

Evelyn, John
F U M I F U G I U M :

O R,

The Inconvenience of the A E R,

A N D

S M O A K E of L O N D O N

D I S S I P A T E D.

T O G E T H E R

With some R E M E D I E S humbly proposed

By J. E. Esq;

To His Sacred M A J E S T I E,

A N D

To the P A R L I A M E N T now Assembled.

Published by His Majesties Command.

Lucret. l. 5.

Carbonumque gravis vis, atque odor insinuat
Quam facile in cerebrum?—

L O N D O N :

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P R E F A C E

B Y T H E

E D I T O R.

THE established reputation of Mr. *Evelyn's* Writings would have prevented the Editor of this very scarce Tract from adding any thing himself, had not Time made some alterations that appear worthy of notice.

Our Author expresses himself with proper warmth and indignation against the absurd policy of allowing Brewers, Dyers, Soap-boilers and Lime-burners to intermix their noisome works amongst the dwelling-houses in the City and Suburbs: But since his time we have a great increase of Glass-houses, Founderies, and Sugar-bakers to add to the black catalogue; at the head of which must be placed the Fire-engines of the Water-works at *London Bridge* and *York Buildings*, which (whilst they are working) leave the astonished spectator at a loss to determine whether they do not tend to poison and destroy

more of the inhabitants by their Smoke and Stench than they supply with their Water. Our Author also complains that the Gardens about *London* would no longer bear Fruit, and gives instances of Orchards in *Barbican* and *the Strand* that were observed to have a good crop the year in which *Newcastle* was besieged*, because but a small quantity of Coals were brought to *London* that year; by this we may observe how much the evil is increased since the time this Treatise was written. It would now puzzle the most skilful Gardener to keep Fruit-trees alive in these places: The complaint at this time would be, not that the trees were without Fruit, but that they would not bear even Leaves.

Although the proposal of turning all the noxious Trades at once out of town may be thought impracticable, as being inconsistent with the general Liberty of the Subject; yet certainly some very beneficial Regulations lie within the power of the present public-spirited and active Magistrates, to whom, with deference, the Editor submits the following Hints.

Till more effectual methods can take place, it would be of great service, to oblige all those Trades who make use of large Fires, to carry their Chim-

nies much higher into the air than they are at present; this expedient would frequently help to convey the Smoke away above the buildings, and in a great measure disperse it into distant parts without its falling on the houses below.

Workmen should be consulted, and encouraged to make experiments, whether a particular construction of the Chimnies would not assist in conveying off the Smoke, and in sending it higher into the air before it is dispersed.

A method of charring sea-coal, so as to divest it of its Smoke, and yet leave it serviceable for many purposes, should be made the object of a very strict enquiry; and Premiums should be given to those that were successful in it. Proper indulgences might be made to such Sugar, Glass, Brew-houses, &c. as should be built at the desired distance from town; and the building of more within the City and Suburbs prevented by Law: This method, vigorously persisted in, would in time remove them all.

The discernment and good sense of the present times are loudly called on, to abolish the strange custom of laying the Dead to rot amongst the Living,

^b Many of these buildings have no Chimnies, and appear to be constructed purposely to beat the Smoke downwards.

by burying in Churches and Church-yards within the town; this Practice has not escaped our Author's censure: and Foreigners have often exposed the absurdity of the proceeding. But it seems to be left particularly to the Magistracy and Citizens of *London*, to set an example to the rest of this Kingdom and to *Europe*, by removing a nuisance which Ignorance and Superstition have entailed on us hitherto; and which, amongst those that are not well acquainted with our Religion, brings a disgrace on Christianity itself. It will be a Work of little shew or ostentation, but the Benefits arising from it will be very extensive and considerable: in both respects it recommends itself in a particular manner to an opulent and free people^c.

To confirm what our Author has urged against the Air of *London*, the Reader is desired to take a view of the Bills of Mortality, and the Calculations made from them; and he will find that there is a waste of near ten thousand people, who are drawn every year from the Country to supply the room of those that *London* destroys beyond what it raises. Indeed the Supply that the Town furnishes towards

^c Amongst the remains of old *Rome* the grandeur of the Commonwealth shews itself chiefly in works that are either necessary or convenient; on the contrary, the magnificence of *Rome* under the Emperors is seen principally in such works as are rather for Ostentation or Luxury, than any real Usefulness or Necessity.

ADDISON.

keeping up its own Inhabitants appeared so very small to the ablest Calculator and most rational Enquirer^d into this subject, that he owns he was afraid to publish the result.

But, without the use of Calculations it is evident to every one who looks on the yearly Bill of Mortality, that near half the children that are born and bred in *London* die under two years of age^e. Some have attributed this amazing destruction to Luxury and the abuse of Spirituous Liquors: These, no doubt, are powerful assistants; but the constant and unremitting Poison is communicated by the foul Air, which, as the Town still grows larger, has made regular and steady advances in its fatal influence.

The ancient *Greeks* and *Romans*, even in their greatest state of Refinement, were reconciled by habit to the custom of exposing and destroying young Children, when Parents did not choose to support them: The same practice is familiar among the *Chinese* at this day. We shudder and are shocked at the barbarity of it, but at the same

^d Corbyn Morris, Esq;

^e A Child born in a Country Village has an even chance of living near forty years. Much has been said against Mothers who put out their Children to nurse; and where they live in an healthy air, the practice is generally unjustifiable; but the chance for Life in infants, who are confined in the present foul Air of *London*, is so small, that it is highly prudent and commendable to remove them from it as early as possible.

time are accustomed to read with great composure of the deaths of thousands of Infants, suffocated every Year by Smoke and Stenches which good policy might in a great measure remove.

Our Author, who had been very instrumental in restoring *Charles* to his Throne, was unfortunate in recommending a work of such consequence to so negligent and dissipated a Patron: The Editor is encouraged by a more promising appearance of success: He has seen with pleasure many improvements of great importance to the elegance and welfare of this City, undertaken and completed in a short time, when magistrates of less public spirit and perseverance than our present would have pronounced them to have been impracticable.

London, March 16, 1772.

T O

T O

THE KINGS MOST SACRED
M A J E S T Y.

S I R,

IT was one day, as I was Walking in Your MAJESTIES Palace at *WHITE-HALL*, (where I have sometimes the honour to refresh myself with the Sight of Your Illustrious Presence, which is the Joy of Your Peoples hearts) that a presumptuous Smoake issuing from one or two Tunnels neer *Northumberland-house*, and not far from *Scotland-yard*, did so invade the Court; that all the Rooms, Galleries, and Places about it were filled and infested with it; and that to such a degree,

gree, as Men could hardly discern one another for the Clowd, and none could support, without manifest Inconveniency. It was not this which did first suggest to me what I had long since conceived against this pernicious Accident, upon frequent observation; But it was this alone, and the trouble that it must needs procure to Your Sacred Majesty, as well as hazzard to Your Health, which kindled this Indignation of mine, against it, and was the occasion of what it has produced in these Papers.

Your Majesty, who is a Lover of noble Buildings, Gardens, Pictures, and all Royal Magnificences, must needs desire to be freed from this prodigious annoyance; and, which is so great an Enemy to their Lustre and Beauty, that where it once enters there can nothing remain long in its native Splendor and Perfection: Nor must I here forget that Illustrious and divine Princeſſe, Your Majesty's only Sister, the now *Dutcheſſe of Orleans*, who at her *Highbneſſe* late being in this City, did in my hearing, complain of the Effects of this Smoake both in her Breast and Lungs, whilst She

their breath; as if, by a certain charm, or innocent *Magick*, they were transferred to that part of *Arabia*, which is therefore styled the *Happy*, because it is amongst the Gums and precious Spices. Those who take notice of the Scent of the *Orange-flowers* from the Rivage of *Genoa*, and *St. Pietro dell' Arena*; the Blossomes of the *Rosemary* from the Coasts of *Spain* many Leagues off at Sea; or the manifest and odoriferous wafts which flow from *Fontenay* and *Vaugirard*, even to *Paris*, in the season of *Roses*, with the contrary Effects of those less pleasing Smells from other accidents, will easily consent to what I suggest: And, I am able to enumerate a Catalogue of native *Plants*, and such as are familiar to our Country and *Clime*, whose redolent and agreeable Emissions would even ravish our senses, as well as perfectly improve and meliorate the *Aer* about *London*; and that, without the least prejudice to the Owners and Proprietors of the Land to be employed about it. But because I have treated of this more at large in another curious and noble subject, which I am preparing to present to Your Majesty, as God shall afford

DEDICATORY.

