



CRE/-



Stanesby Alchorne Tower of London.

THE

UNCERTAINTY

OF THE

SIGNS of DEATH,

And the DANGER of

Precipitate Interments and Diffections, Demonstrated,

- I. From the known Laws of the Animal OEconomy.
- II. From the Structure of the Parts of the Human Body.
- III. From a great Variety of amufing and well-attefted Instances of Persons who have return'd to Life in their Cossins, in their Graves, under the Hands of the Surgeons, and after they had remain'd apparently dead for a considerable Time in the Water.

WITH

Proper DIRECTIONS, both for preventing fuch Accidents, and repairing the Misfortunes brought upon the Constitution by them.

To the Whole is added,

A Curious and Entertaining ACCOUNT of the FUNERAL SOLEMNITIES of many Ancient and Modern Nations, exhibiting the Precautions they made use of to ascertain the Certainty of Death.

Illustrated with COPPER PLATES.

L O N D O N:

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THE

DERSONS supposed to be dead, no	ot al-
ways really deprived of Life, P.	age 1
Johannes Duns Scotus bites his own I	
in his Grave,	2
A Person of Distinction comes to Life, a	s they
were performing the Funeral Service	over
bim,	3
A young Man, suppos'd to be dead of	f the
Plague, comes to Life as he was carr	ied to
the Grave,	4
A pregnant Woman, thought to be dead	, dif-
covers Signs of Life as the Surgeon	was
cutting the Child out of her Womb,	5
A .	

A Man of Quality comes to Life whilf the
Surgeon was laying open his Body, twenty-
four Hours after his suppos d Death, 6
A Woman comes to Life the next Day after her
Interment, by means of one of her Domef-
ticks, who attempted to steal a Ring from
ber Finger,
A Monk taken from his Grave breathing and
alive, four Days after his Burial, 8
Several dubious and fallacious Signs of Death,
11
Various Methods of distinguishing such as are
really dead from those whose Death is still
uncertain,
Proper Measures for discovering the Signs of
Life or Death, 22
Why long-delay'd Interments were invented, 27
Physicians earnestly intreated to try all possible
Methods of recalling the Dead to Life, 28
The Bodies of Persons who have been hang'd
not to be dissected till they become cold, 29
No dead Bodies should be put into a Coffin in
less than forty-eight Hours, or interr'd till
after three Days,
Putrefaction the only infallible Sign of Death,

Well-attested Fasts sufficiently evince the Un-
certainty of the Signs of Death, 33
Asclepiades discovers a Person to be alive
while they were carrying him to the Grave,
35
A Soldier, suppos'd to be slain in Battle, re-
turn'd to Life when laid on the Funeral Pile,
36 Company (1997)
Precautions taken by the Romans to aftertain
the Death or Life of their Citizens, 40
Sundry Instances of Persons rais'd to Life af-
ter their Interment, 41, &c.
A Child taken alive out of its Mother's Belly
_ · ·
after it had been interr'd with her, 48
Persons dying of the Plague ought not to be
foon interr'd, ibid.
Various Instances of the bad Effects of it, 51
A Lady comes to Life in the Vault where she
was buried, and eats her Fingers, 57
A Person recovered to Life after having been
sixteen Hours in the Water, 58
Another who had been under Water no less than
seven Weeks, 60
Remarkable Story of a Swifs Diver, 61
The Story of Ann Green, who was hang'd at
Oxford, 64
2.2.3. A

A Variety of surprizing Instances of Persons
who return'd to Life, at the Place of In-
terment, and after they had been actually
buried, 65, &c.
A Woman, falling into a Syncope, occasioned
by a violent Fit of Passion, suppos'd to be
dead, and put into a Coffin, 75
A Woman, suppos'd to be dead; revived by a
Candle accidentally setting fire to the Bed
on which she was laid out, 77
Lamentable Case of a Lady who was buried
alive at Basingstoke, 78
Strange Story of a Man who was suffocated in
a Coal-Pit, 79
Colonel Townshend's fingular Case, 84
A most affesting Story of a Lover, who took his
Mistress out of her Grave after she was in-
terr'd, and recovered her to Life, 90
That Persons may live several Hours without
Respiration, proved by many well attested
Instances, 98
Vesalius prosecuted for dissecting a Spanish
Gentleman before he was dead, 100
Signs of Recovery or Death more fallacious
and defestive in Acute, than in Chronical
Distempers, 105
Pre-

Precautions to be us'd in order to recover	thole
who have been drown'd or buried alive,	. •
How Respiration and the Circulation of	•
Blood is performed by those who discover	
wifible Signs of Life,	127
An Enquiry into the Funeral Solemnities o	,
Ancients, whence we may learn what	
cautions they used to ascertain the Real	
the Death of these supposed to be dead,	
Of the Funeral Solemnities of the Persians,	
Of the Chinese,	
· ·	136
Of the Americans,	137
3.1	ibid.
Of the Inhabitants of Greenland,	138
	ibid.
Of the ancient Inhabitants of Majorca	and
Minorca,	1 39
Of the Massagetæ, Dervises, Essedons	and
Caspians,	140
Of the Hyrcanians, Iberians and Colch	ians,
	141
Of the Egyptians,	142
Of the Inhabitants of Florida and the C	-
bee Islands,	145
Of the Jews, &c.	148
جا مان المان	Of
	U)

Of the ancient Custom of Conclamation	ons at
Funerals,	158
A particular Account of the Roman Fun	nerals,
	164
Diffidence with respect to Deaths not pr	receded
by the usual Signs, recommended,	187
Signs of an approaching Death,	190
These Signs not always infallible,	194
Important Reflections, and Directions to	Ana-
tomists and Surgeons,	195
Measures to be taken for the Relief of	those,
who are thought to be drown'd,	203
The old Method of hanging the Patient	by the
Heels exploded,	205
The celebrated Dr. Mead's Directions,	208
Useful Instructions for the Preservati	on of
drown'd Persons,	214



THE

UNCERTAINTY

OF THE

SIGNS of DEATH, &c.

SECT. I.



HO' Death, at some Time or other, is the necessary and unavoidable Portion of Human Nature in its present Condition, yet it is not always cer-

tain, that Persons taken for dead are really and irretrievably deprived of Life; since it is evident from Experience, that many apparently dead, have afterwards proved themselves

The Uncertainty of

themselves alive by rising from their Shrowds, their Coffins, and even from their Graves: It is equally certain, that some Persons, too foon interr'd after their supposed Decease, have in their Graves fallen Victims to a Death which might otherwise have been prevented, but which they then find more cruel than that procured by the Rope or the Rack. Incontestable Facts evince, that fome Subjects, too rashly laid open, have upon feeling the Smart of the diffecting Instruments, by their mournful Shrieks and Cries, discovered their too certain Marks of Life, and by that lamentable Circumflance exposed the unwary Operator to eternal Infamy, and the implacable Indignation of the furviving Friends.

(1.) Some may possibly look upon such Relations as fabulous and chimerical, and imagine it a Piece of Credulity below the Dignity of human Reason to believe, that Johannes Duns Scotus bit his own Hands in his Grave, or that the Emperor Zeno exercised the like Piece of distracted Cruelty on himself after reiterated Groans, distinctly heard by those who watch'd him. But tho'

we should grant, that Narratives of Accidents which happened so long ago, are purely spurious, yet surely we must yield a ready Assent to the Testimonies of Persons, whose Candour and Veracity we have no Reason to suspect; who only speak of things they have seen, and some of whom are not only still alive, but also capable of giving distinct Accounts of what has happened before their own Eyes.

distinct Accounts of what has happened be-Thus the learned Lancisi, first Physician to Pope Clement XI. in his Treatise De Morte Subit. Lib. I. Cap. xv. N. 2. fpeaks in the following Manner: " Histories and " Relations are not the only Proofs which " convince me, that many Persons, suppo-" fed to be dead, have shewn themselves " alive, even when they were ready to be " buried, fince I am induced to fuch a Be-" lief from what I myself have seen; for I " faw a Person of Distinction, now alive, " recover Sensation and Motion, when the " Priest was performing the funeral Service " over him in the Church: A Circum-" flance which struck the By-standers with " a Degree of Terror superior to their B 2 " Sur-

The UNCERTAINTY of

4.

