virgil's* account are unsupported by any better Testimony, and contradicted by all modern Experience, I think we need not scruple to charge them upon the Poet's Invention. Whoever attentively reads his whole Description of this *Pestilence*, wherein the erroneous opinion of its *Universality* in respect of Brutes is glossed over with all the beautiful Colours of *Poetry*, will allow it was very easy for the Poet to be so dazzled with the Fire of his own Imagination as now and then to lose sight of Truth: But for my Part, I think the Poet throughout the *whole* has sacrificed the Wisdom of his Beloved *Philosophy*, to the Charms of his more enchanting Mistress, *Poetry*. I will beg leave to trouble the Reader with some of the many reasons, which have confirmed me in this opinion, if he will indulge me in a long Digression; which will be the more

*Verum etiam invisos si quis tentarat amictus,
Ardentes papulæ atque immundus olentia sudor
Membra sequebatur; nec longo deinde moranti
Tempore contactos artus Sacer Ignis Edebat.*

Georgic. III.

more pardonable, as it will serve to establish my opinion before maintained, that no *one Pestilence* has an equal power over any *two Species* of Animals ; and likewise to explain some passages in this excellent Poet, which seem to have been not yet sufficiently understood.

It is remarkable, that though the Poet tells us this *Pestilence* raged with equal fury through the whole *Brute Creation*, yet he has not particularly described the Symptoms it produced in any of the *Brutes*, except the *Horse* ; which Creature he seems to have thought most worthy his *Poetical* regard. “ He only tells us of the *Sheep*, “ that they often fell by the Distemper, “ as they stood at the Altar ; and that if “ the Priest foreseeing their danger, happened to kill them before the Distemper “ could, their blood was so corrupted as “ scarce to tinge the *Knife* or the *Ground* “ with *Red*. Of *Calves*, He only says, “ that they died as they were feeding at a “ full *Manger* : Of *Dogs*, that they went “ mad : Of *Swine*, that they had a *cough* “ with

“ with a *shortness of Breathing*: Of the
 “ *Viper*, that its lurking holes could not
 “ save it: Of *Birds*, that where-ever they
 “ flew they could not escape the Death
 “ that was in the *Air*: Of *Fish*, that they
 “ lay like so many wrecks on the Shore;
 “ and that the *Sea-Calves* forsook their
 “ usual abode and swam into the Rivers:
 “ Nay he is so sparing of his *Pathology*
 “ even in regard to the *Oxen*, (whose
 “ symptoms he was more likely to have
 “ known, as the *Pest* is more common a-
 “ mong them than any other *Species* of
 “ Brutes) that he only mentions one, *viz.*
 “ *their vomiting of Blood*; and he tells us
 “ only one circumstance relating to their
 “ cure, which is, that nothing contributed
 “ so much to stop the Infection among
 “ them, as burying the Animal in its Skin.”
 Thus negligent is *Virgil* of the symptoms,
 which this Distemper must be supposed
 to have produced in all the other *Brutes*
 he mentions, as well as the *Horse*: But he
 no sooner names *Him* than his Imagina-
 tion takes fire, and as if the whole story
 of the *Pestilence* was invented for the
 fake

fake of this single Description, he draws as exquisite a Picture of this noble Animal in its Distress, as the Author of the Book of *Job* has given us of it in its Strength and Beauty *. Here he is as particular in enumerating the symptoms of the Disease both in the beginning and progress of it, as the most exact *Veterinarian*; and condescends to tell us, that though *Wine* seemed at first to raise the Creatures when they appeared to be dying,

L yet

* *Labitur infelix studiorum atque immemor herbæ
Victor EQUUS, fontesque avertitur, & pede
terram*

*Crebra ferit: demissæ aures: incertus ibidem
Sudor; & ille quidem moriturus frigidus: aret
Pellis, & ad tactum tractanti dura resistit.
Hæc ante exitium primis dant signa diebus
Sin in processu cæpit crudescere morbus,
Tum verò ardentes oculi, atque attractus ab alto
Spiritus, interdum gemitu gravis, imaque longo
Ilia singultu tendunt it naribus ater
Sanguis, & obsessas fauces premit aspera lingua.
Profuit inserto latices infundere cornu
Lenæos: Ea visa salus morientibus una.
Mox erat *Hoc ipsum* exitio, furisq; relecti
Ardebant, Ipsique suos jam morte sub ægrâ
(*Di meliora Piis, Erroremque Hostibus illum!*)
Discissos nudis laniabant dentibus artus.*

yet soon after it was found to increase their fury to such a degree that they tore themselves to pieces; from whence, with his usual Art the Poet takes occasion to admonish his Countrymen concerning a subject which always too nearly affected him not to move his Passions and fire his Genius, whenever it came in his way; I mean their *Civil Wars*, which he seems to me to glance at in this very Reflection,

*Di meliora piis Erroremque Hostibus
illum!*

where the unnatural rage of the Creatures, under the impulse of the Distemper, could not but revive the shocking Scenes he had lately beheld in his own Country of *Fellow-Citizens* tearing themselves and their Society to pieces with still more brutal fury *. But if the Poet had really *believed*

* This Reflection appears to me as impertinent and flat in any other light, as it is beautiful and artful in that wherein I have placed it. The Poet seems to me to suppose an *Analogy* between the *Commonwealth* and this Noble *Animal*, whose unnatural
Rage

lieved the Distemper infected *Brutes* universally, it was incumbent upon him, in a *Didactic* Poem, which the *Georgicks* professedly is, to be equally particular in his description of the symptoms incident to every *Species* : whereas if he designed on-

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Rage thus cruelly exerted against itself might reasonably be supposed to have called to his mind the same unnatural fury in the *Commonwealth*. On this supposition the sense of this obscure line is evidently this, “ May the Gods grant a better Disposition
 “ always to those who are faithful observers of the
 “ ceremonies attending their worship, (which ob-
 “ servance, as it made the greatest part of the *Pagan*
 “ Religion, may well be expressed by the word
 “ *Pietas*,) that is, to us *Romans*; and may they in-
 “ spire the *Barbarians*, who are both *their* Ene-
 “ mies and *ours*, with the fatal appetite to this mis-
 “ application of their fury. In this view it is easy to see that the word *Error* is better than *Ardor* substituted by *Pierius* for it. But nothing surely can be more insipid than *Servius*’s remark upon it, nor more ridiculous than That of *Philargyrius*; who, as we shall see hereafter had a *very short way* with any stubborn passage, whose sense and beauty did not immediately surrender themselves to his *Critical* Discretion. The former of these *Critics* very wisely tells us, *Per parenthesis, in execrationem hostum hanc torquet insaniam*; and the latter with more Authority than good Sense pronounces *Errorem hic pro Furore posuit*.

ly to entertain us with the Beauties of his Poetry, it was not only fit but necessary for him to chuse such Subjects for his Description as were capable of furnishing the greatest variety of those Images, which were most likely to strike the Reader's imagination. And such a subject the *Horse* undeniably is on account of his general Use and Beauty, which makes him the particular favourite of *Man*, above almost any other Animal of the *Brute* Creation. This consideration strongly inclines me to believe the whole Description of this *Pestilence*, which is indeed wonderfully beautiful, has much more of *Poetical* Fiction than *Philosophical* Seriousness in it; and if to this, we add the following remarkable circumstance, I flatter myself my opinion will receive great confirmation from it. Let it be observed then that he not only tells us Men were *infected* by wearing any Garments made of the *infected* Wool, (which is a Fact so properly his own, that it is not, at least as far as my reading reaches, taken notice of by any other writer) but also that they contracted

tracted from these Garments that very *Species* of *Pestilence*, which is peculiar to their own nature, *viz.* the *Plague*. For that this is his meaning is evident from hence, that the Symptoms, which, he tells us, the Garments produced, are not only different from every other he had before recited, but are likewise some of the principal ones which occur in every *Plague* we read of; to wit, the *Carbuncle*, *Ardentes Papulæ*, the *Symptomatick Sweat*, *Immundus Sudor*, and the *Erysipelas*, the *Sacer Ignis*. And in this last stroke the Poet has loaded its credibility with his sad Tale of Man's contracting the *Plague* from Garments made of the Fleeces of *Sheep*, which died of this *Pestilence*, as if he designed after this wanton entertainment of our *Fancy*, not to dismiss us without informing our *Understanding* as to what he had been all the while a doing. The Poet has likewise made use of the license belonging to his Art in describing the universal *Putrefaction* which is generally the immediate consequence of *Death* to such Bodies as perish by the *Plague*. The Pas-
sage

sage is worth quoting, as it seems to stand in need of some further explication than the Commentators have hitherto afforded it. It is this :

*Nec via mortis erat simplex ; sed ubi
igneæ venis*

*Omni bus acta fitis miseros adduxerat ar-
tus*

*Rursus abundabat fluidus liquor, omnia-
que in se*

Ossa minutatim morbo collapsa traherat.