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afford me Leisure to finish it, and that I give a Touch of it in this Discourse, I will enlarge my Addresses no farther, then to beg pardon for this Presumption of,

S I R,

Your Majesties ever Loyal, most obedient

Subject, and Servant,

J. EVELYN.

TO

TO THE READER.

I Have little here to add to implore thy good opinion and approbation, after I have submitted this Essay to his Sacred Majesty : But as it is of universal benefit that I propound it ; so I expect a civil entertainment and reception. I have, I confesse, been frequently displeased at the small advance and improvement of *Publick Works* in this Nation, wherein it seems to be much inferiour to the Countries and Kingdomes which are round about it ; especially, during these late years of our sad Confusions. But now that God has miraculously restored to us our Prince, a Prince of so magnanimous and publick a Spirit, we may promise ourselves not only a recovery of our former Splendor ; but also whatever any of our Neighbours enjoy of more universal benefit, for Health or Ornament : In summe, whatever may do honour to a Nation so perfectly capable of all advantages.

It is in order to this, that I have presumed to offer these few Proposals for the meliorating and refining the *Air* of *London* : being extremely amazed, that where there is so great an affluence of all things which may render the
People

People of this vast City, the most happy upon Earth; the sordid and accursed Avarice of some few particular Persons, should be suffered to prejudice the health and felicity of so many: That any Profit (besides what is of absolute necessity) should render men regardlesse of what chiefly imports them, when it may be purchased upon so easie conditions, and with so great advantages: For it is not happiness to possesse Gold, but to enjoy the Effects of it, and to know how to live cheerfully and in health, *Non est vivere, sed valere vita.* That Men whose very Being is *Aer*, should not breath it freely when they may; but (as that *Tyrant* used his Vassals) condemn themselves to this misery & *fumo præfocari*, is strange stupidity: yet thus we see them walk and converse in *London*, pursued and haunted by that infernal Smoake, and the funest accidents which accompany it wheresoever they retire.

That this Glorious and Antient City, which from Wood might be rendred Brick, and (like another *Rome*) from Brick made Stone and Marble; which commands the Proud Ocean to the *Indies*, and reaches the farthest *Antipodes*, should wrap her stately head in Clowds of Smoake and Sulphur, so full of Stink and Darknesse, I deplore with just Indignation. That the *Buildings* should be composed of such a Congestion of mishapen and extravagant Houses; That the *Streets* should be so narrow and incommodious in the very Center, and busiest places of Inter-course; That there should be so ill and uneasy a form of *Paving* under foot, so troublesome and malicious a disposure of the *Spouts* and *Gutters* overhead, are particulars worthy

worthy of Reproof and Reformation ; because it is hereby rendered a *Labyrinth* in its principal passages, and a continual wet day after the storm is over. Add to this the Deformity of so frequent *Wharves* and Magazines of *Wood*, *Coale*, *Boards*, and other coarse Materials, most of them imploying the Places of the Noblest aspect for the situation of Palaces towards the goodly River, when they might with far lesse Disgrace, be removed to the *Bank-side*, and afterwards disposed with as much facility where the Consumption of these Commodities lyes ; a *Key* in the mean time so contrived on *London-side*, as might render it lesse sensible of the *Reciprocation* of the Waters, for Use and Health infinitely superiour to what it now enjoys. These are the *Defiderata* which this great City labours under, and which we so much deplore. But I see the Dawning of a brighter day approach ; We have a Prince who is Resolved to be a *Father to his Country* ; and a *Parliament* whose Decrees and Resentments take their Impression from his Majesties great *Genius*, which studies only the Publick Good. It is from them therefore, that we Augure our future happineffe ; since there is nothing which will so much perpetuate their Memories, or more justly merit it. *Medails* and *Inscriptions* have heretofore preserved the Fame of lesse Publick Benefits, and for the Repairing of a Dilapidated Bridge, a decaid *Aquæduct*, the Paving of a Way, or draining a foggy Marsh, their *Elogies* and *Reverses* have out-lastèd the Marbles, and been transmitted to future Ages, after so many thousand Revolutions :

10 T O T H E R E A D E R.

But this is the least of that which we Decree to our *August* CHARLES, and which is due to his Illustrious *Senators*; because they will live in our Hearts, and in our *Records*, which are more permanent and lasting.

2 May, 1661.

FAREWELL.

FUMI-

F U M I F U G I U M;

O R,

The Inconveniency of the Smoake of London
dissipated, &c.

P A R T I.

IT is not without some considerable *Analogy*, that sundry of the *Philosophers* have named the * *Aer* the *Vehicle of the Soul*, as well as that of the Earth, and this frail Vessel of ours which contains it; since we all of us finde the benefit which we derive from it, not onely for the necessity of common Respiration and functions of the Organs; but likewise for the use of the *Spirits* and *Primigene Humors*, which doe most neerly approach that Divine particle. But we shall not need to insist, or refine much on this sublime Subject; and, perhaps, it might scandalize scrupulous Persons to pursue to the height it may possibly reach

* Anima, quasi ἄνεμος.

(as *Diogenes* and *Anaximenes* were wont to *Deifie* it) after we are past the *Ætherial*, which is a certain ^b *Aer* of *Plato's* denomination, as well as that of the leſſe pure, more turbulent and denſe, which, for moſt part, we live and breath in, and which comes here to be examined as it relates to the deſign in hand, the City of *London*, and the environs about it.

It would doubtleſſe be eſteemed for a ſtrange and extravagant *Paradox*, that one ſhould affirme, that the *Aer* itſelf is many times a potent and great diſpoſer to *Rebellion*; and that *Insulary people*, and indeed, moſt of the *Septentrian* Tracts, where this *Medium* is groſſe and heavy, are extremely verſatile and obnoxious to change both in Religious and Secular Affairs: Plant the Foote of your Compaſſes on the very *Pole*, and extend the other limb to 50 degrees of *Latitude*: bring it about 'till it deſcribe the Circle, and then read the *Hiftories* of thoſe Nations incluſively, and make the Calculation. It muſt be confeſſed, that the *Aer* of thoſe *Climates*, is not ſo pure and Defecate as thoſe which are neerer the *Tropicks*, where the Continent is leſſe ragged, and the Weather more conſtant and ſteady, as well as the Inclination and Temper of the Inhabitants.

But it is not here that I pretend to ſpeculate upon theſe Cauſes, or nicely to examine the Diſcourſes of the *Stoicks* and *Peripateticks*, whether the *Aer* be in itſelf generally cold, humid, warm, or exactly tempered ſo as beſt conduces to a *materiall principle*, of which it is accounted one of the

^b In *Timæo*.

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four; because they are altogether *Physicall* notions, and do not come under our cognisance as a pure and sincere Element; but as it is particularly iniquated, infected, participating of the various Accidents, and informed by extrinsecal Causes, which render it noxious to the *Inhabitants*, who derive and make use of it for Life. Neverthelesse, for distinction sake, we may yet be allowed to repute some *Aers* pure, comparatively, viz. That which is cleare, open, sweetely ventilated and put into motion with gentle gales and breezes; not too sharp, but of a temperate constitution. In a word, *That* we pronounce for good and pure *Aer*, which heats not to sweat and faintnesse; nor cooles to rigidnesse and trembling; nor dries to wrinkles and hardnesse; nor moystens to resolution and over-much softnesse. The more hot promotes indeede the Witt, but is weak and trifling; and therefore *Hippocrates* speaks the *Asiaticque* people *Imbelles* and Effeminate, though of a more artificiall and ingenious Spirit: If over cold and keen, it too much abates the heat, but renders the body robust and hardy; as those who are born under the Northern *Beare*, are more fierce and stupid, caused by a certain internal *Antiperistasis* and universal Impulsion^a. The drier *Aer* is generally the more salutary and healthy, so it be not too sweltery, and infested with heat or fuliginous vapours, which is by no means a friend to health and Longevity,

^c Lib. de Aere, Aqu. & Locis.