"Surprize." Peter Zacchias, a celebrated Physician of Rome, in his Q. Med. Leg. T. iii. Conf. 70. N. 2. informs us, that, " In the Hospital which takes its Name " from the Holy Ghost, a young Man be-" ing feized with the Plague, by the Vio-" lence of the Disease fell into so perfect a "Syncope, that he was accounted dead, " and confequently had his Body laid " among those, who having died of the fame Disorder, were to be interred with " the utmost Expedition; but in the Boat " in which these Carcasses were carried over " the Tyber to the destin'd Place of Inter-"ment, the young Man discovered some Signs of Life, and was for that Reason " conveyed back to the Hospital, where he " perfectly recovered Life; but two Days after falling into a like Syncope, he was " judged irreparably dead, fo that his Body " was without any farther Hesitation laid " among those destin'd for the Grave; " notwithstanding which, he once more re-" turned to Life, and having particular " Care taken of him, was by the Use of so proper Remedies so perfectly cured of 66 his

"his Disease, that he is now alive." To which the Author adds: "I know that in "Rome, during this Plague, several Per"fons were buried for dead, tho' they were "really alive."

Philip Peu, a successful Surgeon and Man-Midwife in Paris, with a Degree of Candour no less uncommon than laudable, in his Prax. Obstetr. II. C. ii. S. 2. relates an unlucky Accident which happened in his own Hands; for being warmly folicited to perform the Cesarian Section on a pregnant Woman, whom he thought perfectly dead, because he perceived no Pulsation in the Sides of the Breast, and because a Mirror applied to her Mouth was not tarnished by her Breath, he did not hesitate to begin the Operation; but he had hardly plunged the. Point of his Instrument into the Integuments, when the Trepidation or Trembling of the Patient's Body, the Grinding of her Teeth, and the Motion of her Legs, convinced him, tho' too late, of his Rashness. This Blunder filled his Mind with fuch Terror, that he bound himself by an Oath, never for the future to attempt the same

Operation, till he was thoroughly fatisfied with respect to the Death of the pregnant Woman. The like Misfortune is faid to have lately happened to a Surgeon ordered to lay open the Body of a certain Man of Quality before twenty four Hours, after his fupposed Death, were expired. And it is fufficiently known to what Hardships and Inconveniencies the like Accident exposed Vesalius, (2.) the greatest Anatomist of the Age in which he lived. But if these wellvouch'd Histories, consecrated to Immortality, and faithfully handed down to latest Generations in the justly celebrated Productions of their respective Authors, should be difregarded, we can produce living Witnesses to attest Facts of the same Nature: But omitting many of this Kind, we shall only mention those to whose Vouchers the Curious or Incredulous may still have Recourse for Satisfaction.

The first Evidence we shall then produce is Father Le Clerc, formerly Principal of the College of Lewis the Great, and a Man universally esteemed for Probity and Candour: This Gentleman will inform any Person,



T. Halett inv; Sculp.

Person, who has a Mind to apply to him, that the Sifter of his Father's first Wife being interr'd with a Ring on her Finger in the publick Church-Yard of Orleans, next Night a Domestick, induced by the Hopes of Gain, uncovered and opened the Coffin, but finding that he could not pull the Ring off the Finger, began to cut the latter; the violent Agitation produced in the Nerves by the Wound, rouzed the Woman, whose hideous Shrieks, extorted by the Pain, not only struck Terror into the facrilegious Robber, but also put him to Flight without his intended Booty; the Woman in the mean time disengaged herfelf, as well as possible, from her Shroud, returned home, and lived with her Hufband ten Years, during which Time she furnished him with an Heir and Representative of his Family.

Mr. Joseph Mareschal, Chaplain of the Metropolitan Church of Paris, Prior of St. John's de la Motte au Mans, and a Man whose Probity and Attachment to Truth are genuine Ornaments to the sacred Character he bears, attests, that about the

Year 1714, when passing through the Street of Jean Robert, he saw a Woman wrapt up in a Woollen Covering, and fitting in an Arm-Chair at the Door of an House, hard by the Cossin in which she had been conveyed thither, and from which she had been but just before releafed. The fame Gentleman declares, that in the Year 1722 or 1723, he faw certain Perfons meet the publick Bearers, who were coming into the Street called Champ Fleury, in order to convey a Corpse to the Place of Interment, and heard the former tell the latter, that they might return, fince the Person whom they believed to be dead, was alive, and but lately released from his Coffin.

Mr. Benard, a skilful Surgeon of Paris, certifies, that in the Parish of Riol he himfelf, when a young Man, together with his Father and several other By-standers, saw a Monk of the Order of St. Francis, who had been buried three or four Days, taken from his Grave, breathing and alive, with his Arms lacerated near the Swathes employed in securing them; but he died immediatey

mediately after his too late Releasement (3.) This Gentleman also afferts, that a faithful Narrative of so memorable an Accident was drawn up by publick Authority, and that the raising of the Body was occasioned by a Letter wrote from one of the Monk's Friends, in which it was affirmed, that he was subject to Paroxysins of the Catalepsy.

Mrs. Landry, a Gentlewoman of uncontested Veracity, and Widow of a late skilful Engraver of the same Name, certifies, that her Father was for some Hours laid out as dead, and that by conveying some Salt-Water into his Mouth, at the Instigation of a Gentlewoman who was his Friend, and resolutely affirmed that he was not dead, he recovered, and was not only cured of that Indisposition, but also lived a long Time after it.

The Facts already related feem sufficient to confirm the Words of the celebrated Lancist, when he tells us, "That in the "Time of the Plague Things are transfuncted with such Disorder and Precipitation, that little Care is taken to distinguish to the property of the property of the Plague Things are transfunction, that little Care is taken to distinguish the property of the prope

10 The UNCERTAINTY of

" guish those who are really dead, from " fuch as only appear to be deprived of " Life." May we not therefore justly sufpect, or rather, have we not good Reason to believe, that the like unlucky Accidents happen during the Times of violent epidemical Disorders, in which vast Numbers of Persons, who have been too soon interr'd, probably call aloud from their Graves for a due Vengeance on those, who have barbarously exposed them to a violent Death, which a little Patience might have prevented. The fame Horror, Murder, and Destruction, no doubt, attend the precipitate and tumultuous Interments after Battles and Sieges; where Persons only halfdead, or possessed of perfect Life, are promiscuously thrown into Ditches with such as are really and irretrievably dead.

SECT. II.

THE elegant and judicious Celsus, in Lib. II. Cap. v. informs us, that the justly celebrated Philosopher Democritus was of Opinion, that the Signs of Death were

not fufficiently certain (4). In Apoplexies, in Syncopes, and in Suffocations, whether true, fuch as those of Persons hanged, strangled, drowned, shut up in too confin'd Places, or fuddenly cut off by pernicious Vapours and Exhalations; or of the spurious Kind, fuch as those of hysteric Women, hypocondriac Patients, and Persons rack'd by violent Passions of the Mind, or feized with Diforders of an analogous Nature, we are often deceived with respect to the Signs of Death: But this Misfortune is less owing to the Impersection of Medicine, than to the Ignorance or Negligence of Physicians, and the Carelessness, Poverty, or perhaps fometimes the wicked Disposition of those who have the Care and Management of the Sick. The Redness of the Face, the Heat of the Body, and the Softness of the flexible Parts, are precarious and uncertain Marks of a remaining Principle of Life; and on the contrary, the Paleness of the Complexion, the Coldness of the Body, the Rigidity of the Extremities, and the Abolition of the external Senses, are very dubious and fallacious