Servius tells us that by *via mortis non simplex*, the Poet means their Death was not according to the Order of Nature ; His words are, *Nec moriebantur ex usu, id est, secundum naturalem ordinem* ; which comment would have been as obscure as the Text if he had not added the following explanation of it, *non tantum fugâ animæ sed etiam corporis resolutione* ; that is, not only by the separation of the sensitive Soul from the Body ; but also by an absolute dissolution of the Body itself. This explanation seems to have been suggested by

by a Passage in *Lucan*, wherein, as in many others, this Poet appears to have copied the Sentiment of *Virgil*. It is where he is describing the terrible consequences of the bite of the *African Viper*, called *Seps*. After having told us that it has worse effects on the Bones than even *Fire* usually has, (for it *totally* consumes them) he adds with his usual quaintness, that other Poisons only *snatch away* Life, but this with a peculiar malignity *snatches away* the very constituent parts of the Carcase, that is, dissolves the firmest parts of it, so as to destroy the very form as well as the principles of its *animation* *.

THE

* ————— Omne
 Quicquid Homo est, aperit *Pestis*, natura profana
 Morte patet, manant humeri, fortesque lacerti:
 Colla caputque fluunt. Calido non ocyus Austro
 Nix resoluta cadit, nec solem cera sequetur.
 Parva loquor, corpus sanie stillasse perustum.
 Hoc et *Flamma* potest, sed quis *rogus* abstulit ossa?
 Nulla manere sinunt rapidi vestigia fati.
 Cyniphias inter Pestes Tibi Palma nocendi est:
 Eripiunt omnes Animam, Tu sola Cadaver.

Lucan. *Phars.* Lib. ix,

THE Commentator appears to be right in his general interpretation of this obscure Passage; according to which the *Construction* of it is certainly This: “ that other
 “ Diseases proceed in their assaults upon
 “ the Body till they have separated the
 “ *sensitive* Soul from it, that is, till they
 “ have destroyed Life; but that the un-
 “ common fury of this *Pestilential* one
 “ does not terminate there; for after
 “ the *fiery Theist* (as he poetically calls
 “ the matter of the Disease, That being
 “ one of its most distinguishing and into-
 “ lerable Signs) has been first vehemently
 “ agitated in the Blood-Vessels (the *Venæ*
 “ *omnes*) and has shrivelled up the tor-
 “ tured limbs so as to make their vessels
 “ no longer pervious, *again* the *morbifick*
 “ humour (the *fluidus liquor*) having con-
 “ sumed the *fleshy* and *membranous* parts,
 “ *sprung up afresh* (*rursus abundabat*) in
 “ the vessels of the more solid parts,
 “ the *Bones*, and destroyed the very sub-
 “ stance of them; or, to translate it
 “ literally, converted by degrees the Bones,
 “ which were before decayed through
 “ the

Thirst

“ the violence of the Disease, into their
 “ own putrid nature.”

THIS indeed is the general sense of the passage; but it is not easy to render the several parts of it worthy the Poet's imagination without altering a word, which on account of its evident flatness the Critics have laboured to raise by straining the Rules of *common Sense* as well as *Rhetorick*. The word is *adduxerat*, which *Philargyrius* is so much at a loss to construe, that he very ridiculously tells us it is put for *contraxerat*. But I would fain know what occasion the Poet had to force the verb *adduxerat* into his Service when the very word, which the Critic supposes it to represent, was equally at his command? Especially since there is no other instance that I know of, where the word was ever used in That Sense either before or since. There is no way in my humble opinion to restore this debased line to its original value but by proceeding upon this reasonable supposition, that the same cause, which is allowed to have defaced the other valu-

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able

able Remains of Antiquity, has likewise exerted its destructive influence here, *viz.* the Ignorance of the *Copyists*. Whenever these Gentry met with a word whose Sense they either did not comprehend, or whose Novelty they distasted, they were fure to compensate the want of *Sense* by similitude of *Sound*; and therefore the word which was nearest in the latter respect, how remote soever it was in the former, was always the most likely to obtain their suffrage. Hence I think there is good reason to suspect that the verb *exusserat*, which kept up the *metaphor* with a Spirit suitable to the Poet's character, was by a Dullness not derogatory to the Copyist's, expelled by him to make way for one more familiar to his Taste and Reading. And when once the word *adduxerat* could plead the Authority of an ancient Copy in support of its title, it is no wonder it should be able to maintain itself against the Sense and Criticism of some Ages. The same Critic not considering the Poet's Drift, and overlooking the common import of words, has also
 given

given us a forced unnatural interpretation of the *Adverb*, *Rursùs*, in saying it is put by the Poet for *contra* : whereas according to my sense of this passage, *rursùs* will recover its proper meaning. But it is time to proceed in the proof of our opinion, that the Antients had not true and precise notions of the different *Species* of *Contagious Pestilential Distempers*.

WE read then in a Writer of much remoter Antiquity than *Virgil*, and who is justly supposed to have given us a pretty true picture of the opinions and manners of his time, of a *Pestilence*, which was so partial as to attack none of the *Brute Creation* but *Mules* and *Dogs*, and then fell with equal rage on our *Species*,

Ἵουρῆας μὲν πρῶτον ἐπωχέτο καὶ κύνες ἀργαί.
 Ἄυταρ, ἔπειτ' ΑΥΤΟΙΣΙ βέλθ' ἐχεπευκὲς ἐφίεις
 Βάλλ' αἰεὶ δὲ πύρραι νεκύων κείοντο θάμειάι. *

BUT the same objections are to be made to this Poet's account as to *Virgil's*, however sacred the Universal veneration, which

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has

* Homer *Iliad*, B. I.

has been always justly paid to his Writings in general, may have made his very *Poetical Fictions*. For nothing has been said by *Homer*, which the Criticks have not undertaken to defend; of whose blind obedience to this *Father of Poetry* I scarce know a stronger instance than what occurs to us in their observations on this very passage. The *Scholiast* is so satisfied of the Truth of *Homer's* relation of the Pestilence in the *Græcian* camp first seizing *Mules* and *Dogs*, that he very gravely tells us the *moral* reason given by the *Rhetoricians* why it did so, which at the same time proves that it must always seize *Brutes* before Men; and then adds a *Natural* one why it cannot but first attack *Brutes* in general, and the *Mule* in particular, before it falls on our *Species*, without enquiring whether it has ever happened so in any other Pestilence since then *. It is probable indeed *Homer* did mean

* Διατί δε ἔτι τῶν ΚΤΝΩΝ καὶ τῶν ΗΜΙΩΝ ὁ ΛΟΓΙ-
ΜΟΣ ἤρξατο ἐκ ἀπὸ τῶν ΕΛΛΗΝΩΝ ἢ ἐδὲ ἀπ' ἄλλης π-
νὸς ζωῆς; καὶ οἱ μὲν ΠΗΤΟΡΙΚΟΙ λύοντες φασιν· ὅτι φι-
λάγθρωπον ὄν τὸ ΘΕΙΟΝ ἐβέλετο παιδεῦσαι τὰς ΕΛΛΗ-
ΝΑΣ

mean to insinuate that *Apollo* was so kind to the *Greeks*, as to give them warning of what he designed to inflict upon them, by first sending the Pestilence among the *Mules* and *Dogs*; and it is still more probable the reason why the Poet chose to fix the Distemper first upon these animals was no other than because they were of particular use in the *Græcian* Camp, tho' not of immediate necessity, as some others were, to their support. But though the *Scholiast* espouses the *Natural* reason for this Fact, as the *Truest* and most *Philosophical*, yet the *Moral* one does not want the patronage of a celebrated *Critick* of our