^d That is, the heat of their Bodies is condensed and encreased by the coldness of the atmosphere that surrounds them.

as *Avicen* notes of the *Æthiops*, who seldom arrived to any considerable old Age. As much to be reprov'd is the moyſt, *viz.* that which is over-mixed with *aquous* exhalations, equally pernicious and ſuſceptible of putrefaction; notwithstanding does it oftner produce faire and tender ſkins, and ſome laſt a long while in it; but commonly not ſo healthy, as in *Aer* which is more dry. But the impure and *Uliginous*, as that which proceeds from ſtagnated places, is, of all other, the moſt vile and Peſtilent.

Now, that through all theſe diverſities of *Aer*, *Mores Hominum do Corporis temperamentum ſequi*, is for the greater part ſo true an obſervation, that a Volume of Inſtances might be produced, if the Common notices did not ſufficiently confirm it, even to a Proverb. The *Aer* on which we continually prey, perpetually inſpiring matter to the *Animall* and *Vitall* Spirits, by which they become more or leſſe obſcured, clouded and rendered obnoxious; and therefore that Prince of Phyſitians *Hippocrates**, wittily calls a ſincere and pure *Aer*, The *Internunce and Interpreter of Prudence*. The celeſtiall influences being ſo much retarded or aſſiſted, and improved through this omnipreſent, and, as it were, univerſal *Medium*: For, though the *Aer* in its ſimple ſubſtance cannot be vitiated; yet, in its prime qualities, it ſuffers theſe infinite mutations, both from ſuperiour and inferiour Cauſes, ſo as its accidentall effects become almoſt innumerable;

Let it be farther conſidered, what is moſt evident, That the Body feedes upon *Meats* commonly, but at certain pe-

* De Morbo Sacro.

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riods and stated times, be it twice a day or oftner; whereas, upon the *Aer*, or what accompanies it (*est enim in ipso Aere occultus vitæ cibus*) it is alwayes preying, sleeping or waking; and therefore, doubtlesse, the election of this constant and assiduous Food, should something concerne us, I affirme, more than even the very *Meat* we eat, whereof so little and indifferent nourishes and satisfies the most temperate and best Educated persons. Besides, *Aer* that is corrupt insinuates itself into the vital parts immediately; whereas the meats which we take, though' never so ill conditioned, require time for the concoction, by which its effects are greatly mitigated; whereas the other, passing so speedily to the Lungs, and virtually to the Heart itself, is derived and communicated over the whole masse: In a word, as the Lucid and noble *Aer* clarifies the Blood, subtilizes and excites it, cheering the Spirits and promoting digestion; so the dark and grosse (on the contrary) perturbs the Body, prohibits necessary Transpiration for the resolution and dissipation of ill Vapours, even to disturbance of the very Rational faculties, which the purer *Aer* does so far illuminate, as to have rendred some Men healthy and wise, even to Miracle. And therefore the Empoysoning of *Aer*, was ever esteemed no lesse fatall than the poysoning of Water or Meate itself, and forborn even amongst *Barbarians*; since (as is said) such Infections become more apt to insinuate themselves and betray the very Spirits, to which they have so neer a cognation. Some *Aers* we know are held to be *Alexipharma*c, and even deleterious to Poyson itself, as 'tis reported of that of *Ireland*: In some we
finde

finde *Carcasses* will hardly putrifie, in others again rot and fall to pieces immediately.

From these, or the like considerations, therefore, it might well proceed, that *Vitruvius*[†], and the rest who follow that *Master-Builder*, mention it as a Principle, for the accomplishment of their *Architect*, that being skilful in the Art of *Physick*, amongst other Observations, he sedulously examine the *Aer* and *Situation* of the places where he designs to build, the Inclinations of the Heavens, and the Climats[‡]; *Sine his enim rationibus nulla salubris habitatio fieri potest*: there is no dwelling can be safe or healthy without it. 'Tis true, he does likewise adde *Water* also, which is but a kinde of condensed *Aer*; though he might have observed, *that* Element to be seldome bad, where the other is good; omitting onely some peculiar Fountains and *Mineral* waters, which are percolated through *Mines* and *Metalique* Earths, less frequent, and very rarely to be encountered.

Now whether those who were the Antient *Founders* of our goodly *Metropolis*, had considered these particulars (though long before *Vitruvius*) I can no waies doubt or make question of; since having respect to the nobleness of the situation of *London*, we shall every way finde it to have been consulted with all imaginable Advantages, not onely in relation to Profit, but to Health and Pleasure; and that, if there be any thing which seems to impeach the two last *Transcendencies*, it will be found to be but some-

[†] Lib. i. cap. 1.

[‡] Aeres Locorum.

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thing Extrinsic and Accidental onely, which naturally does not concern the Place at all ; but which may very easily be reformed, without any the least inconvenience, as in due time we shall come to demonstrate.

For first, the City of *London* is built upon a sweet and most agreeable Eminency of Ground, at the North-side of a goodly and well-conditioned River, towards which it hath an Aspect by a gentle and easie declivity, apt to be improved to all that may render her *Palaces*, *Buildings*, and *Avenues* usefull, gracefull, and most magnificent: The *Fumes* which exhale from the Waters and lower Grounds lying Southward, by which means they are perpetually attracted, carried off or dissipated by the Sun, as soon as they are born, and ascend.

Adde to this, that the Soil is universally Gravel, not onely where the City itself is placed, but for severall Miles about the Countreys which environ it: That it is plentifully and richly irrigated, and visited with Waters which Chrystalize her Fountains in every Street, and may be conducted to them in such farther plenty, as *Rome* herself might not more abound in this liquid ornament, for the pleasure and divertisement, as well as for the use and refreshment of her Inhabitants. I forbear to enlarge upon the rest of the conveniencies which this August and Opulent City enjoies both by Sea and Land, to accumulate her *Encomiums*, and render her the most considerable that the *Earth* has standing upon her ample bosome; because, it belongs to the *Orator* and the *Poet*, and is none of my Institution: But I will infer, that if this goodly City justly

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challenges what is her due, and merits all that can be said to reinforce her Praises, and give her *Title*; she is to be relieved from that which renders her less healthy, really offends her, and which darkens and eclipses all her other Attributes. And what is all this, but that Hellish and dismal Cloud of SEA-COALE? which is not onely perpetually imminent over her head; For as the Poet^b,

Conditur in tenebris altum caligine cælum;

but so universally mixed with the otherwise wholesome and excellent *Aer*, that her *Inhabitants* breathe nothing but an impure and thick Mist, accompanied with a fuliginous and filthy vapour, which renders them obnoxious to a thousand inconveniences, corrupting the *Lungs*, and disordering the entire habit of their Bodies; so that *Catharrs*, *Phthisicks*, *Coughs* and *Consumptions*, rage more in this one City, than in the whole Earth besides.

I shall not here much descant upon the Nature of *Smoakes*, and other Exhalations from things burnt, which have obtained their several *Epithetes*, according to the quality of the Matter consumed, because they are generally accounted noxious and unwholsome; and I would not have it thought, that I doe here *Fumos vendere*, as the word is, or blot paper with insignificant remarks: It was yet haply no inept derivation of that *Critick*, who took our *Englisch*, or rather, *Saxon* appellative, from the *Greek* word *σμίχω* *corrumpo* and *exuro*, as most agreeable to its destructive

^b *Æneid* xi.

effects,

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effects, especially of what we doe here so much declaim against, since this is certain, that of all the common and familiar materials which emit it, the immoderate use of, and indulgence to *Sea-coale* alone in the City of *London*, exposes it to one of the fowlest Inconveniencies and reproches, than can possibly befall so noble, and otherwise incomparable City: And that, not from the *Culinary* fires, which for being weak, and lesse often fed below, is with such ease dispelled and scattered above, as it is hardly at all discernible, but from some few particular Tunnells and Issues, belonging only to *Brewers*, *Diers*, *Lime-burners*, *Salt*, and *Sope-boylers*, and some other private Trades, One of whose *Spiracles* alone, does manifestly infect the *Aer*, more than all the Chimnies of *London* put together besides. And that this is not the least *Hyperbolie*, let the best of Judges decide it, which I take to be our senses: Whilst these are belching it forth their sooty jaws, the City of *London* resembles the face rather of *Mount Aetna*, the *Court of Vulcan*, *Stromboli*, or the Suburbs of *Hell*, than an Assembly of Rational Creatures, and the Imperial seat of our incomparable *Monarch*. For when in all other places the *Aer* is most Serene and Pure, it is here Ecclipsed with such a Cloud of Sulphure, as the Sun itself, which gives day to all the World besides, is hardly able to penetrate and impart it here; and the weary *Traveller*, at many Miles distance, sooner smells, than sees the City to which he repairs. This is that pernicious Smoake which sullies all her Glory, superinducing a sooty Crust or Furr upon all that it lights, spoyling the moveables, tarnishing the Plate,

Gildings and Furniture, and corroding the very Iron-bars and hardest Stones with those piercing and acrimonious Spirits which accompany its Sulphure; and executing more in one year, than exposed to the pure *Aer* of the Country it could effect in some hundreds.