12 The UNCERTAINTY of

Signs of a certain Death. The Pulsation of the Arteries and Respiration are infallible Signs of Life, because without the two first the last cannot subsist: But we are by no Means to imagine, that these two Motions are totally extinguished, when they become invisible to the Eye, or imperceptible to the Touch. If we continue to investigate these Motions for fome Time, we may perhaps discover the Pulse, which was imperceptible in the Wrist when straight or reclin'd, by gently bending it forward; fince in the last Situation the relaxed Artery affords a free Passage to the Blood, tho' conveyed to it with a very inconsiderable Force; whereas the Tension of the Artery in the two first Situations entirely stops the progressive Motion of the vital Fluid. If we do not perceive the Pulfation of the deep-feated Artery near the Base of the Radius 2, we may

^{*} The Radius is one of the two Bones of the Fore-Arm, which in the most ordinary Situation of that Part constitutes its superior Portion; it in a particular Manner possesses that Place, when the Pulse is felt.

perhaps discover it between the Thumb and the adjacent Bone of the Metacarpus b; but we are to guard against a too strong Compression of the languid Artery in this Part, lest we should by that Circumstance occasion a Defect of the Pulse; nor are we inadvertently to take the Pulfation of the arterial Extremities in the Points of the Fingers, for that of the Artery we feel, fince by fuch a Mistake we may be induced to believe the Person alive, after he is really dead (5). But tho' all these Scrutinies should prove unsatisfactory, we are not for that Reason to be totally discouraged. From the Pulse of the Arm we must proceed to that of the Temples, and if this fhould escape us, we must have Recourse to the Carotid Arteries, Vessels not only

b The Metacarpus is an Affemblage of various Bones, which compose the Palm of the Hand. Under the Skin, between the Thumb and that Bone of the Metacarpus which sustains the Fore-Finger, is lodged an arterial Ramification so considerable, that its Pulsation is not only perceptible to the Touch, but also visible to the Eye.

14 The UNCERTAINTY of

of larger Diameters than the others, but also more directly exposed to the Action of the Blood propell'd from the Heart: But these Arteries must not, like the others, be gently felt, fince before we can obtain due Satisfaction, we must plunge the Fingers pretty deep, under the posterior Margin of one of the Muscles, called the Sterno-Mastoidæi c. A skilful Hand can easily trace the Crural Arteries, near the Groins, in order to discover the State of the Circulation. Besides these different Scrutinies we may also find Signs of Life in the Parts adjacent to the Heart; for this Purpose the Body must not be laid on its Back, but almost entirely on one or other of the Sides; for

c The Muscles called Sterno-Massoidæi are two Muscles, whose inferior Parts adhere to the Sternum, a longitudinal Bone, dividing the Fore Part of the Thorax into two equal Parts; but the superior Parts of these Muscles are fixed to an Eminence of one of the Bones, which constitute the Base of the Cranium, and this Eminence may be felt under the posterior Part of the Ear: These are two of the Muscles which serve to turn the Head on the Neck.

when the Body is laid on its Back, every one must be sensible, that the Heart, as it were, fublides towards the Spine, and is fo removed from the Præcordia, that its Apex acts very gently, and fometimes not at all on them. Tho' the Apex of the Heart is generally directed to the Left Side, yet there have been Persons in whom its Pulsation was perceptible in the Right; and upon laying open fuch Subjects after Death, an entirely preternatural Disposition has been found, not only with respect to the Situation of the Heart, but also of all the Thoracic and Abdominal Viscera; and perhaps this preternatural and uncommon Disposition of the Parts has fometimes misguided Physicians in treating Disorders of the Liver, of the Spleen, of the Colon, and especially of the Cæcum or Head of the Colon. Whatever Care and Circumspection we use in making the Scrutinies hitherto specified, yet the Pulsation of the Heart and Arteries is fometimes fo infensible (6), that we are very subject to be deceived, and believe the Person dead, who has few Signs of Life, if we do not fatisfy ourselves with

16 The UNCERTAINTY of

with respect to his State and Condition by other Signs. Respiration affords Marks no less precarious than those of the Pulse; fince it is fometimes fo languid, and as it were over-power'd, that neither the Eye nor the Hand can discover the slightest Motion of the Breast; for as very faint Vibrations of the Heart and Arteries, together with the free, tho' insensible Entry of the external Air into all the Ramifications of the Bronchia, are sufficient to prolong Life for some Time, even tho' there be no fensible Motion or Pulsation of the exterior Arteries; fo there is almost nothing requifite to supply the Place of a manifest and fensible Respiration, but the elastic Force of the Bronchia and Pulmonary Vesicles asfifted by flight Oscillations of the Heart and Pulmonary Artery (7). But tho' we are furnished with no more certain and infallible Methods, than those already specified, of acquiring a fatisfactory Knowledge of the State of the Organs subservient to the Circulation of the Blood, yet this Misfortune does not supercede or cancel our Obligation to examine the Respiration, and the Inftruments.

ftruments of Motion and Sensation; since by such a Neglect we may possibly pronounce the Person dead, who is alive, and by such a fatal Blunder deprive him at once of a present Recovery and subsequent Life.

SECT. III.

IFFERENT Authors have propofed different Methods of diftinguishing fuch as are really dead, from those whose Death is still uncertain. Thus, in order to render a languid and over-power'd Respiration sensible, some, with a steady Hand, apply the Flame of a Wax-Candle to the Mouth and Nostrils, imagining that the tremulous Motion of the Flame from one Side to another, when not produced by some other Cause, is a Proof that Life is not as yet destroyed; whereas they form the contrary Judgment, when the Direction and Situation of the Flame are continually the fame. Others pretend to afcertain the Reality of Life or Death by applying to the Mouth or Nostrils a little fine Wool

18 The Uncertainty of

Wool or Cotton. But these Methods are as fallacious as they are common; fince Persons not only alive, but also bless'd with perfect Health, may by checking their Refpiration, frustrate the Ends of such precarious Scrutinies: Of this any one may be convinced, by making the Experiment on himself. Some foolishly imagine, that when a Mirrour applied to the Mouth and Noftrils is tarnished, it affords a Proof of a still subsisting Respiration; but this Method is attended with no smaller Degree of Uncertainty than the others; fince almost fimilar Vapours are discharged from the Mouth and Nostrils of a really dead Person, who is as yet warm. Others laying the Body on its Back in fuch a Manner, as to fecure it most effectually from Motion, put a Glass full of Water upon the Xiphoide Apophysis or Epiphysis d, imagining, that when they

d It is before observed, that the Sternum is a longitudinal Bone dividing the Breast into two equal Parts; this Bone at its inferior Part, commonly called the Pit of the Stomach, terminates

they perceive Motion in the Water, Life is not as yet ended; whereas they take a perfect State of Rest in the Liquor to be a Proof of certain Death: But in order to give this Method of Scrutiny all the Advantage and Certainty of which it is fufceptible, the Body ought not to be placed entirely on the Spine of the Back, but turned in fuch a Manner to one of the Sides, as that the Extremity of the Cartilage of the ante-penult Rib may be elevated as much as possible, and have the Vessel containing the Water placed upon it; fince it is much better disposed to render the slightest Motion of the Breast senfible, than the Xiphoid or Ensiform Cartilage. But it is certain from Experience, that a flow, gentle and infenfible Motion

in a kind of sharp or pointed Production, generally called the Xiphoide or Ensiform Cartilage, from the Resemblance it bears to the Point of a Sword or Dagger. The Terms Apophysis or Epiphysis imply nearly the same with the Word Excrescence.