ΝΑΣ κὶ μὴ παντάπασιν ὑπολέσαι· κὶ διὰ τὸτο πρῶτον
 ἀπὸ τῶ ποιέτων ζώων ἤρξατο μετένοιαν πῆς ἀμαρτάνουσι
 διδές οἱ δε ΑΛΗΘΕΣΤΕΡΟΝ κὶ ΦΙΛΟΣΟΦΩΤΕΡΟΝ
 λύοντες φάσιν, ὅτι ἅπας μὲ λοιμὸς ἀπὸ ἐκφυλογένεως γίγνε-
 ται γῆθεν ἀναφορέμωθ' ἕξ ἀναδυμιάπως· διὰ κὶ τῆ Ἀπόλ-
 λωνα φάσιν αἶπον ἐπὶ ὁ αὐτὸς εἶ) λέγεται τῷ ἡλίῳ τῷ κρ-
 ταφλέροντι τῆ γῆν· ἐκ γῆς ὃ μίσημένης τῆ νόσου ἀνασκαίον τὰ
 κύναις πρῶτον ἠδ' ὕδρ' τῆ βλάβης ὅτι τε κὶ αἰδητικῶτερον εἶσι
 τὰ ΑΛΟΓΑ ΖΟΑ φύσει τῶ ἈΝΘΡΩΠΩΝ κὶ ὅτι κἄτω
 κεύουσι πρὸς τὴν γῆν κὶ ἀνιχνεύουσι τὰ ὃ ΗΜΙΟΝΟΥΣ ἔ
 διὰ τὸ κἄτω νέουσι ἀλλὰ τὸ ἐκ διαφόρων σωματῶν εἰληχέ-
 ναι τῶ γένεσιν. Πάν γ' ΕΥΔΙΑΦΘΑΡΤΟΝ πιστόν·
Scholiast. in *Homerum*.

our times. For the famous Mr. *Dacier*, in his notes on *Aristotle's Art of Poetry* has not scrupled to assert the *Fineness* of this Remark, as being consonant to God's method of punishing the *Ægyptians*. It will be time enough to examine the solidity of these reasons, when we are assured of *Homer's Fact*; whose sole Authority and Character, as I before observed of *Virgil*, are not sufficient to establish a point, which is contradicted by the Universal Experience of both the *Antients* and *Moderms*, in every *Plague* since his time. In the mean while I shall only observe that nothing can be reasonably inferred in favour of the opinion that This is the usual method of God's sending *Plagues* among Men from his peculiar manner of doing it among the *Ægyptians*: For surely the *extraordinary* Providence exercised by Him throughout his whole Dealings between *Them* and the *Israelites* is a very unfit measure of his *ordinary* Providence over Mankind in general. Besides, if by God's method of punishing the *Ægyptians* be meant that he first sent the *Plague*

to

to Brutes and then to Men, the fact is not true. For the *Plague of Boils* as we translate it, which is hinted at, was most evidently different in *Species* from the *Murrain* among the Beasts, as appears from this single circumstance, that there is not the least hint of its *mortality*; which we know is inseparable from the latter. And as to the order in which these different kinds of punishment were sent to the *Ægyptians*, it is plain God's design in That was not to admonish them of his Purpose to send the *Plague*, properly so called among them, because he did not do it afterwards, when he found his other punishments ineffectual; on the contrary he still continued to punish them by similar methods, such as the *Hail*, the *Locusts* and the *Darkness*. But to return to the Testimony of the *Ancients* concerning the *equal* power of the *Plague* over *Men* and *Brutes*.

PERHAPS, it may be said, tho' the *Poets* are not to be credited in so serious an affair, yet the Testimony of such a grave and eminent

nent Historian as *Livy* concerning the equal power of the *Plague* over Man and Beast cannot reasonably be rejected ; and He affirms, that the same *Plague* was three times fatal to Both in *Italy* ; on the first of which occasions he expressly says, *Forte annus pestilens erat Urbi Agrisque, nec Homi- nibus magis quàm Pecori* * ; on the second, He asserts, *Magna fuit clades in urbe, agrisque promiscuè Hominum pecorumque perniciè acceptâ* † ; and on the third, He affirms, *Pestilentia quæ priore anno in Boves ingruerat, eo verterat in Homines* ‖. To this I reply, that every one of these Facts related by *Livy* are said to have happened at a great distance from the Age wherein the Historian lived ; by which means they could not fail to be loaded by a People so devoted to Superstition as the *Romans*, with much falsehood and aggravation ; and as they were handed down to him, the Historian has delivered them in like manner as he has done the rest of his innumerable *Prodigies*.

This

* Dec. I. Lib. III.

† Dec. I. Lib IV.

‖ Dec. V. Lib. I.

This we know to be so in regard, to the last of the three cases, which happened nearest the Historian's time; for he tells us in the very same confident phrase, wherein he speaks of this *Plague* (*satis constabat*) that to accompany it there happened a great number of *Prodigies*, such as *a Boy born with Two Heads, a Girl born with Teeth, a Rainbow in a serene sky, Three Suns, and many more flames falling through the sky, a Snake with a main speckled with Gold*, all which it must be owned, were enough to produce the last in his Catalogue, that is, make *an Ox speak*. But if this glaring falshood in one part of the *Roman* Historian's account (which he scarce believed any more than we) should not be thought sufficient to emancipate us from the bondage of believing his other *Two Facts*, concerning the equal power of the *Plague* over Man and Beast, which are no less contradicted by all Modern Experience, there are still at least two possible ways of accounting for the principal thing implied in them, *viz.* the *equal Mortality of Men, and Brutes*

supposed to have happened in those times of Sickness, without recurring to the supposition that it was occasioned by the same *specifick pestilential* Distemper. For in the two former cases the great Destruction of the Cattle might in its consequences occasion a great mortality among our *Species*, because, as *Vegetius* observes, in those countries where they use Oxen to till the ground, mankind cannot well be supported without them ; so that a general Destruction of them joined to the frequent Irruptions of the Neighbouring People, which any Domestick Calamity always made them liable to, might easily occasion either an absolute Famine, or such an *epidemical* Disease as always arises from a general bad Diet. Or these Distempers might possibly be of That kind, which we call *Intercurrent* or *Sporadic*, proceeding from such a manifest Intemperature of the *Air* as might affect every Animal, whose Health depended on a different constitution of it ; in which case there is no reason to suppose any *pestilential Contagion*, but only an excess of some manifest

manifest quality of the *Atmosphere*; which excess might possibly then be great enough to hurt more Animals than those of one *Species*. Either of these circumstances then might possibly have been the case in the two former Distempers: But however possible this might be with regard to the two former, we have a very strong proof in the Historian's own account of this last Distemper, that it was no real *Pestilence*. For he tells us “ that few
 “ People survived the 7th day; but such
 “ as did so fell into some Distemper of
 “ long Duration, which was for the most
 “ part a *Quartan**: A circumstance so entirely foreign to the nature of the *Plague* that it cannot but at first sight convince any one the least conversant in the History of That Distemper, that this which *Livy* relates to have ended in an *Ague* could never be of That *Species*. But

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Pesti-

* *In morbos qui inciderant septimum diem haud facile superabunt: Qui superavit, longinquo maximè Quartana implicabantur morbo. Liv. Lib. XLI.*

Pestilence, as he calls it, was *not*, so we may from another part of it reasonably conjecture of what sort it *was*; for he tells us “ the *Slaves* chiefly died of it.” * From whence it appears probable that the Distemper was occasioned by the Badness of their Diet, which was almost a certain consequence of the scarcity of good Corn. For whenever such a scarcity happened, who were so likely to suffer by it as the lowest of the People? And when was such a Scarcity so likely to happen as after a neglect of culture? And when was a neglect of culture so much to be expected as after a great destruction of the Cattle, † which were so much employed in the Methods of Cultivation; and a long confinement both of Them and the People within the City ||? A very extraordinary Fact, which

* *Servitia maximè moriebantur.* Ibid.