— *piceaque gravatum*
*Fædat nube diem*¹;

It is this horrid Smoake which obscures our Churches, and makes our Palaces look old, which fouls our Clothes, and corrupts the Waters, so as the very Rain, and refreshing Dews which fall in the several Seasons, precipitate this impure vapour, which, with its black and tenacious quality, spots and contaminates whatever is exposed to it.

— *Calidoque involvitur undique fumo*²;

It is this which scatters and strews about those black and smutty *Atomes* upon all things where it comes, insinuating itself into our very secret *Cabinets*, and most precious *Repositories*: Finally, it is this which diffuses and spreads a Yellowness upon our choicest Pictures and Hangings: which does this mischief at home, is ¹ *Avernus* to Fowl, and kills our *Bees* and *Flowers* abroad, suffering nothing in our Gardens to bud, display themselves, or ripen; so as

¹ Claud. de rap. Prof. l. i.

² Ovid.

¹ A lake in Italy, which formerly emitted such noxious fumes, that birds, which attempted to fly over it, fell in and were suffocated; but it has lost this bad quality for many ages, and is at present well stocked with fish and fowl.

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our *Anemonies* and many other choycest Flowers, will by no Industry be made to blow in *London*, or the Precincts of it, unlesse they be raised on a *Hot-bed*, and governed with extraordinary Artifice to accelerate their springing; imparting a bitter and ungrateful Taste to those few wretched *Fruits*, which never arriving to their desired maturity, seem, like the *Apples of Sodome*, to fall even to dust, when they are but touched. Not therefore to be forgotten, is that which was by many observed, that in the year^m when *Newcastle* was besieged and blocked up in our late Wars, so as through the great Dearth and Scarcity of Coales, those fumous Works many of them were either left off, or spent but few Coales in comparison to what they now use: Divers Gardens and Orchards, planted even in the very heart of *London*, (as in particular my Lord Marquesse of *Hertford's* in the *Strand*, my Lord *Bridge-water's*, and some others about *Barbican*) were observed to bear such plentiful and infinite quantities of Fruits, as they never produced the like either before or since, to their great astonishment: but it was by the Owners rightly imputed to the penury of Coales, and the little Smoake, which they took notice to infest them that year: For there is a virtue in the *Aer*, to penetrate, alter, nourish, yea and to multiply Plants and Fruits, without which no vegetable could possibly thrive; but as the *Poet*,

Aret ager: vitio moriens fitit aëris herba^m:

So as it was not ill said by *Paracelsus*, that of all things,

^m 1644.

^a Georg. vii.

Aer only could be truly affirmed to have *Life*, seeing to all things it gave *Life*. Argument sufficient to demonstrate, how prejudicial it is to the Bodies of Men ; for that can never be *Aer* fit for them to breath in, where nor *Fruits*, nor *Flowers* do ripen, or come to a seasonable perfection.

I have strangely wondred, and not without some just indignation, when the South-wind has been gently breathing, to have sometimes beheld that stately House and Garden belonging to my Lord of *Northumberland*, even as far as *Whitehall* and *Westminster*, wrapped in a horrid Cloud of this Smoake, issuing from a *Brew-house* or two contiguous to that noble Palace : so as coming up the River, that part of the City has appeared a *Sea* where no Land was within ken ; the same frequently happens from a *Lime-kelne* ° on the *Banke-side* neer the *Falcon*, which when the Wind blowes Southern, dilates itself all over that Poynt of the *Thames*, and the opposite part of *London*, especially about *St. Paul's*, poysoning the *Aer* with so dark and thick a Fog, as I have been hardly able to pass through it, for the extraordinary stench and *halitus* it sends forth ; and the like is neer *Fox-hall* at the farther end of *Lambeth*.

Now to what funest and deadly Accidents the assiduous invasion of this Smoake exposes the numerous Inhabitants,

° I doe assent, that both *Lime* and *Sulphur* are in some affections specifics for the *Lungs*; but then they are to be so prepared, as nothing save the purest parts be received into the body (for so Physicians prescribe *Flores sulph. &c.*) and not accompanied with such gross and plainly virulent vapours, as these fires send forth : Nor are they (as accurately prepared as Art can render them) to be perpetually used, but at certain periods, in Formes, and with due Regiment.

I have

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I have already touched, whatsoever some have fondly pretended, not considering that the constant use of the same *Aer* (be it never so impure) may be consistent with Life and a Valetudinary state; especially, if the Place be native to us, and that we have never lived for any long time out of it: Custom, in this, as in all things else, obtaining another Nature, and all Putrefaction, proceeding from certain Changes, it becomes, as it were, the *Form*, and Perfection of that which is contained in it: For so (to say nothing of such as by assuefaction have made the rankest poysons their most familiar Diet) we read that *Epimenides* continued fifty years in a damp *Cave*, the *Eremites* dwelt in Dens, and divers live now in the *Fens*; some are condemned to the *Mines*, and others, that are perpetually conversant about the *Forges*, *Fornaces* of Iron and other Smoaky Works, are little concerned with these troublesome accidents: But as it is not (I perswade myself) out of choyce, that these Men affect them; so nor will any man, I think, commend and celebrate their manner of Living. A *Tabid* Body might possibly trail out a miserable Life of seven or eight years by a *Sea-coale* Fire, as 'tis reported the *Wife* of a certain famous *Physician* did of late, by the Prescription of her Husband; but it is to be considered also, how much longer, and happier she might have survived in a better and more noble *Aer*; and that old *Par*, who lived in health to an Hundred and fifty years of Age, was not so much concerned with the change of Diet (as some have affirmed) as with
that

that of the *Aer*, which plainly withered him, and spoyled his Digestion in a short time after his arrival at *London*.

There is, I confesse, a certain ^r *Idiosyncrasia* in the Composition of some persons, which may fit and dispose them to thrive better in some *Aers*, than in other: But, it is manifest, that those who repair to *London*, no sooner enter into it, but they find a universal alteration in their Bodies, which are either dried up or enflamed, the humours being exasperated and made apt to putrifie, their sensories and perspiration so exceedingly stopped, with the losse of Appetite, and a kind of general stupefaction, succeeded with such *Catharrs* and *Distillations*, as do never, or very rarely quit them, without some further Symptoms of dangerous Inconveniency so long as they abide in the place; which yet are immediately restored to their former habit, so soon as they are retired to their Homes and enjoy the fresh *Aer* again. And here I may not omit to mention what a most Learned ^s *Physician*, and one of the *Colledge*, assured me, as I remember of a Friend of his, who had so strange an *Antipathy* to the *Aer* of *London*; that though he were a *Merchant*, and had frequent businesse in the City, was yet constrained to make his Dwelling some miles without it; and when he came to the *Exchange*, within an hour or two, grew so extremely indisposed, that (as if out of his proper Element) he was forced to take horse (which used therefore constantly to attend him at the Entrance) and

^r A peculiar temperament or disposition.

^s Dr. Whistler.