20 The Uncertainty of

of the Diaphragm alone, without the least Motion of the Ribs, is sometimes sufficient in the Cases we have specified, to support and carry on Respiration; and in such a State it is absolutely impossible, that the Water should have any Motion communicated to it: We are however carefully to guard against taking the fermentative Motion of the Abdominal Humours of a Corpse, which may possibly be conveyed to the Water in the Veffel, for the genuine and real Motion of the Organs subservient to Respiration; neither ought we, after a fruitless and unfuccessful Trial of these Methods, to imagine that there is no Hope left, and for that Reason cruelly abandon, to an una-

• The Diaphragm is a muscular Kind of Partition, separating the Thorax from the Abdomen, and which bending downwards in the latter, by that Means not only augments the Capacity of the former, but also contributes greatly to facilitate the Entry of the Air into the Lungs: In some Persons the Dilatation of the Breast, even in a natural State, depends entirely on the Diaphragm.

voidable Death, a Patient as yet not dead, and who perhaps would not die at that Juncture, if we should neglect no Means of recalling him to Life; for this Purpose, we ought to irritate his Nostrils by introducing into them Sternutatories, Errhines, Salts, stimulating Liquors, Synapisms, the Juice of Onions, Garlic, and Horse-radish, or the feather'd End of a Quill, or the Point of a Pencil: We must also rub his Gums frequently and Arongly with the same Substances; stimulate his Organs of Touck with Whips and Nettles; irritate his Intestines by Means of Clysters and Injections of Air or Smoke; agitate his Limbs by violent Extensions and Inflexions; and if poffible shock his Ears by hideous Shrieks and excessive Noises; only we ought by no Means to conclude, that the Sense of Hearing is totally loft, because the Person under Examination does not discover himfelf to be possessed of it, by the slightest Motion of the Eye-lids, the Lips, the Fingers, or any other Parts of the Body; for as it is generally thought, that the Heart is the first Part of the Body which moves,

22 The UNCERTAINTY of

fo those who, after they are deprived of all the other Senses, give distinct Relations of every Thing they have heard during that Time, can attest, that the Sense of Hearing remains longer than any of the rest: The Truth of this is in a remarkable Manner confirmed by the Testimony of a celebrated Priest, who having affirmed, that it was unlawful to give Absolution to a dying Person, who by no Signs discovered that he had the Sense of Hearing, altered his harsh Opinion, after he himself had fallen into a Deliquium fo violent, as to deprive him of all Motion, tho' at the fame Time he distinctly heard the whole Conversation of those, who were present when his Misfortune happened.

SECT. IV.

IN order to discover the Signs of Life or Death, it is in the last Place necessary to call in the Aid of that Part of Medicine, whose Effects, according to Cel-sus, are most sensible and manifest. The Chirurgical Measures, then esteemed most proper

proper for these important Purposes, are principally Wounds made either with pricking or cutting Instruments, or by Means of Fire: these Dilacerations of the Parts have fometimes recalled from apparent Death to real Life, Perfons on whom milder Methods had no more Effects, than they would have produced on Stocks or Statues: for the minute Fibrils of the Extremities of the Nerves, which principally constitute the Organ of Touch, being vellicated, divided, lacerated and stript of the Epidermis which covers them, by the violent Action of Fire, or of a cutting or pricking Instrument, with inconceivable Expedition, and in a Manner hitherto unknown, transmit a Sense of the most exquifite and lively Pain to the common Senfory or Seat of all the Sensations. For this Reason, pricking the Palms of the Hands, or the Soles of the Feet, and scarifying the Scapulæ, Shoulders and Arms, are Methods which have often proved fuccessful in determining with respect to Deaths, before dubious and uncertain. From this we may easily account for the Success of the rash Conduct

24 The Uncertainty of

Conduct of a certain Person, who, thrusting a long Needle pretty far under the Nail of an Apoplectic Woman's Toe, who had no Signs of Life, by that feemingly cruel Expedient quickly restored her to herself. The Instances already enumerated sufficiently evince, that fuch Incisions have shewn the Persons, on whom they were made, to be really alive after they were taken for irretrievably dead. But the Scrutinies made by Burning are generally esteemed the most efficacious of all others, for deciding with respect to Life or Death. Thus the celebrated Lancisi, in Tr. de Mort. Subit. Lib. H. Cap. v. N. 11. informs us, that some labouring People, who could not by the most strong and powerful Remedies, be rouz'd from profound Apoplexies, have been instantly restored to Life by applying hot Irons to the Soles of their Feet; other Authors recommend the Crown of the Head, as the Place most proper for an Operation of this Kind: But we may with the same View, and with equal Success, apply Water when boiling, common Wax when melted, Spanish Wax when burning,

or even a Match when lighted, to the Hands, to the Arms, or to the Skin of any other Part of the Body. Of the fame Nature we may also reckon the violent Frictions of a certain Physician, mention'd in Eph. Nat. Cur. Die 1. an. 8. who perceiving, that the Limbs of a Man who was believ'd to be dead, were still flexible and pliant, tho' no Pulse was felt, tho' the Immobility of the Cotton applied to his Mouth; fhew'd that his Respiration was gone, and tho' the most acrid Clysters were injected to no Purpose, yet order'd the Soles of his Feet to be strongly and incessantly rubb'd with a coarse Hair-cloth, immers'd in an highly faturated Brine; by which Means he recall'd his Patient to Life in three Quarters of an Hour. However efficacious these Methods of determining, with respect to Life or Death, may appear, it is nevertheless certain, that they are fometimes infufficient and fallacious: For Confirmation of this I shall, without collecting other Instances, appeal to a memorable History communicated to the Royal Academy of Sciences, in

26 The UNCERTAINTY of

in which we have the furprizing Account of a certain Soldier, who had no Sense of Pain created by the Application of a red hot Iron to the Parts of his Body, tho' all the Organs of voluntary Motion were in a good Condition.

SECT. V.

11.

IF any should ask, why so many Scrutitinies? or why so fond of Incisions, Punctures, and Burnings? I answer, The Fate of others strikes Terror into myself strikes Twice the Physician condemn'd me to the Grave; first in my Infancy, and then in my Youth. Besides, the celebrated Zacchias, in

of the Fables of Phadrus relating to a fick Lion, who in his Distress receiv'd a Visit from a Fox; but the Fox, without approaching the Lion, thought proper to testify his Concern and Sorrow at a Distance: Upon this, the Lion ask'd the Reason of such a Piece of Conduct, and the Fox as readily satisfied him by the following Answer; The Example of others makes me afraid; for I see the

in Qu. Med. Leg. Tit. 1. q. 9. n. 54. justly observes, " That no one ought either to " blame or ridicule the most prudent Phy-" ficians for trying all the Methods they " possibly can, on those who are either " really dead, or believ'd to be fo, in " order to discover whether they have still " any remaining Principle of Life." Lancifi also, in Tr. de Mort. Subit. L. I. Cap. 15. to the same Purpose, quotes the following Expostulation of the incomparable Quintilian; " For what Purpose do ye ima-" gine that long delay'd Interments were " invented? Or on what Account is it that " the mournful Pomp of funeral Solemni-" ties is always interrupted by forrowful "Groans and piercing Cries? Why, for " no other Reason, but because we have " feen Persons return to Life, after they

the Footsleps of those who have enter'd into your Den; but I can discover no Marks of their ever having return'd. This Allusion is just and beautiful; since for one Person preserv'd after Interment, many have in all Probability died in their Graves.

" were about to be laid in the Grave as " dead. For this Reason, adds Lancist, " the Legislature has wifely and prudently or even too " fpeedy Interment of all dead Persons; " and especially of such as have the Mis-" fortune to be cut off by a fudden Death." The fame Author also in the subsequent Chapter earnestly intreats, not only Physicians, but likewise all benevolent and welldispos'd Persons, who may have an Opportunity to try these and all other possible Methods of recalling the Dead to Life. And in Lib. II. Cap. 5. he warmly exhorts Physicians to be diligent and industrious in finding out new Measures, if not for a perfect Recovery of the Dead, yet at least for regaining a happy, tho' perhaps a short Portion of Time, in which they may be duly touch'd with a Sense of their Sins, and recommend themselves to that Being, who is alone able to pardon them (8).