† Sine quibus (sc. *Bobus*) nec Terra excoli nec humanum genus sustentari ullatenus poterunt.

Veget. LIB. III.

|| This was so common a consequence of Sickness among the *Roman* People even when it was not very mortal,

which happened in *Europe* since the beginning of this very century, and in a nation justly famed for its proficiency in *natural Knowledge*, will serve to shew the possibility of what we here alledge, that very *epidemical* and *mortal* Distempers may arise from a depravity of Corn, which may certainly be occasioned as well by a defect in the proper methods of culture, as by an Intemperature of the Seasons. The case is worth relating, and is as follows. In the year 1710 a great number of *French* Peasants who lived chiefly upon a vitiated Rye, called from its resemblance to the *Spurs* of a Cock *Ergot* *, (which is

mortal, that *Livy* expressly says neglect of culture and scarcity of Corn were the usual effects of *epidemical* Sickness. *Defuncta civitate plurimorum morbis per paucis funeribus Pestilentem annum inopia frugum neglecto cultu agrorum, ut plerumque fit, excepit.* And this neglect of culture might *sometimes* be the effect of Sickness among the *Cattle*, as it was here of Sickness among *Men*: In which case it would be the *Cause* of an *Epidemical* Sickness among *Men*, as it is here said to have been the *Effect* of it. Another thing worth remarking in this Passage is, that the word *Pestilent* is used in a Sense of greater latitude than its original one; which extended signification of it was not unusual, as we shall see in these *Considerations*, among the *Greek* and *Roman* Authors.

* *On est persuadé avec assez de vrai-semblance que cette étrange maladie qui n'attaque gueres que les pauvres*

is almost always the effect of a wet season, and often merely of sowing that grain in *March* instead of *Autumn*) were seized with a *Gangræne* of their Legs, which always began at their Toes; which strange malady would probably have become as extensive in the country among the lower people as a *Plague*, if the commendable vigilance of That Government had not exerted itself with its usual vigour in the prevention of such a publick calamity. Hence it appears how possible it is for a very *epidemical* and *mortal* Distemper to arise from a bad Diet, and also how likely the lowest of the People are to suffer most from such a cause. It is true indeed the *Roman* Historian, after he has told us the *Slaves* chiefly died of what he calls the *Plague*, adds; *Ne liberorum quidem funeribus Libitina sufficiebat. That the better sort of People also died in such numbers that it was not possible to bury even All*
of

vres gens, & dans les années de cherté vient de la mauvaise nourriture, & principalement d'un certain Bled noir & cornu, qu'on appelle Ergot, parce qu' Effectivement il approche de la figure d'un Ergot de Coq.

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of them. But though in a general scarcity of grain the Bad will always fall to the share of the poorer sort of people *first*, yet the Rich must likewise suffer by the same means when all the good is consumed, which will soon happen in every such general Scarcity *. But what if after all we should allow this last Distemper related by *Livy* to have been a real *Pestilence*? it will not follow from thence that it was the same *specifick* Distemper which he says raged the year before among the *Horned Cattle*, which is the point I am concerned to disprove: For it is very possible that the *Plague* peculiar to the *Cattle* might have broke out the year before the *Plague* which is peculiar to *Man*; that is, they might have been thus successively brought into *Italy*.

BUT perhaps it will be said that *Dionysius* of *Halicarnassus*, who was a Philosopher

* *Victui sæpe debentur causæ illæ communes Februm; quod in urbibus obsessis toties potuit, dum dura necessitas Divites æquè ac pauperes premit.* Van Swieten *Comment.* in *Boerhaave*, Vol. II. p. 28, &c.

pher as well as an Historian, sufficiently confirms the Testimony of *Livy* concerning this matter, by telling us that within the first 312 years from the building of *Rome* (*viz.* as far as the Remains of his History extend) the *Plague* was often equally fatal to *Men* and *Brutes*. To this I reply; As much a Philosopher as *Dionysius* was, He as well as every other Historian, who wrote of the remotest times of the *Roman* affairs, was obliged to derive his materials from the same obscure Original, *viz.* the Traditions of a very superstitious People; who never failed to load every natural event with much Wonder and Prodigy: So that the Testimony of a hundred writers in such a point are of no more weight than That of one, since the credibility of them all depends solely upon one and the same foundation. That in this point they wrote either *to* or *from* the superstition of That people is evident from hence, that these writers never mention a *Plague* without some terrible prodigies either to introduce or attend it; and as they rarely relate the breaking out of any *Plague* without referring the cause
of

of it to the Gods, so they scarce ever impute the ceasing of any to any other means than some *ceremonial* or *judicial* Expiation of some *publick* Immorality. We have a remarkable instance of the Success of the latter method of Expiation in a case where the *Greek* Historian very seriously tells us the former had failed. I shall transcribe the whole passage, after having observed to the candid Reader that the Historian seems desirous to prepare us for the marvellous Story in his Introduction to it, by acquainting us “ that in the beginning of this year “ the city was more than ordinarily superstitious, which Disposition the *Soothsayers* and *Ministers of Religion* did not “ fail to improve by assuring the people “ that all these signs and wonders were “ sent by the Gods as so many admonitions of their approaching vengeance “ for their neglect of a *pure* and *holy* administration of their *Religious Rites* and “ *Ceremonies.*” After this introduction the Historian adds “ that not long after, “ *viz.* in this very year *U. C.* 282 a Di-

O “ stemper

“ stemper, *which was called Pestilential* *,
 “ happened to Women only, and chiefly
 “ to those who were with child ; *so pun-*
 “ *ctual and exact was this Plague in the*
 “ *execution of the purpose for which it was*
 “ *sent.* Greater numbers of these unhap-
 “ py Women were found to die than ever
 “ did before ; and none of the usual Sup-
 “ plications at the Altar, nor any expiatory
 “ Rites either publick or private were able
 “ to procure any abatement of this sin-
 “ gular calamity. At last a *Slave* gave
 “ information to those, who presided over
 “ the

* The Historian's phrase in this place is remarkably equivocal ; for it may either mean that the Distemper was of *That kind which is called Pestilential*, or that it was called *Pestilential* by those who had delivered an account of it to those times ; the former of which interpretations implies no Diffidence of its being a real Pestilence, the latter a great deal. I am inclined to believe the Historian designed to express the latter Sense ; for as he very rarely uses the word λοιμὸν *Pestilence*, to signify the *Plague*, but almost always calls it νόσος λοιμικὴ the *Pestilential Disease*, why should we imagine he would add the participle καλέσμενον (*called*) in this single place, unless he meant to abate the positiveness of the phrase, which he employs on every other occasion without any such participle ?

“ the Affairs of Religion, that *Urbina*,
 “ one of the *Vestal* Virgins, had polluted
 “ her sacred office by continuing to offi-
 “ ciate in it after she had lost her *Vir-*
 “ *ginity* ;” intimating by this account *that*
the SEX, and especially That part of it
which was become pregnant without any
offence to their Consciences were punished
 by this Plague for her crime. “ Where-
 “ upon the Magistrates immediately re-
 “ moved her from her sacred office, and
 “ having legally convicted her of her
 “ crime, they first severely whipt her, and
 “ then after having exposed her person
 “ through the whole city, buried her
 “ alive. Soon afterwards one of her Ac-
 “ complices in this profane kind of For-
 “ nication laid violent hands on himself,
 “ and another of them being prosecuted
 “ by the *Overseers* of Religion was first
 “ whipt as a Slave, and then put to death:
 “ After which publick attonement of so
 “ heinous a violation of Religion the
 “ Distemper (says this authentick Histo-
 “ rian) which had made such Havock

“ among the poor Women IMMEDIATELY CEASED.” *

BUT perhaps it may still be said that though all this Detail of the Superstition of the *Greeks* and *Romans* proves they were mistaken in their accounts of several things relating to *Plagues*, yet it by no means proves