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ride as for his Life, till he came into the Fields, and was returning home again, which is an Instance so extraordinary, as not, it may be, to be parallell'd in any place of *Europe*, save the *Grotto del Cane*, nere *Naples*, the *Os Plutonium* of *Silvius*, or some such *subterranean* habitation. For Diseases proceed not from so long a *Series* of causes, as we are apt to conceive; but, most times from those obvious, and despicable mischiefs, which yet we take lesse notice of, because they are familiar: But how frequently do we hear men say (speaking of some deceased Neighbour or Friend) *He went up to London, and took a great Cold, &c. which he could never afterwards claw off again.*

I report myself to all those who (during these sad confusions) have been compelled to breath the *Aer* of other Countries for some years, if they do not now perceive a manifest alteration in their *Appetite*, and clearness of their Spirits; especially such as have liv'd long in *France*, and the City of *Paris*; where, to take off that unjust reproch, the *Plague* as seldome domineers, as in any part of *Europe*, which I more impute to the Serenity and Purity of the *Aer* about it, than to any other qualities which are frequently assign'd for the cause of it by divers writers. But if it be objected that the purest *Aers* are soonest infected; it is answered, that they are also the soonest freed again; and that none would therefore choose to live in a corrupt *Aer*, because of this Article: *London*, 'tis confess'd, is not the only City most obnoxious to the Pestilence; but it is yet never clear of this Smoake which is a Plague so many other ways, and indeed intolerable; because it kills not at once,

E

but

but always, since still to languish, is worse than even Death itself. For is there under Heaven such *Coughing* and *Snuffing* to be heard, as in the *London Churches* and *Assemblies of People*, where the *Barking* and the *Spitting* is uncessant and most importunate. What shall I say?

Hinc hominum pecudumque Lues†.

And what may be the cause of these troublesome effects, but the inspiration of this infernal vapour, accompanying the *Aer*, which first heats and sollicit the *Aspera Arteria*, through one of whose Conduits, partly *Cartilaginous*, and partly *Membranous*, it enters by several branches into the very *Parenchyma*, and substance of the *Lungs*, violating, in this passage, the *Larynx* and *Epiglottis*, together with those multiform and curious Muscles, the immediate and proper Instruments of the *Voyce*, which becoming rough and drye, can neither be contracted, or dilated for the due modulation of the *Voyce*; so as by some of my Friends (studious in *Musick*, and whereof one is a Doctor of Physick) it has been constantly observ'd, that coming out of the *Country* into *London*, they lost *Three whole Notes* in the compasse of their *Voice*, which they never recover'd again till their retreat; *Adeo enim Animantes* (to use the *Orators* words) *aspiratione Aeris sustinentur, ipseque Aer nobiscum videt, nobiscum audit, nobiscum sonat*‡: In summe, we perform nothing without it.

Whether the Head and the Brain (as some have imagined) take in the ambient *Aer*, nay the very *Arteries*)

† *Lucan.*

‡ *Cic. de Nat. Deor.*

through

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through the skin universally over the whole body, is greatly controverted; But if so, of what consequence the goodnesse and purity of the *Aer* is, will to every one appear: Sure we are, how much the Respiration is perturb'd, and concern'd, when the *Lungs* are prepossessed with these grosse and dense vapours, brought along in the *Aer*; which on the other side being pure and fitly qualified, and so conducted to them, is there commixed with the circulating blood, insinuating itself into the left ventricle of the heart by the *Arteria Venosa*, to rarifie and subtilize that precious vehicle of the Spirits and vital flame: The *Vena Arteriosa*, and *Arteria Venosa* disposing themselves into many branches through the Pulmonique lobes, for its Convoy the *Aer* (as we sayd) being first brought into them out of the *Bronchia* (together with the returning blood) to the very Heart itself; so as we are not at all to wonder, at the suddain and prodigious Effects of a poysonous or lesse wholesome *Aer*, when it comes to invade such noble Parts, *Vessells*, *Spirits* and *Humours*, as it visits and attaques, through those subtile and curious passages. But this is not all.

What if there appear to be an *Arsenical* vapour, as well as *Sulphur*, breathing sometimes from this intemperate use of *Sea-Coale*, in great Cities? That there is, what does plainly stupifie, is evident to those who sit long by it; and that which fortun'd to the *Dutchmen* who winter'd in *Nova Zembla*, was by all *Physicians* attributed to such a deleterious quality in the like fuel, as well as to the In-spissation of the *Aer*, which they thought only to have

attemper'd, as is by most esteem'd to be the reason of the same dangerous *halitus* of *Char-Coale*, not fully enkindl'd. But to come neerer yet.

New Castle Coale, as an expert *Physician*† affirms, causeth *Consumptions*, *Phthificks*, and the Indisposition of the *Lungs*, not only by the suffocating abundance of *Smoake*; but also by its *Virulency*: For all *subterrany* Fuell hath a kind of *virulent* or *Arsenical* vapour rising from it; which, as it speedily destroys those who dig it in the *Mines*; so does it by little and little, those who use it *here* above them: Therefore those Diseases (saith this Doctor) most afflict about *London*, where the very *Iron* is sooner consum'd by the *Smoake* thereof, than where this Fire is not used.

And if indeed there be such a Venemous quality latent, and sometimes breathing from this Fuell, we are lesse to trouble our selves for the finding out of the Cause of those *Pestilential* and *Epidemical* Sickneses (*Epidemiorum Causa enim in Aere*, says *Galen*) which at divers periods, have so terribly infested and wasted us: or, that it should be so susceptible of infection, all manner of Diseases having so universal a *vehicle* as is that of the *Smoake*, which perpetually invests this City: But this is also noted by the Learned Sir *Kenelme Digby*‡, in confirmation of the doctrine of *Atomical Effluvias* and Emanations, wasted, mixed and communicated by the *Aer*, where he well observes, that from the Materials of our *London* Fires, there results a great quantity of volatile Salts, which being very sharp

† Boetius a Boot.

‡ Discourse of Sympathetick Powder.

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and diffipated by the Smoake, doth infect the *Aer*, and so incorporate with it, that though the very Bodies of those corrosive particles escape our perception, yet we soon find their effects, by the destruction which they induce upon all things that they do but touch; spoyling, and destroying their beautiful colours, with their fuliginous qualities: Yea, though a Chamber be never so closely locked up, Men find at their return, all things that are in it, even covered with a black thin Soot, and all the rest of the Furniture as full of it, as if it were in the house of some *Miller*, or a *Bakers* Shop, where the *Flower* gets into their *Cupboards*, and *Boxes*, though never so close and accurately shut.

This *Coale*, says Sir *K.* flies abroad, fowling the Clothes that are expos'd a drying upon the Hedges; and in the Spring-time (as but now we mention'd) besoots all the Leaves, so as there is nothing free from its universal contamination, and it is for this, that the *Bleachers* about *Harlem*, prohibit by an expresse Law (as I am told) the use of these *Coales*, for some Miles about that Town; and how curious the Diers and Weavers of *Dammask*, and other precious Silks are at *Florence*, of the least ingresse of any Smoaky vapour, whilst their Loomes are at work, I shall shew upon some other occasion: But in the mean time being thus incorporated with the very *Aer*, which ministers to the necessary respiration of our Lungs, the *Inhabitants* of *London*, and such as frequent it, find it in all their *Expectorations*; the Spittle, and other excrements which proceed from them, being for the most part of a blackish and fuliginous

fuliginous Colour: Besides this acrimonious Soot produces another sad effect, by rendring the people obnoxious to Inflammations, and comes (in time) to exulcerate the *Lungs*, which is a mischief so incurable, that it carries away multitudes by languishing and deep *Consumptions*, as the *Bills of Mortality* do Weekly inform us. And these are those *Endemii Morbi*, vernaculous and proper to *London*. So corrosive is this *Smoake* about the City, that if one would hang up *Gammons* of *Bacon*, *Beefe*, or other Flesh to fume, and prepare it in the Chimnies, as the good *House-wives* do in the Country, where they make use of sweeter Fuell, it will so *Mummifie*, dry up, waft and burn it, that it suddenly crumbles away, consumes and comes to nothing.

The Consequences then of all this is, that (as was said) almost one half of them who perish in *London*, dye of *Phthical* and *Pulmonic* distempers; That the *Inhabitants* are never free from *Coughs* and importunate *Rheumatisms*, spitting of *Impostumated* and corrupt matter: for remedy whereof, there is none so infallible, as that, in time, the Patient change his *Aer*, and remove into the *Country*: Such as repair to *Paris* (where it is excellent) and other like Places, perfectly recovering of their health; which is a demonstration sufficient to confirm what we have asserted, concerning the perniciousness of that about this City, produc'd only, from this exitial and intolerable Accident.