The celebrated *Riolanus*, formerly an Ornament to the Faculty of Medicine in *Paris*, has long ago furnish'd us with a similar Instance of chirurgical Compassion; since when.

when, fpeaking of the Bodies of hang'd Persons, by public Authority destin'd to Diffection, he tells us; " That so long as " the Body is warm, and the Person but " lately executed, we are not to diffect " him; fince, if there is still any Prospect " of recalling him to Life, we are equally " bound by the Principles of Humanity 44 and Charity to do all we can for that "Purpose, in order to procure him, if "possible, a favourable Opportunity of "Repentance." But as we have not, efpecially in the Cases hitherto specified, any absolutely certain Signs of Death, except the livid Spots which appear on the Skin, and the cadaverous Scent of the Subject, which is widely different from all other Smells, even that arifing from the Excrements, or the still more disagreeable Odour peculiar to certain malignant Ulcers; the fafest Way is to let the suppos'd dead Perfon remain in Bed, covered with Clothes, and his Head supported with a Bolster and Pillow, as if he was alive, and not to put him in his Shrowd and Coffin, till two or eveneven three Days after, when his whole Body is become fpontaneously cold under the Bedclothes, and all his Limbs are rendered rigid and inflexible.

Terilli, a celebrated Physician of Venice, in Tr. de Causis Mort, repentin. Sect. vi. Cap. 2. gives us the following memorable and important Advice; "Since, fays he, " the Body is fometimes fo depriv'd of " every vital Function, and the Principle " of Life reduc'd fo low, that it cannot " be diftinguish'd from Death, the Laws " both of natural Compassion and reveal'd "Religion oblige us to wait a fufficient " Time for Life's manifesting itself by the " usual Signs, provided it should not be " as yet totall; extinguish'd; and if we " should act a contrary Part, we may pos-" fibly become Murderers, by confining to " the gloomy Regions of the Dead, those " who are actually alive. Now the Time, " by the Generality of Authors, allotted as " fufficient for this Purpose, comprehends 44 three natural Days, which amount to " about feventy-two Hours; and if during " this Interval no Marks of Life should "appear,

" appear, but on the contrary the Body
" should diffuse a fetid and cadaverous
" Smell, we may rest satisfied with the
" Certainty of the Death, and consequently
" proceed to the Interment without any
" Hestation of Mind, or Scruple of Con" science."

The celebrated Zacchias is of the fame Opinion; fince in Tom. III. Conf. 79. N. 21. he tells us, "That there is no other " infallible Proof of Death, but a begin-" ning Putrefaction in the Body (9)." We ought not therefore to be furpriz'd at the feemingly whimfical Precaution of fome Persons, who have in their Wills ordered, that they should not be put in their Cossins till at least forty-eight Hours after their apparent Death, and till all the different Methods of Incision, Puncture, and Burning, have been tried upon them, in order to acquire a greater Certainty of their Deaths. But without running back into past Times for Instances of this Precaution, 'tis sufficiently known, that a Will of the same Nature was in the Beginning of the Year 1742 not only made by Madame de Corbeville, a

32 The UNCERTAINTY of

Lady of Distinction and a Canoness, but also faithfully and punctually sulfilled by her illustrious Executor. As for my own Part, I earnestly request of those who shall have an Opportunity of seeing me dead, that they would not only use the Methods already prescrib'd, but also every other possible Expedient, in order to satisfy themselves whether I have really paid the last Tribute of human Nature. From what has been said 'tis sufficiently obvious, that the Signs of a dubious Death are less uncertain by Chirurgical, than by any other Methods.



ADDITIONS.

Single Fact of whatever Kind, (1).when well attefted, is fufficient to make fuch lafting Impreffions on the prudent and judicious Part of Mankind, as are capable of keeping them continually on their Guard; but this is not univerfally the Case; for Persons who pretend to think in a Manner different from other Men, are always fo full of Scruples, and fo inviolably attach'd to certain Peculiarities of Thought, rather inspir'd by a Defire of being esteem'd singular, than produc'd by a Dread of believing without fufficient Evidence, imagine that they have a just Title to look upon single Facts as exceptionable Accidents from which no general

34 The Uncertainty of

neral Conclusion can be drawn. Others have their Minds but slightly and supersicially touch'd by the most striking Incidents of this Kind; whilst the Imaginations of others are so insensible, as to require reiterated Shocks before they can be thoroughly rous'd to a due Regard and Attention to Truth.

As an Author, therefore, who is defirous of being univerfally useful, or who writes on Subjects in which all Mankind without Exception are deeply interested, ought to overlook or neglect none of those, into whose Hands his Works may fall, I shall add to the Histories collected by Mr. Winflow, in order to prove the Uncertainty of the Signs of Death, some others, whose Multiplicity will justify the Precautions of the Prudent, destroy the vain Pretexts of the Incredulous, make deeper Impressions on the Minds of the Giddy, and alarm those whose Insensibility calls for the most powerful and commanding Evidence.

The Truth, then, established in Mr. Winslow's Differtation was not first discovered by that learned Gentleman, since the

most remote and distant Ages furnish us with glaring Instances of the Uncertainty of the Signs of Death.

Thus Plutarch informs us, that a certain Person falling from an Eminence was cut off by the Fall; tho' there was not the least Appearance of any Wound; but three Days after, he suddenly resum'd his Strength, and return'd to Life as his Friends were conveying him to the Grave.

To this History Kirchman adds the following related by Apulcius.

Asclepiades, a celebrated Physician, in his Return from his Country Seat met a large Company conveying a Corpse to the Grave. A Principle of Curiosity induc'd him to ask the Name of the deceas'd Person; but Grief and Sorrow reign'd so universally, that no one return'd him an Answer: Upon which, approaching the Corpse, he found the Whole of it rubb'd over with Persumes, and the Mouth moisten'd with a precious Balm according to the Custom of the Greeks; then carefully feeling every Part, and discovering latent Signs of Life, he forthwith affirm'd that the Person was

not dead. Some inclin'd that his Discourse should be listned to, whilst others, especially the Friends, and above all the Executors of the Deceased, ridicul'd the Physician, and slighted his Profession; so that Ascepiades with some Dissiculty obtained a short Respite: But at last the Deceased being dragg'd from the Hands of the covetous Bearers, was carried back to his own House, where by the Essicacy of proper Remedies he was forthwith recall'd to Life. Celsus in Book II. Chap. 6. makes mention of this Accident.

Eusebius, Theodoret, and Calixtus, in Tr. de Immort. Anim. Cap. viii. from the tenth Book of Plato's Republic, relate the History of one Erus, an Armenian, who was slain in Battle. Ten Days after, when the furviving Soldiers came with a View to inter the Dead, they found all the Bodies corrupted except his; for which Reason, they conveyed him to his own House, in order to have him inter'd in the usual Manner; but two Days after, to the great Surprize of all who were present, he return'd to Life when laid on the Funeral Pile.

This Narrative related by Quenstedt is taken from Korman's Treatise De Miraculis Mortuorum, and we have Reason to believe that it is the fame with the Accident related by Valerius Maximus, Book I. Chap. viii. for there is no Difference of Circumstances. except with respect to the Name and Native Country of the deceafed Person, whom the last quoted Author calls Phereus, and fays he was a Native of *Pamphilia*; besides, what induces me to believe, that in one or other of the Relations there is a Mistake of the Name, is because Valerius Maximus also quotes Plato as his Voucher, and because it is hardly possible to conceive, that two Events fo exactly fimilar in every minute Circumstance should happen. Korman however, in his Treatise De Miraculis Mortuorum, relates both these Facts, ascribing to Plato the History of Phereus of Pamphilia, and quoting Noel Taillepied, in his Treatise De Apparitione Spirituum, for the Narrative relating to Erus the Armenian, without mentioning that the last quoted Author also took it from Plato: But whether there is any Mistake or not, Quenstedt from these

two Histories very justly concludes, "That "the Soul fometimes remains in the Body, "when the Senses are so fetter'd, and as "it were lock'd up, that it is hard to de- termine whether the Person is dead or alive."

Pliny, in his Natural History, Book VII. Chap. 52. which treats of those who have return'd to Life when they were about to be laid in the Grave, tells us, that Acilius Aviola, a Man of so considerable Distinction, that he had formerly been honoured with the Consulship, return'd to Life when he was upon the Funeral Pile; but as he could not be rescued from the Violence of the Flames, he was burnt alive. The like Missortune also happen'd to Lucius Lamia, who had been Prætor. These two shocking Accidents are also related by Valerius Maximus.