* Ἐν ἀρχῇ ᾗ τὸ ἔτος ὀφείας πνός ἢ πόλις ἐπληρώθη, καὶ φόβος δαιμονίας, τεράτων τε καὶ σημείων πολλῶν γινομένων. Καὶ οἱ τε μάντις ἅπαντες, καὶ οἱ τῶν ἱερῶν ἐξηγηταί, χόλος δαιμονίας μνησμάτα εἶ) τὰ γινόμενα ἀπέφαινον, ἱερῶν πινῶν ἐχ' ὁσίων ἐσὲ καθαρώς ὀπιτελευμένων· καὶ ἐ μεί' ἐ πολὺ νόσος ἐπέσκηψεν εἰς τὰς γυναῖκας ΚΑΛΟΤΜΕΝΗ ΛΟΙΜΙΚΗ, καὶ θάνατος ὅτι ἔπω φέρτερον, μάλιστα εἰς τὰς ΕΓΚΤΜΟΝΑΣ ὡμοποκῆσαι τε γὰρ καὶ νεκρὰ τίκτωσαι συναπέθνησκον τῆς βρέφει· καὶ ἔτε λιτανεῖαι φέρει καὶ βωμοῖς γινόμενα θεῶν, ἔτε καθάρθῃσι θυσίαι αὐαί τε πόλεως καὶ οἰκῶν ἰδίων ὀπιτελέμενα παῦλαν αὐταῖς ἐφέρου τῶν κακῶν ἐν ποιότητι ᾗ συμφορᾷ τῆ πόλεως ἔσῃς, τῆς ἐξηγηταῖς τῶν ἱερῶν γίνεται μήνυσις ὑπὸ δέλεος πνός, ὅπ μίαι τῶν ἱεροποιῶν παρθέτων τῶν φύλακισσῶν τὸ ἀθάνατον πῦρ ΟΡΒΙΝΙΑ τῆ παρθενίαν ἀπόλωλε, καὶ τὰ ἱερά θυει τὰ τῆ πόλεως ἐκ ἔσα καθαρά· καὶ κείνοι μεταστήσαντες αὐτῶν ἀπὸ τῶν ἱερῶν, καὶ φερόντες δίκλῳ, ἐπειδὴ καταφανὴς ἐχέτο ἐλεγχθεῖσα ῥαβδοῖς τε ἐμασίγῳσαν, καὶ πομπώσαντες διὰ τῆ πόλεως ζῶσαν κατάρυξαν τῆ ᾗ διὰ προξάνων πὴν ἀνοσίαν φερόν ὁ μὲ ἔτερον ἑαυτὸν διεχειρίσατο, τῆ ᾗ ἔτερον οἱ τῶν ἱερῶν ὀπίσκοποι συλαβόντες ἐν ἀγορᾷ μάλιστα αἰκίσαμφοι καθάρθῃ ἀνδράποδον, ἀπέκλειαν ἢ μὲ ἔν νόσος ἢ τῆς γυναῖξὶ κατασκήψασα, καὶ ὁ πολὺς αὐτῶν φόβος μὲ τῆ τοῦ ἔργου ΕΠΙΑΥΣΑΤΟ ΕΥΘΥΣ.

Dionys. Halicarnass. Lib. IX. Hudson edit. pag.

571. Vol. I.

proves that they were not able to know the Truth of a mere matter of Fact, such as that the *Plague* was equally fatal to *Men* and *Brutes*; and if so, why should we have any doubt concerning their evidence, wherein they so universally concur? To this I reply; This Objection has been sufficiently obviated before, and therefore I need say little in confirmation of the Answer already given to it. I will only observe in regard to the early times from whence the Historians drew their accounts of this matter, that it is not easy to imagine how susceptible Mens Minds are of false Impressions in a time of any general calamity; neither is it easy to conceive how far these impressions will contribute to pervert their Judgment concerning mere ~~matters~~ *matter* of Fact. Many Instances of this kind might be produced out of That Vast Fund of human Errors and Foibles wherewith every Age has abounded; but it will be sufficient to lay one of these before the candid Reader, which is not only exactly in point, but has likewise fallen within the compass of our own Experience. The Fact

Fact I mean has happened in the very case of the present Distemper among the Cattle; concerning which within these two years I remember to have read these two accounts in our publick *News-Papers*, that the *same* Distemper was fatal to the *Men* in one County and to the *Geese* in another. Let us now suppose a Thing which is far from being impossible, *viz.* that these strange anecdotes should happen to survive any account of this Distemper, which has contradicted ~~its~~ *their* Assertions; may we not in such a case reasonably expect that an Historian, who three or four centuries hence shall write of these times with two such curious papers in his possession, will confidently deliver the Fact to Posterity with this irresistible proof of its notoriety, that it was related in the daily Registers of the Transactions of our Age, and never met with any contradiction? May we not presume in these circumstances that the greatest Abilities of succeeding Writers might be imposed on by such an Evidence? and that Error and Nonsense by such an accident might hereafter gain a compleat Triumph over Truth
and

and Reason? Where is the wonder then that Historians, who fetch many of their materials from no better records, and whose purpose it was not to rectify the Faith of the times they wrote in, should often relate Things concerning the Operations of Nature, which never existed but in the Imaginations of their Ancestors? and Those too, among other Things, such as *Portents* and *Prodigies*, which are confessedly of no better Original?

HENCE we see how little the accounts either of the ancient Poets or Historians concerning the equal Fatality of the *Plague* to Men and Brutes are to be depended on. If indeed we should admit a Fact reported by *Diemerbroek*, and for which he produces no other proof than the Authority of *Avicen*, we should bring the Poets and Historians out of all their Difficulties at once. The Fact pretended is, that the same *specifick* poison infects *Vegetables* as well as *Animals*; so that all kinds of Food, by which Animals are sustained, being universally vitiated by the *pestilential* particles contained in them, must necessarily infect

infect All sorts of Animals, which feed on them. But to say nothing here of what has been before proved, that every kind of *pestilential* Substance taken into the Stomachs of Animals of different *Species* will not hurt them All ; nor of what has lately been experienced abroad, that the flesh of the Cattle killed by this very Distemper may be eaten with great safety by our own *Species* ; not to insist I say upon these particulars, I would observe that this notion of *Avicen's* is founded on the old Notion of the general Infection of the Air, and evidently appears to be copied like all the rest from the Poetical relation of *pestilential Contagion*, wherein the Universality of its Influence is so favourite a point on account of its affording such a field for Description, that the Poets never fail to affirm it sometimes extends to every sort of Food in use among Animals.

BUT there yet remains an Objection to my Opinion, that No animal is ever hurt in the ordinary way of *Infection* but by That *specifick Contagion*, which is peculiar
to

to its *Species* : And this Objection is to be met with in only one of all the Ancient Writers on the Distempers of *Brutes*, viz. *Vegetius*, who tells us, “ there is a *Contagious* Distemper, which though called “ by different names is the *same*, and is “ equally fatal to *Oxen* and *Horses* *.” In answer to this it is sufficient to refer the candid Reader to what we have before alleged against the Testimony of the *Poets* and *Historians* in this point, viz. That They had no precise notions of *contagious* Distempers ; which though it may at first sight appear more wonderful in those who treat professedly on the Subject, will be found nevertheless true upon examination. There cannot be a stronger proof of their imperfect knowledge of the differences of such Diseases, than their absurd opinion concerning the Original of this very *Pestilence* ; some of them affirming that it

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* Nam *Equinum* genus morbus qui appellatur *malleus*, diverso genere passionum emigrans per plures *contagione* consumit. *Boves* quoque *idem* morbus interficit sed a diversis diverso nomine vocatur.

Veget. LIB. III. CAP. II.

arose from the Cattle's accidental eating of *Swine's Dung* * ; others requiring another circumstance in the production of it, *viz.* that the *Swine* whose Dung had this extraordinary effect should be first sick it self, before its excrement could generate so mortal a Sickness in other Animals †. Nor is it I say so much to be wondered at that the ancient Naturalists should have such imperfect notions of this part of their Subject, since nothing but a long habit of diligently observing the Nature and Course of Diseases can qualify a Man to distinguish their *Pathognomonick* Signs from their accidental Symptoms, and consequently to know their *Genera* and *Species* ; for want of which accurate knowledge they would be obliged to class them according to their most obvious Similarities, and would therefore reckon all very mortal

* Si autem *porcinum stercus* Bos devoraverit statim *Pestilentiam* Contagionis illius *Mallei* sustinet morbi.