But I hear it now objected by some, that in publishing this Invective against the *Smoake* of *London*, I hazard the engaging of a whole *Faculty* against me, and particularly,
that

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that the *Colledge of Physicians* esteem it rather a Preservation against Infections, than otherwise any cause of the sad effects which I have enumerated. But, as I have upon several encounters, found the most able, and Learned amongst them, to renounce this opinion, and heartily wish for a universal purgation of the Aer by the expedients I propose; so, I cannot believe that any of that Learned Society, should think themselves so far concerned, as to be offended with me for that, which (as well for their sakes, as the rest who derive benefit from it) I wish were at farther distance; since it is certain, that so many of their *Patients* are driven away from the City, upon the least indisposition which attacks them, on this sole consideration; as esteeming it less dangerous to put themselves into the hands of some Country *Doctor* or *Emperic*, then to abide the Aer of London, with all its other advantages. For the rest, that pretend to that honourable Profession; if any shall find themselves agreev'd and think good to contend, I shall easily allow him as much Smoake as he desires, and much good may it do him. But, it is to be suspected, and the answer is made (by as many as have ever suggested the Objection to me) That there be some whom I must expect to plead for that, which makes so much work for the *Chimney-Sweeper*; Since I am secure of the Learned and Ingenuous, and whose Fortunes are not built on Smoake, or raised by a universal Calamity; such as I esteem to be the *Nuisances*, I have here reprov'd: I do not hence infer, that I shall be any way impatient of a just and civil Reply, which I shall rather esteem for an honour done me, because I know,
that

that a witty and a learned man is able to discourse upon any Subject whatsoever; some of them having with praise, written even of the praise of *Diseases* themselves, for so *Favorinus* of old, and *Menapius* since commended a *Quartan Ague*, *Pirckhemierus* the *Gout*, *Gutherius* celebrated *Blindness*, *Heinsius* the *Louse*, and to come nearer our Theam, *Majoragius* the nasty *Dirt*; Not I suppose that they affected these pleasant things, but as *A. Gellius* * has it, *exercendi gratia*, and to shew their Wits; for as the *Poet*,

Sunt etiam Musis sua ludicra, mista Camænis
Otia sunt: —

But to proceed, I do farther affirm, that it is not the Dust and Ordure which is daily cast out of their Houses, much less what is brought in by the Feet of Men and Horses; or the want of more frequent and better conveyances, which renders the Streets of *London* dirty even to a *Proverb*: but chiefly this continual *Smoake*, which ascending in the day-time, is, by the descending Dew, and Cold, precipitated again at night: And this is manifest, if a piece of clean Linnen be spread all Night in any Court or Garden, the least infested as to appearance: but especially if it happen to rain, which carries it down in greater proportion, not only upon the earth, but upon the *Water* also, where it leaves a thin web, or *pellicule* of dust, dancing upon the Surface of it; as those who go to bathe in the *Thames* (though at some Miles distant from the City)

* De materiis infamibus, quas Græci αἴμαρ, appellant. Noct. Att. l. xvii. c. 12.

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do easily discern and bring home upon their Bodies: How it sticks on the Hands, Faces and Linnen of our fair *Ladies*, and nicer Dames, who reside constantly in *London* (especially during Winter) the prodigious wast of *Almond-powder* for the *One*, *Soap* and wearing out of the *Other*, do sufficiently manifest.

Let it be considered what a Fuliginous crust is yearly contracted, and adheres to the Sides of our ordinary Chimnies where this grosse Fuell is used; and then imagine, if there were a solid *Tentorium*, or Canopy over *London*, what a masse of *Soots* would then stick to it, which now (as was said,) comes down every Night in the *Streets*, on our *Houses*, the *Waters*, and is taken into our *Bodies*.

And may this much suffice concerning the *Causes* and *Effects* of this *Evill*, and to discover to all the World, how pernicious this *Smoake* is to our *Inhabitants* of *London*, to decree it, and to introduce some happy Expedient, whereby they may for the Future, hope to be freed from so intolerable an inconvenience, if what I shall be able to produce and offer next, may in some measure contribute to it.

P A R T II.

WE know (as the *Proverb* commonly speaks) that, as *there is no Smoake without Fire*; so neither is there hardly any *Fire* without *Smoake*, and that the ἄκαπνα ξύλα, materials which burn clear are very few, and but comparatively so tearmed: That to talk of serving this vast City (though *Paris* as great, be so supplied) with *Wood*, were madnesse; and yet doubtlesse it were possible, that much larger proportions of *Wood* might be brought to *London*, and sold at easier rates, if that were diligently observed, which both our *Laws* enjoyn, as faisible and practised in other places more remote, by Planting and preserving of *Woods* and *Coppes*, and by what might by Sea, be brought out of the *Northern Countries*, where it so greatly abounds, and seems inexhaustible. But the *Remedy* which I would propose, has nothing in it of this difficulty, requiring only the Removal of such *Trades*, as are manifest *Nuisances* to the City, which, I would have placed at farther distances; especially, such as in their Works and Fournaces use great quantities of *Sea-Coale*, the sole and only cause of those prodigious Clouds of *Smoake*, which so universally and so fatally infect the *Aer*, and would in no City of *Europe* be permitted, where Men had either respect to Health or Ornament. Such we named to be *Brewers*, *Diers*, *Sope* and *Salt-boylers*, *Lime-burners*, and the like: These I affirm, together with some few others of the same *Classe* removed

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at competent distance, would produce so considerable (though but partial) a Cure, as Men would even be found to breathe a new life as it were, as well as *London* appear a new City, delivered from that, which alone renders it one of the most pernicious and insupportable abodes in the World, as subjecting her Inhabitants to so infamous an *Aer*, otherwise sweet and very healthful: For, (as we said) the *Culinary* fires (and which *charking* would greatly reform) contribute little, or nothing in comparison to these foul mouth'd Issues, and Curles of *Smoake*, which (as the Poet* has it) do *Calum subtexere fumo*, and draw a sable Curtain over Heaven. Let any man observe it, upon a *Sunday*, or such time as these Spiracles cease, that the Fires are generally extinguished, and he shall sensibly conclude, by the clearness of the Skie, and universal serenity of the *Aer* about it; that all the Chimnies in *London*, do not darken and poyson it so much, as *one* or two of those Tunnels of *Smoake*; and, that, because the most imperceptible transpirations, which *they* send forth, are ventilated, and dispersed with the least breath which is stirring: Whereas the *Columns* and Clouds of *Smoake*, which are belched forth from the sooty Throates of those Works, are so thick and plentiful, that rushing out with great impetuosity, they are capable even to resist the fiercest winds, and being extremely surcharg'd with a fuliginous Body, fall down upon the City, before they can be dissipated, as the more thin and weak is; so as two or three of these *fumid vortices*†, are able to whirl it about the whole City, rendring it in a few Moments like the

* Virgil.

† Pliny.

Picture of *Troy* sacked by the *Greeks*, or the approaches of *Mount-Hecle*.