Celius Tubero had a happier Fate than his two Fellow-Citizens; fince, according to Pliny, he discover'd the Signs of Life before it was too late. His State however was far from being eligible, fince being laid on the Funeral Pile, he stood a fair Chance of being

being expos'd to the like Misfortune. Pliny from the Testimony of Varro adds, that when a Distribution of Lands was making at Capua, a certain Man, when carried a confiderable Way from his own House, in order to be inter'd, return'd home on Foot. The like furprizing Accident also happened at Aquinum. The last Instance of this Nature related by the Author occur'd at Rome; and Pliny must, no Doubt, have been intimately acquainted with all its most minute Circumstances; fince the Person to whom the Misfortune happen'd, was one Cerfidius, the Husband of his Mother's Sifter, who return'd to Life after an Agreement had been made for his Funeral with the Undertaker, who was probably much disappointed when he found him alive and in good Health.

These Examples drawn from the Roman History greatly contribute to establish the Uncertainty of the Signs of Death, and ought to render us very cautious with respect to Interments. But that we may not interrupt the Course of our Histories, we shall in another Place consider the Precautions

The UNCERTAINTY of

40

tions taken by the Romans, in order to afcertain the Death or Life of their Citizens: We must however observe, that Manilius so firmly believ'd that his Countrymen had inter'd living Persons, that in Astronom. 4. he expressly afferts, that some had return'd to Life and risen even from their Grayes.

Ex ipsis quidam elati rediere sepulchris.

Greece and Italy are not the only Theatres on which fuch tragical Events have been acted, fince other Countries of Europe also furnish us with Instances of a like Nature.

Thus Maximilian Misson, in his Voyage through Italy, Tome I. Letter 5. tells us, "That the Number of Persons who have been inter'd as dead, when they were really alive, is very great in Comparison of those who have been happily rescued from their Graves; for in the Town of Cologne, Archbishop Geron, according to Albertus Krantzius, was inter'd alive, and died for want of a seasonable Releasement. It is also certain, that in the

" fame

" fame Town the like Misfortune hap-" pened to Jobannes Duns Scotus, who in " his Grave tore his Hands and wounded " his Head. I am not ignorant, that one " George Herwart, who had a profound "Veneration for Duns Scotus, positively " denies this Fact, as too shocking and "difagreeable, in Opposition to Bezovius, " one of the most considerable Authors " who affert it: But neither Bezovius, nor " Paulus Jovius, nor Latomus, nor Majoli; " nor Vitalis, nor Garzoni, nor any of the " Authors who relate this Accident, can " be suspected of an Intention either to dif-" guife or conceal the Truth; fo that we " may reasonably give Credit to their Tes-" timonies."

"timonies."
Immediately after Mission subjoins the following Relation: "Some Years ago the "Wife of one Mr. Mervache, a Goldsmith of Poistiers, being buried with some "Rings on her Fingers, as she had defired when dying, a poor Man of the "Neighbourhood being apprized of that "Circumstance, next Night open'd the "Grave, in order to make himself Master

42 The Uncertainty of

"of the Rings; but as he could not pull them off without some Violence, he in the Attempt wak'd the Woman, who spoke distinctly, and complain'd of the Injury done her: Upon this, the Robber made his Escape, and the Woman, now rous'd from an Apoplectic Fit, rose from her Cossin, which for her was luckily open'd, return'd home to her own House, and in a sew Days recover'd a perfect State of Health: She not only surviv'd this Missortune for many Years, but also bore several Children, some of whom at present sollow the Business of their Father at Poistiers.

What induc'd Mission to relate these Histories, was a certain Piece of Painting preserved in the Church of the holy Apostles at Cologne, in order to keep up the Memory of a certain Accident, which that Traveller relates in the following Manner:

"In the Year 1571, the Wife of one of the Magistrates of Cologne being inter'd with a valuable Ring on one of her Fingers, the Grave-digger next Night open'd the Grave, in order to take it off; "but



" but we may readily suppose, that he was " in no small Consternation when the sup-" pos'd dead Body squeez'd his Hand, and " laid fast hold of him in order to get out " of her Coffin: The Thief however dif-" engaging himself, made his Escape with " all Expedition; and the Lady difentan-" gling herself in the best Manner she " could, went home, and knock'd at her " own Door; and in order to get the readier " Admission, and prevent her being long " expos'd to the Cold, she call'd a Servant " by his Name, and gave him a fuccinct "Account of what had happen'd to her; 66 but the Servant treated her as a Phan-44 tom, and with a Mind full of Terror " ran to relate the Accident to his Master, " who being as incredulous as himself, ri-" dicul'd him for his Folly: The Lady in " the mean time flood shivering in her "Shroud, till at last the Door was open'd " to her; after which, being warm'd, and " treated in a proper Manner, she resum'd " as perfect a State of Health, as if no " fuch Misfortune had befallen her."

44 The Uncertainty of

Simon Goulart, a pretty old tho' judicious Author, gives us a more accurate and circumstantiate Detail of this Accident in bis admirable and memorable Histories, printed at Geneva in the Year 1628.

The Lady, then, to whom this Misfortune happen'd, and whose Name was Reichmuth Adolch, was suppos'd to fall a Victim to a Pestilence which rag'd with such impetuous Fury, as to cut off most of the Inhabitants of Cologne; foon after however, according to Goulart, she not only " reco-" vered her Health, but also brought into " the World three Sons, who in Process of " Time were advanc'd to Livings in the " Church: But having for feveral Years " after this Deliverance liv'd honourably " with her Husband, she at last died a na-"tural Death, and was inter'd near the " Door of the boly Apostles Church, under " a lofty and magnificent Monument of "Stone. In order to perpetuate the Me-"mory of her Fate, there was affix'd to " the Monument a large Piece of Painting, " in which the Accident was not only re-" presented in a masterly Way, but also describ'd

" describ'd in German Verse. In the Year " 1604, John Bussenmacher, Citizen and

" Merchant of Cologne, in order to diffuse

" the Knowledge of this Piece of History,

" published a small Print taken from the

" original Design; and tho' at Cologne I

"have often feen that noble Piece of Paint-

" ing, which always warm'd my Soul with

" the tender Impressions of Humanity and

"Compassion, yet with the same View I

" fill preserve the Print published by Buf-

" senmacher."

In all this Narrative there is not a fingle Word of the Ascension of the Horses to the Granary of the surviving Husband, which however Misson has inserted in his Relation, tho' I know not for what Reason; since he is so far from believing it, that he at best esteems it a Tradition or popular Error, originally suggested by those who preserv'd the Memory of this Event by Monuments posterior to its genuine Date.

As a farther Proof of the Reality of fimilar Refurrections, Misson in his third Volume relates the History of Francis de Ci-

46 The UNCERTAINTY of

ville, who, in the Registers where his Fate is recorded, is said to have been three Times dead, three Times buried, and by the Grace of God three Times rais'd from the Dead. But that we may confine ourselves precisely to what relates to the present Subject, we shall only give an Extract of Misson's Relation.

Francis de Civille then, a Gentleman of Normandy, was a Captain of a Company confifting of an hundred Men, in the City of Rouen, when it was belieged by Charles the Ninth; at which Time Civille was twenty-fix Years of Age: In an Attack made by the Enemy he was wounded, and falling from the Rampart into the Ditch below it, was by fome Pioneers stript of his Cloaths, thrown into a Grave along with another Body, and cover'd with a little Earth: in this Condition he remain'd from eleven o'Clock in the Forenoon, till half an Hour after fix in the Evening, when his Servant came to take him out of his Grave: This faithful Domeftic embracing him, perceiv'd fome Signs of remaining Life, and for that Reason carried

carried him to the House in which he us'd to lodge, where he continued five Days and five Nights without either speaking, moving, or discovering the least Sign of Sensation, tho' he was now as hot by the Violence of a Fever, as he had before been cold in his Grave. The Town being taken, the Servants of an Officer belonging to the victorious Army, who intended to lodge in the House where Civille was, laid him upon a Straw-bed in a back Chamber, from a Window of which he was thrown by some Persons, who bore an Enmity to his Brother; but luckily he fell upon a Dunghil, where he remain'd in his Shirt more than three Days and three Nights, at the End of which Time one of his Friends, furprized to find him alive, fent him to a House in Rouen, where his Wounds being dress'd, and due Care taken of him, he was perfectly cur'd.