Veget. ibid.

† Et id præcipuè quod egerit *Sus ægra* *Pestilentiam* facere valet. *Columell. LIB. VI. CAP. V.*

tal Diseases of the same *Species*; which they called by the common name of *Pestilence* *. This way of denominating certain Diseases was very natural to Men who had not observed their *specifick* Differences, and sufficiently accounts for their mistakes concerning this matter. It is not without good reason therefore that one of the most celebrated modern Physicians has made great difference between the Veracity and the Judgment of these ancient Naturalists. The Writer I mean is the learned *Fernelius*;

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who

* Thus *Livy* calls many Diseases so, which were manifestly of a different *Species*, as we have shewn; nay, he does not scruple, as we have before remarked, to give That name to some which he owns were not very fatal. *Defuncta civitate plurimorum morbis, perpaucis funeribus pestilentem annum inopia frugum excepit.* So likewise in another place he calls an *epidemic* Disease a *grievous Pestilence*, though he owns it was remarkable rather for ending in chronical Disorders than for its being mortal. Nor have the *Historians* and *Naturalists* only given the Name of *Pestilence* to such Diseases, as were specifically different from That, which is now known by the Name of the *Plague*; but even the

who in the passage before referred to in these *Considerations*, asserts the frequency of an excessive mortality among *Brutes* on their Authority, thinking very truly that in this they might well be relied on, as it is a matter of mere observation; but he very justly differs from them in his Judgment concerning the several distinct natures of these excessively mortal Distempers, which they justly called *Plagues*; and agreeably to the superior knowledge of the *Specifick* Differences of *Pestilences*, so far
as

the Author of the Book *περὶ φουσῶν* (who was a *Physician* at least though not *Hippocrates*, to whom it is ascribed) in his general division of Fevers into two sorts, *viz.* Those, which he supposes to be caused by the Air, and Those, which arise from bad Diet, call's the former general class by the *specifick* name of ΛΟΙΜΟΣ, *Pestilence*, for what reason I cannot imagine except because That *Species* of Distemper is the most eminent of all that are ranked under That *Genus* of *Epidemicks*, which is supposed to proceed from the Air. But such a Figure of Speech, though allowable in *Rhetorick*, has no right to a Place in any kind of *Philosophical* writing. Ἔστι ἡ διατὰ ἐθνεα πνευμάτων, ὁ μὲν κοινὸς ἅπασιν καλεόμενος ΛΟΙΜΟΣ, ὁ δὲ διατὰ πονηρῶν διαταῶν πονηρῶς διατειρόμενοισι γινόμενος.
Lib. *περὶ φουσῶν*, Cap. III.
Charter. Edit.

as they are distinguishable, in which these latter Ages excel the Ancients, he pronounces each of them to have been confined to some *one Species* of Animals*.

BUT perhaps it may still be said by those who oppose This opinion, that although I will not yield to profane evidence in this matter,

* I cannot help being surprized that there should be no mention of the *Plague* among any *Species* of *Brutes* besides *Sheep* and *Goats* in any part of the collection of *Greek Writers de Re Rusticâ*, ascribed to *Cassianus Bassus*. The only Authors among these that have taken any notice of this matter are the *Quintilii*, viz. *Gordianus* and *Maximus*, who have recommended a preservative against the *Pestilence* among *Sheep* and *Goats*. The reason for this general omission might probably be an opinion that, as the *Pestilence (Pestis) properly* so called was esteemed absolutely incurable, it could not with any propriety be put into a collection, of which the *Cures* make an essential part. If to this it be objected; why then is the *Pestilence* among *Sheep* and *Goats* mentioned, since a Real *Pestilence* among Those *Species* of Animals is no more curable than any other? I answer; it is probable the word (*Pestis*) *Pestilence*, was there understood by the *Collector* not in its *proper* Sense, but in the wide one wherein I have shewn it to have been frequently applied by the Ancient Naturalists as well as Historians. And this is the more probable, because it is certain that Those *Species* of Animals are liable to some Diseases from their *Diet*, which resemble a *Pestilence* in the Excess of their *Mortality*, but which are much oftner capable of a *Cure*.

matter, yet surely I cannot resist the Testimony of a celebrated Father of the Church, who has expressly testified against *Both* my Opinions, as well *That of the Air's suffering no corruption, as That of the Plague's affecting but one Species in the usual mode of Infection.* The Father I mean is St. *Jerom*, who gives us the following account. “ We have seen, says he, in our
 “ Days swarms of Locusts over the Land
 “ of *Judæa*, which were afterwards,
 “ through the Mercy of God, driven by
 “ the Wind into the *first* and *last* (that is,
 “ as St. *Jerom* himself explains them, into
 “ the *Eastern* and *Western*) Sea. And
 “ when the Shores of both Seas were
 “ filled with heaps of dead *Locusts*, the
 “ Putrefaction and Stench of them were
 “ noxious to such a degree as to *corrupt*
 “ the Air, and produce a Pestilence
 “ both among Men and some kinds of
 “ Brutes.” *. To which I answer; I
 “ readily

* Etiam nostris temporibus vidimus agmina *Locustarum* terram texisse *Judæam*, quæ postea misericordiâ Domini vento surgente in mare *primum & novissimum*

readily believe the Fact so far as it was cognizable by St. *Jerom*, viz. that there was a Sickness in his time which was fatal not only to Men, but also to some *Species* of Brutes: But as to the Air's being *corrupted*, or the Suffering of the Men and the Brutes by the *same Specifick* Distemper, Those are points which This Father could not so well know, and I cannot so readily assent to. If this Sickness affected only one *Species* of Brutes it might possibly be a *Pestilence* either transferred from some other Country, or generated in this Hot one (which is much sheltered from Winds) by this high degree of *Animal Putrefaction*. But if it was a Distemper which seized more than one *Species* it probably arose from a Defect both of *Corn* and

vissimum præcipitatæ sunt. Cumque littora utriusque maris acervis mortuarum *Locustorum*, quas aquæ evomuerant, implerentur, *Putredo* earum & *Fætor* in tantum noxius fuit, ut aerem quoque *corrumperet* & *Pestilentia* tam *jumentorum* quàm *Hominum* giganeretur.

Hieronym. Comment.
in *Joel*. CAP. II.

and *Herbage* occasioned by the *Locusts* before they were driven into the Sea.

IF the former was the Case, I think one may reasonably account for the Sicknefs of our *Species*, by supposing it to have been, as I observed it probably was among the *Romans*, a consequence of the Destruction among the Cattle. But the latter Supposition is the most probable from the word *Jumentum* made use of by St. *Jerom*, which not only signifies more Species of Brutes than one, but likewise implies no other than such as were likely to suffer from the Ravage of the *Locusts*, viz. all such as are employed by Man in some kind of labour; All which live upon *Corn* and *Herbage*.

AFTER all then it appears, that neither the Testimonies of the Ancients, nor the Relations of the Moderns are able to prove the equal Power of the *Plague* over *Men* and *Beast*. And if to what has been said we add, that neither in the *Plague* of *Justinian's* time, nor in the last which afflicted

afflicted this Kingdom, no such Power over *Brutes* is pretended, I flatter myself there will be sufficient evidence of the truth of my Opinion, that *Brutes* are not liable to be infected by the *Plague* in the same way with Men. Upon the whole I think we may safely conclude, that tho' the *Plague* be an *absolute* Poison to the *Human* Species; yet it is only a *relative* one to *every other*: that is, though it be communicable to the former in every mode of *Infection*, yet it is only hurtful in certain modes of communication to the latter. So that whenever any writer affirms it is equally fatal to all sorts of Animals, he must be understood according to the restrictions we contend for.

BUT it is time to relieve the Reader from so long an Engagement to one Point; which I have dwelt the longer on, that I might shew there is neither *any Natural* nor *Moral* connection between the *Pests* of *Brutes*, and That of our *Species*, and consequently that the Apprehensions of the latter succeeding the former, (which seem to have originally risen from the blind

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obedience anciently paid to the Authority of *Homer*,) are groundless and *chimerical*. In a word, *Homer*, in this point, wrote like a Man of Sense, though his Commentators have not done so. His Business was to describe, not a natural disease, but a divine Punishment for violated religion; and very wisely, to distinguish it from a common Pestilence, he adds a circumstance, that never happens in such. His Commentators, blind to his purpose, strain their brains to justify it on the footing of an usual fact; and will not allow the Poet his *Physical* fiction, though for the sake of the *Morality* he would convey under it.