I propose therefore, that by an *Act* of this present *Parliament*, this infernal *Nuisance* be reformed; enjoyning, that all those *Works* be removed five or six miles distant from *London* below the River of *Thames*; I say, five or six Miles, or at the least so far as to stand behind that *Premontary* jetting out, and securing *Greenwich* from the pestilent *Aer* of *Plumstead-Marshes*: because, being placed at any lesser Interval beneath the *City*, it would not only prodigiously infect that his *Majesties* Royal Seat (and as *Barclay* calls it) *pervetusta Regum Britannicorum domus*; but during our nine Months *Etesians* (for so we may justly name our tedious Western-winds) utterly darken and confound one of the most princely, and magnificent * Prospects that the World has to shew: Whereas, being seated behind that Mountain, which seems to have been thus industriously elevated, no winds, or other accident whatever can force it through that solid obstacle; and I am perswaded, that the heat of these Works, mixing with the too cold and uliginous vapours which perpetually ascend from these Fenny Grounds, might be a means of rendring that *Aer* far more healthy then now it is; because it seems to stand in need of some powerful drier; but which *London*, by reason of its excellent scituation, does not at all require: And if it shall be objected, that the Brackishnesse of the *Spring-*

* "Memorabilis amœnitas penè citius animum quam oculos diffudit, aspectû non Britannia tantum, sed fortasse totâ Europâ pulcherrimo.—Sed pulcherrimum spectaculum præbet ipsa urbs, inter eximias Europæ celebrata, Londinum, innumeris domibus, vix tamen populi sui capax." Jo. Barcl. Euphor. Sat. part. iv. c. 2.
tides,

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tides, happening hereabout at some periods, may render the Waters lesse useful for some purposes; It is an extraordinary Accident, which appearing rarely is cured again at the reversion of the next Tide: Or if it only concern the *Brewer*, I know no inconveniency, if even some of them were proscrib'd, as far as any fresh-waters are found dissem-boguing into the *Thames*; since the commodiousnesse of the passage may bring up their Wares with so great ease: He that considers what quantities are transported from *Danizick*, *Lubeck*, *Hamborough*, and other remote places into *Holland*, cannot think this an unreasonable proposition: But if their fondnesse to be nearer *London*, procure indul-gence for some of them, The Town of *Bowe*, in regard of its scituation from our continual Winds may serve for the expedient, and a partial Cure: But the rest of those banish'd to the utmost extreme propounded on the River.

At least by this means Thousands of able *Watermen* may be employed in bringing Commodities into the City, to certain *Magazines* and *Wharfs*, commodiously situated to dis-pense them by *Carrs* or other *Sleds*, into the several parts of the Town; all which may be effected with much faci-lity, and small expense; but, with such Conveniency and Benefit to the *Inhabitants* otherwise, as were altogether in-estimable; and therefore, to be valued beyond all other trifling objections of sordid and avaricious persons whatsoever. Nor, indeed, could there at all the least detriment ensue upon this Reformation, since the Places and Houses de-serted (which commonly take up a great space of Ground)
might

might be converted into *Tenements*, and some of them into *Noble Houses* for use and pleasure, respecting the *Thames* to their no small advantage. Add to this, that it would be a means to prevent the danger of *Fireing*, those sad Calamities, for the most part, proceeding from some Accident or other, which takes beginning from places, where such great and exorbitant Fires are perpetually kept going.

Nor were this a thing yet so extravagant, and without all *Precedent* of former times; since even the *Smoake* and burning of lesse foetid and noxious Fuell, produced an inconvenience so universal, in some *Counties* of this *Nation*: (Not to mention the complaint which I have heard some parts even of *France* itself lying *South west* of *England*, did formerly make of being infested with Smoakes driven from our *Maritime* Coasts, which injur'd their Vines in *Flower* *,) that it was thought expedient an *Act* of *Parliament* should be made purposely to reform it in the seventh year of the Reign of His *Majesties* Grandfather that now

* An elegant French Writer, since our Author's time, describes the effects of our Sea Coal thus:

Aspicis effosso terris carbone Britanni
Quam malè dissolvunt frigus, quam ducitur ægrè
Spiritus; infesto nisi tabescentibus igne
Monspelienfis opem tulerit pulmonibus aër.

● ● ● ● ● ● ● ●

Ægra salutifero potiaturs ut aëre tecum
Gallia, quæ foculos uno carbone Britannum
Mox struet ad ritum, ligno caritura; gravesque
Hauriet & fumos, & anhelis semina morbi;
Nè caveant quibus est nemorum mandata potestas.

VANIERII PRÆD. RUST.

is,

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is, which, to take off all prejudice, I shall here recite, as it remains upon Record.

“ Anno VII Jacobi Regis.

“ An Act against burning of Ling, and Heath, and other
“ Moor-burning in the Counties of *Yorke, Durham,*
“ *Northumberland, Cumberland, Westmorland, Lancaster,*
“ *Darbie, Nottingham, and Leiceſter,* at unseasonable times
“ of the year.

“ WHEREAS, many Inconveniencies are observed
“ to happen in divers Counties of this Realm, by Moore-
“ burnings, and by raising of Fires in Moorish grounds and
“ Mountanous Countries, for burning of Ling, Heath,
“ Hather, Furs, Gorſſe, Turſſe, Fearn, Whinnes, Broom,
“ and the like, in the Spring-time, and Summer-times:
“ For as much as thereby happeneth yearly a great destruc-
“ tion of the Brood of Wild-fowle, and Moore-game, and
“ by the multitude of groſſe vapours, and Clouds arising
“ from thoſe great Fires, the Aer is ſo diſtemper’d, and
“ ſuch unseasonable and unnatural ſtorms are ingendred,
“ as that the Corn, and the Fruites of the Earth are there-
“ by in divers places blaſted, and greatly hindered in their
“ due courſe of ripening and reaping. As alſo, for that
“ ſometimes it hath happened, that by the violence of
“ thoſe Fires driven with the Wind, great Fields of Corn
“ growing, have been conſumed, and Meadows ſpoyl’d, to
“ the

- “ the great hurt and dammage of His Majesties Subjects;
- “ which Moor-burnings, neverthelesse, may be used, and
- “ practised at some other convenient times, without such
- “ eminent danger or prejudice.

“ Be it therefore Enacted by our Sovereign Lord the
“ Kings most excellent Majesty, with the assent of the
“ Lords Spiritual and Temporal, and of the Commons
“ in this Parliament assembled, and by the Authority of
“ the same; That from, and after the last day of July next
“ ensuing the end of this present Session of Parliament,
“ it shall not be lawful for any Person or Persons whatso-
“ ever, in the Months of April, May, June, July, Au-
“ gust, and September, nor in any of them, to raise,
“ kindle, or begin; or to cause or practise to be raised,
“ kindled, or begun any Fires or Moor-burnings in the
“ said Counties of York, Durham, Northumberland, Cum-
“ berland, Westmorland, Lancaster, Darby, Nottingham,
“ and Leicester, or in any of them, for burning of Ling,
“ Heath, Hather, Furs, Gorse, Turffes, Fearne, Whinnes,
“ Broome or the like; neither to assist, further, nourish
“ or continue the same; and that all and every Person
“ and Persons, which from and after the said last day of
“ July, shall offend contrary to the true intent, and mean-
“ ing of this Statute, the same offence being proved by
“ confession of the Party, or by the Testimonies of two
“ sufficient Witnesses upon Oath, before one or more
“ Justices of the Peace of the same County, City, or Town
“ Corporate, where the offence shall be committed; or
“ the Person or Persons offending, apprehended, shall be
“ by

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“ by the said Justice, or Justices of the Peace, for every
“ such offence, committed to the Common Goale of the
“ County, City, or Town Corporate, where the Offence
“ shall be committed, or the person or persons apprehended,
“ there to remain for the space of one Month without Bail
“ or Main-prise.

“ And further, be it Enacted, by the Authority afore-
“ said, that all, and every person and persons, which shall
“ be so convicted and imprisoned as aforesaid, shall not be
“ enlarged from their said Imprisonment; but shall there
“ remain after the said Month is expired, without Bail or
“ Main-prise, untill such time as every such Offender re-
“ spectively shall pay, or cause to be paid, to the Church-
“ Wardens, or unto the Overseers of the poor of the
“ Parish, or place, where the same Offence shall be com-
“ mitted, or the Offender or Offenders apprehended, or
“ unto some of them, to the use of the poor of the said
“ parish or place, where the same Offence shall be com-
“ mitted, the Summe of Twenty Shillings, for every
“ such Offence committed or done, contrary to this Act.
“ This Act to continue until the end of the first Session of
“ the next Parliament.”