In this Hiftory I can only find two Interments and as many Resurrections; nor are any more mention'd in the memorable and admirable Histories of Goulart, where the Wound of Civille, and all the Accidents

dents subsequent to it are fully describ'd: But I have heard the following traditional Account of his third Interment and Resurrection.

The Mother of Civille happening to die big with Child in her Husband's Absence, was inter'd without any Thoughts of preferving the Infant by Means of the Cefarian Section. The Day after the Interment the Husband coming home, was no Doubt struck with Surprize, not only at the Death of his Wife, but also at the little Care which had been taken of the Child. With a View therefore to fatisfy himself, he order'd his Wife to be rais'd from the Grave, and an Aperture to be made in her Abdomen, from which Francis de Civille was taken alive: Tho' this Circumstance is foreign to our Subject, yet its furprizing Nature apologizes for its Infertion.

Simon Goulart, before quoted, has wrote a Chapter, the Title of which is, That Perfons who die of the Plague, or are cut off by any other violent and sudden Accident, ought not to be so soon inter'd as they generally are in several Parts of the World: He begins

this Chapter with an Extract of a Letter wrote by William Fabri, an eminent Surgeon, and directed to Doctor John James Crafft, Physician at Neufchastel. Goulart cloaths Fabri's Thoughts in the following Dress: " Levinus Lemnus, in the third " Chapter of his Book concerning the fe-" cret Miracles of Nature, has just Rea-" fon to condemn the too-precipitate Inter-"ment of Persons over-power'd by Le-"thargies, Apoplexies, or Suffocations of " the Matrix; for I know there have been " fome, supposed to be irretrievably cut off " by these Disorders, who, resuming Strength " and returning to Life, have rais'd the " Boards of their own Coffins. Nor should "any fuppos'd dead Perfons, especially "those who have before been subject to " Apoplexies and Lethargies, be too foon " confin'd to Coffins, because in such Dis-" orders the Soul only retires as it were to " her most secret and concealed Residence, " in order to make the Body afterwards " fenfible, that she had not entirely forsa-" ken it. Examples of this frequently oc-D 66 Cur

cur in ancient as well as in modern Au-" thors. Fabri adds, that in the Time of " the Plague, or when any other contagious or malignant Diseases rage, Physi-"cians should advise the Interment of the "Dead with all possible Expedition, be-" cause their Bodies, like extinguish'd " Lamps, Torches, or Flambeaux, diffuse " an Odour no less disagreeable than pre-" judicial: But fuch fudden Interments are " neither fafe, nor consistent with that " Humanity and Compassion, which ought " to animate the Breafts of Christians, as " is obvious from the following Histories." But what is furprizing, and even dishonourable to human Reason, too often the Victim of some Prejudice or other, is that Fabri relates these three Histories to Crafft, without drawing a just Conclusion from them, and even without observing, that as at other Seasons, so also in the Times of pestilential and contagious Diseases we ought not to interr Persons precipitately, and before we are thoroughly fatisfied with respect to their Deaths.

The first of these Histories gives an Account of a Man of twenty-two Years of Age, of the Town of Meniere, in the Canton of Fribourg, who, in the Year 1566, was feiz'd with a Plague, which cut off almost the whole Family wherein he lived, and he himself being taken for dead, on the fourth Day was laid out as such. Eight Hours however after his suppos'd Death, the Persons who were putting him in his Coffin, finding that he was neither cold nor stiff, began attentively to examine the State of the Body, in which they still perceiv'd a small and languid Degree of Respiration: For this Reason they put him into a warm Bed, applied hot Bricks to his Feet, and forc'd him to swallow a small Quantity of Malmsey Wine, by which Means he not only return'd to Life, but recover'd so fast, that in a Month's Time he was able to attend his usual Business. After this Accident he proved the Father of feven Children, and enjoy'd a good State of Health in the fixty-fourth Year of his Age.

52 The UNCERTAINTY of

The fecond History is that of *Reichmuth Adoleh* already related.

The third is that of the Master of an Inn in the Town of Cleves, who, feventeen Years before he recounted the Story to Fabri, fell into such a Syncope, on account of an acute and violent Disease, that he would have been interr'd for dead, if one Mr. John Wier had not recall'd him to Life by confining him to a warm Bed, applying Epithems 5 to his Wrists and the Region of his Heart, and forcing him now and then to fwallow fome Drops of corroborating and cordial Liquors. These Measures, however, ferv'd only to divert the Company at the Expence of the Physician, till fuch Time as their Propriety was justified by the Recovery of the Patient.

E Epithems are either fimple or compound Medicines externally applied, in order to produce fuch internal Effects as the Physician intends: These Topics are of various Kinds, such as Antisebrile, Stomachic, and Cordial, of which last Quality were these here mention'd.

Doctor *Craffi*, in order to make a fuitable Return to his Correspondent *Fabri*, remits him the five following Histories; which, as the Facts are only subservient to our Purpose, we shall abridge as well as the rest.

Burgundy, and especially the Town of Dijon, was in the Year 1558 afflicted with a violent Plague, which cut off the Inhabitants fo fast, that there was not Time to make a feparate Grave for each dead Perfon; for which Reason large Pits were made, and fill'd with as many Bodies as they could contain. In this deplorable Conjuncture Mrs. Nicole Lentillet shar'd the common Fate, and after labouring under the Disorder for some Days, fell into a Syncope fo profound, that she was taken for dead, and accordingly buried in a Pit with other dead Bodies; the next Morning after her Interment she return'd to Life, and made the strongest Efforts she could to get out; but her Weakness and the Weight of the Bodies with which she was cover'd, render'd her incapable of executing her D 3 Design.

54 The Uncertainty of

Design. In this wretched Situation she remain'd for four Days, till the Grave-diggers coming to inter other Bodies, took her up and carried her to her own House, where she recover'd a perfect State of Health.

The fecond Instance of this Nature, mentioned by Doctor Crafft, happened immediately before he wrote the following Account of it. A labouring Man of Courcelles near Neufchastel fell into so profound a Syncope, that he was taken for dead; but the Persons who were putting him in his Grave without a Cossin, perceiv'd some Motion in his Shoulders, for which Reason they carried him to his own home, where he persectly recover'd. This Accident laid a Foundation for his being call'd the Ghost of Courcelles.

A Lawyer of Vefoul, a Town of Francheaomté near Befançon, so carefully conceal'd a Lethargy to which he was subject, that No-body knew any thing of his Disorder, tho' the Paroxysins return'd very frequently. The Motives which principally induc'd him

to this Secrecy, was the Dread of losing a Lady to whom he was just about to be married: Being afraid, however, left fome Paroxysms should prove fatal to him, he communicated his Cafe to the Sheriff of the Town, who, by Virtue of his Office, was oblig'd to take Care of him, if such a Misfortune should happen. The Marriage was concluded, and the Lawyer for a confiderable Time enjoy'd a perfect State of Health; but at last he was seiz'd with so violent a Paroxysm of the Disease, that his Lady, to whom he had not reveal'd the Secret, not doubting of his Death, order'd him to be put in his Coffin: The Sheriff, tho' absent when the Paroxysm seiz'd him, yet luckily return'd in Time to preserve him: for he ordered the Interment to be delay'd, and the Lawyer returning to Life, furviv'd the Accident fixteen Years.

Doctor Craffi's fourth History is that of a certain Person who was convey'd to the Church, in order to be interr'd, but one of his Friends sprinkling a large Quantity

56 The Uncertainty of

of Holy Water h on his Face, which was uncover'd, he not only return'd to Life, but also resum'd a perfect State of Health.