LET us now recapitulate the evidence for our opinion of the *Pestilential* Nature of the present Distemper. So universal a Notion among the Ancients concerning the existence of a *Pestilential* Distemper incident to this *Species* of Cattle, supported likewise by universal modern Experience, cannot but oblige us to allow there have been such in almost All times as well as among Men; so that the next question to be

be enquired into, seems to be, whether the present Distemper has the same general signs, which have been imputed to such *Pestilential* ones as we read of. Let us see then what are the signs which are common to All such; and the Indisputable ones are only *Two*, to wit, *their most excessive Mortality*, and the *Rapidity of their Progress*, among the Individuals of That *Species* which any one of them is adapted to infect.

WE shall see presently whether these two general signs belong to the present Distemper; but first let us inquire whether from them we may not safely infer *Pestilential Contagion*?

IN regard then to the first of these signs, it may be truly affirmed that there is no instance in the whole History of *Physick*, of the *most excessive Mortality* of any Distemper, which was not ascribed by *Physicians* to *Pestilential Contagion*. And this must be owned to have been done not without very good reason, if every other

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assign-

assignable cause will not so well account for this terrible effect. Now All the other assignable causes are *Air* and *Diet*: But that the former of these alone never produces such *Mortality* is evident from what has been already said concerning the Exemption of the *Air* from *Infection*; from whence it appears that Creatures, which live within the smallest distance from the places where this *Mortality* rages, provided there be no communication of any thing but *Air*, shall entirely escape it; nay some who live in the midst of it will not be at all affected by it. This is so indisputable a Fact that we need not make use of the Testimony of *Evagrius Epiphaniensis* (a writer, as *Casaubon* justly observes in his answer to Cardinal *Baronius*, too much addicted to the *Fabulous*) to support it; who avers that in the great *Plague* which happened in his time, in the City of *Antioch*, several Families died of the Distemper, whilst the greatest Part of the *Citizens* remained quite unaffected by it*. Neither does the latter assignable cause, namely, *Diet*, any better account

* *Hist. Eccles. Cap. 28.*

account for this *excessive Mortality*. For these excessively mortal Distempers equally destroy all creatures of the same *Species*, however differently *dieted*. We cannot therefore but subscribe to the general opinion concerning the principal cause of such *excessive Mortality*, and acquiesce in their judgment, who have imputed this effect to *Pestilential Contagion*. It only remains then to enquire, whether the confessed mortality of the present Distemper has not been always excessive in every condition of *Air* and *Diet* for a long time after its first breaking out? And as a proof that it has been so, I need only appeal to those, who have observed its mortality in very different countries and very different seasons. The truth of this Fact would have been still more apparent but for the early care of the Legislature, which by enabling distant Countries to guard against the approach of suspected Cattle, did thereby for a long time prevent the *infection* from being carried into many different grounds of very different degrees of Fertility. But notwithstanding all their prudence it has now insinuated itself into
 very

very distant countries and very different soils, where its *Pestilential Contagion* is even still sufficiently evident.

THE first general sign of a *Pestilential Distemper* having been made sufficiently plain, it is fit we should examine the other, to wit, the *Rapidity of its Progress*, and see *first*, whether it can be accounted for on any other supposition, than That of *Pestilential Contagion*? and *secondly* whether This sign also is applicable to the Distemper among the Cattle?

As to the first Question, the same kind of Argument, which proved the *excessive Mortality* of Distempers supposed *Pestilential* could not be accounted for by the other assignable causes, namely, *Air* and *Diet*, will likewise prove the *Rapidity of their Progress* cannot; which is, that such Distempers fly through all Countries of the most different Climates, and spread equally among all kinds of Creatures of the same *Species*, however differently *dieted*. This Argument alone is sufficient to prove the

the *negative* side of the *first* Question ; so that we may proceed directly to the proof of the *affirmative* side of the *second* ; for which it will be sufficient also to appeal to those who have observed it from its first breaking out to this time ; for I am content to rest the proof of my assertion that *Both* these signs are applicable to this Distemper entirely on their Testimony.

HAVING endeavoured to explain the general Nature of *Pestilential Contagion*, and laid before the candid Reader my reasons for imputing it to the present Distemper, it is fit I should say something about the present difficulty of checking its progress, and the present Facility of curing it ; the *Two* points concerning which I professed myself in the beginning of these *Considerations* to have once entertained a different Opinion.

IN regard to the former of these Points a late Ingenious Writer before-mentioned * has proposed the only effectual Method,

* Vid. Essay on *Pestilential Contagion*.

thod, if indeed any thing can be effectual in the present diffusiveness of the *Contagion*; which I think there is too much reason to doubt. For if we consider how long it has now raged among us, and how ineffectual every Method enjoined by the Legislature to restrain the Communication between the Infected and the Sound has for a long time been, we cannot but think it probable that some portions of *Infection* are now dispersed in an infinite number of places in this Kingdom, and as long as any of these *infectious Portions* remain undestroyed (which in some that are lodged in substances very retentive of Infection, such as *Hair, Wool, &c.* must certainly be a long time) so long it will be in the power of every Animal in whose Cloaths or Hair they at present lye concealed to propagate them whenever they come near That *Species* of Animals, which alone they are adapted to infect. And when the occasions of spreading a Disease are become thus extensive what can a Government do? Be it ever so disposed to restrain any suspicious commerce between
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its subjects it cannot prevent Danger where it sees it not ; and be it ever so circum-
spect and vigilant it cannot possibly see
where it is unless it offers some marks of
it self to Men's Senses ; which it certainly
does not but where it meets with its Ob-
ject, the Cattle themselves. Wherever
indeed it actually breaks out, from *thence*
all further occasion of spreading it may be
prevented by the Learned Author's Me-
thod ; but still it may be propagated from
every other place and thing where it con-
tinues unexhausted ; and therefore it must
necessarily be a long time before it be ex-
tinguished *. As to the Method, which
was at first employed to stop the Progress
of the *Infection* in any place where it had
once broke out, *viz.* the indiscriminate
shooting of the sick Cattle, though it was
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* Perhaps it would not a little contribute to the
accomplishment of this difficult purpose to lower the
Hedges and cut up all the superfluous wood in inclo-
sures of a *dry* Soil, by which means not only a freer
communication of Air would be obtained, but like-
wise a greater degree of dryness and purity : And in
marshy and *fenny* inclosures, where infected Cattle
are known to have been, it seems no less useful to
burn wood for some time after they have left them,

at first wisely enjoined by the Legislature, yet I am of opinion, that unless it be always executed upon the very first suspicion of the Distemper's appearance, it never was, nor ever could be effectual. And if nothing can justify the killing a few but the probability arising from thence of saving the rest, what is killing them without such probability but conspiring with the Distemper against the Lives of the whole? But there can be no such probability without a punctual observance of the circumstance above-mentioned, *viz.* a *very early execution* of the Government's order; and what chance there is for such a Compliance in a Country, where we are apt to prize our Liberty *most* when it is *least* useful to us, our fatal experience has already too well informed us. Nor in the present extensiveness of the Contagion can even the most early execution of this Order be always successful; for though it be probable from some experiments lately made that the Cattle do not infect each other till a few days after the very first signs of the Distemper in themselves, yet it is no less probable from other experiments,

ments, as well as the reason of things, that the pastures in which they feed, nay the very High-ways through which they pass, do receive and retain some portions of *Contagion* accidentally brought into them by Animals of different *Species*: So that though they escape it ever so often from each other, by the Care of their Owners, yet they are every hour liable to it from many other accidents. When the Means therefore of communicating the Distemper are become thus numerous, and the Chance for preventing its spreading from That as well as other causes is proportionably lessened, surely it is advisable to apply our Industry to find out the Means of Cure; which is the *second* point concerning which I promised to deliver my Opinion in the beginning of these *Considerations*: And this, if I am not much deceived, the present Mitigation of the Distemper's original Severity has made much more feasible than it was some time ago*. At least I am very sure that the

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* As great havock as the Distemper makes at present, it is very certain that many more Cattle have
for

following simple Method has been attended with great Success in my Neighbourhood, and therefore I cannot help recommending

for this last year and a half recovered than did from its first breaking out to That time. And This is true Both of Those which are treated medically, and of Those which are not. This Difference of Event in regard to the latter cannot be denied to proceed from a different degree of Violence in the Distemper; and I think the same conclusion may be justly drawn in respect of the former, since no method of treatment for some time after its first appearance, (when all kinds were tried,) was able to produce the same Event, which has been frequently observed to follow a punctual compliance with the Method here recommended. Neither is this mitigation of the Distemper's original Violence either contrary to the reason of Things, or to our former Experience in other Distempers, as we may learn from an observation of one of the most faithful as well as able observers that ever lived; whose opinion of this matter so exactly coincides with our present Supposition, that I cannot but offer it to the Learned Reader in his own words.