So far the *Act*. And here you see was care taken for the *Fowl* and the *Game*, as well as for the *Fruits*, *Corn*, and *Grasse*, which were universally incommoded by these unwholsome *vapours*, that distempered the *Aer*, to the very raising of Storms and Tempests^b, upon which a *Philoso-*

^b See Hipp. de Flatibus & Gall. l. Cib. boni & mali succi, instancing in Corn and Water, poison'd by ill Aer.

pher might amply discourse. And if such care was taken for the Country, where the more *Aereall* parts predominate, and are in comparison free; how much greater ought there to be for the City, where are such Multitudes of Inhabitants concern'd? And surely it was so of old, when (to obviate all that can be replied against it) even for the very Service of God, the *Sacrifices* were to be burnt without the *Camp*, amongst the *Jews*; as (of old) amongst the *Romans*, HOMINEM MORTUUM IN URBE NE SEPELITO, NEVE URITO. That Men should burn, or bury the Dead within the City Walls, was expressly prohibited by a Law of the XII *Tables*; and truly, I am perswaded, that the frequency of *Church-yards*, and *Charnel-houses*, contaminate the *Aer*, in many parts of this Town, as well as the *Pumps* and Waters, which are any thing near unto them, so that those *Pipes* and Conveyances which passe through them (obnoxious to many dangerous accidents) ought either to be directed some other way, or very carefully to be looked after.

We might add to these, *Chandlers* and *Butchers*, because of those horrid stinks, *nidorous* and unwholsome smells which proceed from the Tallow, and corrupted Blood: At least should no Cattel be kill'd within the City (to this day observ'd in the *Spanish* great Towns of *America*) since the Flesh and Candles might so easily be brought to the Shambles and Shops from other places lesse remote than the former; by which means also, might be avoided the driving of Cattel through the Streets*, which is a very great

* The number of lives lost by driving Cattle thro' the streets, must have been very great since our Author's time, few Weeks now passing without bad Accidents.
incon-

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inconvenience and some danger: The same might be affirm'd of *Fishmongers*, so wittily perstringed by *Erasmus*, per^d *Salsamentarios nempe, inquinari Civitatem, infici terram, flumina, aërem & ignem, & si quod aliud est elementum*. Then for the *Butcher*; That the *Lex Carnaria* of the Romans forbad them to kill, or have their *Slaughter-houses* within the Walls; that they had a certain Station assign'd them without; *ne si passim vivant, totam urbem reddant pestilentem*: So as, were the people to choose, *malunt* (says he) *habere vicinos decem Lenones, quam unum Lanionem*; They would rather dwell neer Ten *Bawds*, then One *Butcher*: But this is *insulsus Salsamentarius*, a quibble of the *Fishmongers*. I could yet wish that our nasty *Prisons* and Common *Goales* might bear them Company; since I affirm they might all be remov'd to some distant places neer the River, the situation whereof does so invite, and rarely contribute to the effecting of it. But if the Avarice of the men of this Age be so far deplorable, that we may not hope for so absolute a cure of all that is offensive; at least let such, whose *Works* are upon the Margent of the *Thames*, and which are indeed the most intollerable, be banished further off, and not once dare to approach that silver Channel (but at the distance prescrib'd) which glides by her stately Palaces, and irrigates her welcome Banks.

What a new Spirit would these easie Remedies create among the *Inhabitants of London*? what another *Genius* infuse in the face of things? and, there is none but ob-

^d Ἰχθυοφαγία.

ferves, and feels in himself the Change which a serene and clear day produces; how heavy and lesse dispos'd to motion, yea, even to good *humour* and friendly inclinations, we many times find our selves when the Heavens are clouded, and discompos'd, when the *South-winds* blow, and the humours are fluid, for what we are when the Skie is fair, and the *Aer* in good temper? And there is reason, that we, who are compos'd of the *Elements*, should participate of their *qualities*: For as the *Humours* have their source from the *Elements*; so have our *Passions* from the *Humors*, and the *Soul* which is united to this *Body* of ours, cannot but be affected with its Inclinations. The very dumb creatures themselves being sensible of the alterations of the *Aer*, though not by *ratiocination*, yet by many notorious *Symptomes*.

For I forbear to *Philosophise* farther upon this *Subject*, capable of very large and noble reflections; having, with my promis'd brevity, endeavour'd to shew the Inconveniencies and the Remedies of what does so universally offend, and obscure the Glory of this our renowned Metropolis; and which, I hope, may produce some effects towards the reforming of so publick a *Nuisance*. At least, let the continual sejourne of our Illustrious *CHARLES*, who is the very Breath of our Nostrils, in whose health all our happinesse consists, be precious in our Eyes, and make our Noble *Patriots* now assembled in *Parliament*, consult for the speedy removal of this universal grievance.

It is certainly of far greater concernment (however light and aery it may appear to some) than the drayning of a *Fen*,
or

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or beautifying an *Aqueduct*, for which some have received such publick honours, *Statues* and *Inscriptions*; and will (if ever any thing did) deserve the like acknowledgements both of the present and future Ages. You therefore, that have *Houses* in the *City*, you that bring up your *Wives* and *Families* from their sweet Habitations in the Country; that educate your *Children* here; that have *Offices* at *Court*; that study the *Laws*; In fine, all that are ὑπόκαπτοι ἔαδ eundem fumum degentes, bear a part in this request of mine, which concerns the universal benefit; and the rather, for that having neither *Habitation*, *Office*, nor *Being* in the *City*, I cannot be suspected to oblige any particular. The elegant *Ladies* and nicer *Dames*; All that are in Health, and would continue so; that are infirm or convalescent, and would be perfect; that affect the Glory of our *Court* and *City*, *Health* or *Beauty*, are concerned in this Petition; and it will become our wise *Senators*, and we earnestly expect it, that they would consult as well the State of the *Natural*, as the *Politick* Body of this Great Nation, so considerable a part whereof are *Inhabitants* of this August City; since, without their mutual harmony, and well-being, there can nothing prosper, or arrive to its desired perfection.

P A R T

P A R T III.

*An offer at the Improvement, and Melioration of
the Aer of London, by Way of Plantations, &c.*

THERE goes a pleasant *Tale* of a certain Sir *Politick*, that in the last great *Plague* projected, how by a Vessel freight with peel'd *Onions*, which should passe along the *Thames* by the *City*, when the Wind sate in a favourable quarter, to attract the pollution of the *Aer*, and sail away with the Infection to the Sea: Transplantation of Diseases we sometimes read of amongst the *Magnetical*, or rather *Magical* Cures; but never before of this way of Transfretation: but, however this excellent conceit has often afforded good mirth on the *Stage*, and I now mention to prevent the application to what I here propound; There is yet another expedient, which I have here to offer (were *This* of the poisonous and filthy *snoake* remov'd) by which the *City* and environs about it, might be rendred one of the most pleasant and agreeable places in the world. In order to this I propose*,

* If the reader should find himself disposed to smile when he sees the author gravely proposing to counteract the offensive smells of London by rows of trees, and borders of fragrant shrubs, and aromatic herbs; he should remember that this scheme (visionary as it may appear) was the foible of a writer whose enthusiasm for planting has proved of singular service to this kingdom; productive of noble plantations, ornamental to the country, and useful to the community.

That

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That all low-grounds circumjacent to the City, especially *East* and *South-west*, be cast and contriv'd into square plots, or Fields of twenty, thirty, and forty *Akers*, or more, separated from each others by Fences of double *Palisads*, or *Contr'paliers*, which should enclose a Plantation of an hundred and fifty, or more, feet deep, about each Field; not much unlike to what His *Majesty* has already begun by the wall from Old *Spring-garden* to *St. James's* in that *Park*; and is somewhat resembled in the new *Spring-garden* at *Lambeth*. That these *Palisads* be elegantly planted, diligently kept and supply'd, with such *Shrubs*, as yield the most fragrant and odoriferous *Flowers*, and are aptest to tinge the *Aer* upon every gentle emission at a great distance: Such as are (for instance amongst many others) the *Sweet-brier*, all the *Periclymenas* and *Woodbinds*; the Common *white* and *yellow Jessamine*, both the *Syringas* or *Pipe trees*; the *Guelder-rose*, the *Musk*, and all other *Roses*; *Genista Hispanica*: To these may be added the *Rubus odoratus*, *Bayes*, *Juniper*, *Lignum-vitæ*, *Lavender*: but above all, *Rosemary*, the *Flowers* whereof are credibly reported to give their scent above thirty Leagues off at Sea, upon the coasts of *Spain*: and at some distance towards the Meadow side, *Vines*, yea, *Hops*.

———*Et Arbuta passim,*
Et glaucas Salices, Castamque Crocumque rubentem,
Et pinguem Tiliam & ferrugineos Hyacinthos, &c. †

† Virgil.

For,

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