Porro observandum est, quod Epidemici omnes, ubi primum e Naturæ sinu Emergunt, Exiliuntque, quantum ex eorum Phænomenis licet conjicere, principio magis spirituosò ac subtili videntur inhærescere, quàm ubi jam magis adoleverint, quòque magis ad occasum vergunt, eò magis indies crassi atque humorales fiunt: Etenim quales quales

mending it to the Notice of the Publick,
with this necessary Restriction as to its
Use (lest I should seem to counteract the
Endea-

*quales demum fuerint inimicæ istæ particulæ, quos aeri
intimè permistos Constitutionem Epidemicam formare
opinabimur, omnino par est ut easdem majori agendi
potentiâ, per ea tempora pollere existimemus, quibus
primum eruperint, quàm postquam earum vires
fuerint refractæ. Ita primis mensibus quibus grassa-
batur pestis, nullo ferè non die ejus contagio adflati,
dum in triviis versarentur, inopinantes extincti sunt,
nihil prorsus mali præsentientes; cum ubi morbus
magis adoleverat, neminem nisi febre atque aliis sym-
ptomatis præcedentibus unquam prostravit: Ex quo
abunde conficitur, morbum hunc in ipsis incunabulis
magis efferatum atque acutum fuisse quàm post prin-
cipia licet pauciores primâ acie jugulaverit aucto jam
scilicet quem habebat in humana corpora influxu. In
Dysenteriis pariter, de quibus jam agimus, omnia
universim symptomata atrociora sub primo morbi in-
gressu comparebant; & licet si ad ægrorum nume-
rum respexeris latius indies malum serperet, donec
tandem ad *statum* pervenisset, in quo ex consequenti
plures interibant quam ineunte morbo, symptomata
tamen sub initio sæviebant magis quàm in *statu* ac
multo adhuc magis quàm in declinatione & cæteris
paribus plures pro ægrorum numero*

Ἐλαβε πορφερεῖς θάνατον καὶ μὲν κατὰ τὴν

Sydenham. Cap. 3. Sect. 4.

Endeavours of the Legislature to stop the Progress of the Distemper) that it should be only tried in such places where there are no hopes of accomplishing their most laudable Design.

The Means of CURE.

AS soon as ever the Beast begins to cough or run at the Nose, take from three Pints to three Quarts of Blood from it according to the Size and Strength of the Animal, and the Violence of its Cough, shortness of breathing, or inward heat ; which last Symptom may be judged of from the Degree of Colour in its Urine. The next Day take from one Quart to two from it according to the Degree of the aforesaid Symptoms. The third Day abstain from Bleeding unless the Symptoms should still be very violent, in which Case the Beast ought to be blooded again two Quarts more. If the Animal be blooded on the third Day, it will scarce require it on the fourth ; and then it is generally right to take from a Pint to
a Quart

a Quart on the fifth. But if it does not require it on the third Day, I usually advise a Repetition of the Bleeding from a Pint to a Quart on the fourth and fifth Days. By these means you will have taken from the Generality of Cattle about two Gallons of Blood within the first five days, on which Circumstance the Cure chiefly depends. The Violence of the Inflammation is generally so much abated by this copious and early bleeding, that the Beast is able to entirely subdue the remaining Virulence of it within the Space of fourteen Days, if besides this profuse bleeding its Diet be managed in the following manner. Every three Hours, from Four in the Morning to Ten at Night, the Beast ought to have from three Pints to three Quarts (according to its size) of warm Water-gruel forced down its Throat till the Return of its Disposition to feed, which usually happens about the *seventh* day; from which time to the *15th* it ought to live upon warm Mashs of Bran and Water-gruel taken alternately, unless the Abatement of the Symptoms should dispose

pose the Creature sooner to eat dry Food ; in which Case it may be allowed it in small Quantities now and then instead of Mash ; and in this manner it ought to return gradually to its former use of it. All this time the Beast ought to be kept in a warm House, and to have Plenty of clean Straw to lye on. If the Beast breaks out in Blotches about the fifth or seventh day its Recovery may be depended on ; but a great many do also recover which have no such *critical* Eruptions. This is the Method which has succeeded so well for the last Year in my Neighbourhood ; and I hope it will not be thought the less efficacious for its Simplicity. I did the Year before advise Rowelling in the Neck after the second Bleeding, and likewise add some Medicines to the Bleeding then prescribed, such as the most rational Theory of the Distemper then suggested to me, as *Salt Petre, Honey, Liquorice,* and *Rhubarb*, which succeeded very well ; but as the giving of Medicines afforded the Country People an Opportunity of mixing their *Nostrums* with them ; and this
simpler

simpler method was found to succeed as well, I thought it most adviseable to give this the Preference. There may undoubtedly be some Occasions wherein it may be useful, and even necessary to add some Medicines; and whoever has a mind to use them properly may find them very judiciously adapted to the chief Indications of Cure in a late Pamphlet stiled *An Essay to fix the Judgment of the Publick on the Nature and Cure of the Distemper now raging among the Horned Cattle, &c.* which so far as concerns the Means of Cure is the best which has yet been published on the Subject; and therefore if this simple Method should not succeed for the future, as it has hitherto done, I shall hope to see the Rules recommended in the aforesaid *Essay* put in practice with the Punctuality and Fidelity they deserve.

THERE may be likewise some Circumstances wherein the Bleeding may be continued after the fifth day, and likewise wherein it may be necessary to exceed the Quantity specified within that time, as when the Shortness of Breathing and in-

ward Heat are more violent, or continue longer than usual; but in general the Method before directed has been found effectual: And what sufficiently proves that the Success of it chiefly depends on the very early and copious Bleeding, is, that several People who did not care to be at the Trouble, or were apprehensive of the Difficulty of repeated Bleedings, and yet were desirous of bleeding their Cattle to the Purpose, quite cured them by cutting off a Part of their Tails, and suffering them to bleed as long as they would, and by keeping them warm, and upon tepid cooling Liquors for several days after the Operation.

HAVING now gone through the several Parts proposed in the Beginning of these *Considerations*, and therein contributed my Mite towards the Alleviation of this Publick Calamity, it is time to relieve the candid Reader and my self from a Labour, which has no less trespassed upon my time than his Patience. As nothing but my regard to *Truth*, and its inseparable Consequence

sequence *Publick Utility* could have prevailed with me to publish my Dissent from the Opinions of any of the Learned, so if ever I am convinced of any Mistake, which I may have fallen into in the Course of these *Considerations*, I shall be as ready to acknowledge it as I have been to point out any such in other Men. For what *Tully* declares of Himself in regard to some of his Philosophical Opinions, is a Duty still more becoming a much inferior Writer on no less intricate a Subject; and therefore with his Declaration I shall conclude these CONSIDERATIONS. *Nos, qui sequimur Probabilia, nec ultra quàm id quod Verisimile occurrerit, progredi possumus, & refellere sine pertinaciâ, & refelli sine iracundiâ parati sumus.*

F I N I S.

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Qui spiritum Proposuit, nec ultra eum
 id quod Veritatis certum, progressu
 sumus, & relictis sine periculo, & re-
 sisti sine inconditis parvis sumus.

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