The fifth Instance of a Recovery from suppos'd Death, related by Doctor Crafft, is that of James de Lavaur, Lord of the Manor of Boudry, in the County of Neufchaftel, who being feiz'd with a violent Cardialgia, fell into fo profound a Syncope, that he was taken for dead: But the Physician brought to his Relief from Fribourg being of a contrary Opinion, blowed powder'd Pepper into his Nostrils, by which Means he was not only recall'd to Life, but also furviv'd his Misfortune for a confiderable Time, according to Goulart; from whom the following Passage is quoted by William Fabri, in the fecond Century of his Chirurgical Observations, Obs. 96.

h We must here apprize the Reader, that this Effect was produc'd by the Coldness, and not by the Consecration of the Water, whose genuine Qualities can never be altered by a Rhapsody of superstitious Words.

[&]quot; Doctor

" Doctor Crafft subjoins other Histories " of Persons who, being interr'd alive, have " expir'd in their Graves and Tombs, as " has afterwards been discovered by va-" rious Marks made not only in their Se-" pulchres, but also in their own Bodie's. " He in a particular Manner makes men-"tion of a young Lady of Auxbourg, who " falling into a Syncope, in Consequence " of a Suffocation of the Matrix, was bu-" ried in a deep Vault, without being co-"vered with Earth, because her Friends " thought it sufficient to have the Vault " carefully shut up. Some Years after, " however, one of the same Family hap-" pening to die, the Vault was open'd, and "the Body of the young Lady found on 56 the Stairs at its Entry, without any Fin-" gers on the Right Hand."

As the Histories already related only give an Account of the Resurrection of Persons cut off by Sickness or Wounds, we shall now consider the Fates of some Persons, who have been drown'd and hang'd. Mr. Derham then, in the sixth Chapter of the

58 The Uncertainty of

fourth Book of his Physico-Theology, quotes the following History from Rechelin, De Aere & Alim. defest.

" About eighteen Years ago, a Gardner 41 of Tronningbolm, now fixty-five Years of " Age, and fufficiently vigorous and ro-" bust for one at that Period of Life, made an Attempt to relieve a Person who had fallen into the Water; but not * being fo cautious as he ought, he ventur'd upon the Ice, which broke and let in him fall into the Water, which at that Part was eighteen Ells in Depth. He " went perpendicularly to the Bottom, where his Feet stuck; and in this Situation he remain'd fixteen Hours before he was found. He himself says, that as soon as he was under the Water his Body became frigid, and loft not only the Power of Motion, but also all Sensation, except that he thought he heard the Sound of fome Bells, which were then ringing at " Stockholm: He at first also perceiv'd, as " it were, a Bladder before his Mouth, which hindered the Water from entring " by

46 by that Passage, tho' he found it entring " freely into his Ears; a Circumstance " which produc'd a Dulness in his Hearing " for some Time after. He was sought " for in vain during fixteen Hours, till at " last a Hook being fixed in his Head, he " was by its Means taken up; and after-" wards faid he was sensible of that Part " of his Fate. Whether from the Custom " of the Country, or the Persuasion of " particular Perfons, Attempts were made " to restore him to Life: For this Pur-" pose he was wrapt up in Blankets, lest " the Air entring too precipitately into his " Lungs should prove fatal to him. In " this Condition he was gradually warm'd; 44 then being wrapt in warm Sheets, he was rubb'd and tormented till the Mo-"tion of his Blood, which had been check'd " for so many Hours, return'd. At last " he was totally restor'd by Means of Cor-44 dials and Anti-apoplectic Liquors. He 44 as yet bears the Mark made by the "Hook, and fays, that he is still subject to " violent Pains in his Head. This fingular " Accident.

" Accident, attested by the Oaths of Eye-"Witnesses, induc'd the Queen to give " him an annual Penfion, and he was pre-" fented to the Prince, in order to give " him an Account of what had happened " to him. " Mr. Tilasius, Keeper of the King's "Library, has wrote the History of a "Woman who remain'd under Water for "three whole Days, who was reftor'd to " Life almost in the same Manner with the "Gardner; and who was alive when Tila-" fus wrote the Account of her. To this " we may add the Testimony of Mr. Bur-" mann, who assures us, that in Boness in " Pithovia, he heard a Funeral Sermon " preach'd upon the Death of one Law-" rence Jones, a Man of seventy Years of " Age, who, as the Preacher faid, was "drown'd when fixteen Years old, and " continued feven Weeks in the Water; " notwithstanding which Accident he re-"turn'd to Life, and enjoy'd good " Health.

"It is furprizing, continues Rechelin, that Stories fo well known, and fo fingular in themselves, should not be confectated to Immortality by the Attestations of Physicians of Note. As I believe that there are a great many secret things in Nature, and daily observe Accidents, which I before thought impossible; so I have no Reason to doubt of furprizing Facts related by so many Men of Learning, nor formally to deny a History, which at first appears incredible."

Mr. d'Egly, a Member of the Royal Academy of Inscriptions, has communicated to me the Measures he took in order to preserve the Life of a certain Swiss, who made a good Livelihood by plunging into the Water, and thrusting himself into the Holes in which he thought the large Fishes were contained.

This adventurous Swiss being one Day employed to provide Fish for a Company, who intended to have a splendid Dinner, promis'd to furnish them with a Dish of

62 The UNCERTAINTY of

fine Fish: His Employers accompanying him to the Brink of the River, and seeing him plunge into the Water, retir'd, thinking that he would not fail to keep his Word.

But when the Hour appointed for Dinner came, the Swiss did not appear with his Part of the Entertainment; so that when the half of the Afternoon was spent, the Company went to the River in order to know the Reason of their Disappointment: The Clothes of the Diver lying on the Brink, laid a Foundation for suspecting the Missortune which had befallen him; accordingly they ordered him to be searched for with Hooks, in the Place into which they had seen him plunge, and at last being found, he was taken out of the Water, tho' wounded in several Parts.

As the Swifs had been drown'd for about nine Hours, the Curate of the Place, who was present, inclin'd that he should be forthwith interr'd, and he had undoubtedly been confin'd to the Grave, had not Mr. d'Egly, who saw a kind of Ebullition in the

the Water discharg'd from his Mouth, asferted that he was not dead; for he justly attributed that Ebullition to the faint Remains of Respiration.

This Observation made a deep Impresfion on the Spectators, who carried him into an adjacent House, where having laid him out at full Length, they compress'd his Abdomen in order to facilitate the Difcharge of the Water he had swallowed; when in about three Quarters of an Hour having discharged a considerable Quantity of Water, he mov'd one of his Legs, which was a sufficient Proof, that he was ftill alive: For this Reason he was wrapt up in warm Sheets, and gradually restor'd to a natural Heat; then he was convey'd to a warm Bed, where, his Life becoming more and more confpicuous, a liberal Venefection was made, which was fucceeded by a Sigh, then by a fmall Degree of Knowledge of what pass'd, and a little after by a perfect Cure.

This important Service ever after touch'd the Heart of the Swift with a grateful Sense

Sense of the Obligations he lay under to Mr. d'Egly.

Mr. Derham, in the Part before quoted, gives us two Instances of the Resurrection of hang'd Persons. The first, seen by Pechlin, and recorded in Tr. de Aere & Alim. defect. Cap. vii. is that " of a certain Wo- man hang'd, and in all Appearance

"dead, who was nevertheless restor'd to

" Life by a Physician accidentally coming

" in, and ordering a plentiful Administra-

"tion of the Spirit of Sal Ammoniac."

The other Accident of this Nature is by Mr. *Derham* related in the following Words.

" The Story of Ann Green, executed at

"Oxford, Dec. 14, 1650, is still well re-

• membered among the Seniors there:

" She was hang'd by the Neck near half an

" Hour, some of her Friends thumping her

" on the Breast, others hanging with all

" their Weight upon her Legs, sometimes lift-

" ing her up, and then pulling her down

" again with a sudden Jirk; thereby the

" fooner to dispatch her out of her Pain, as

" the

" the printed Account of her informs us.

" After she was in her Cossin, being ob-

" ferv'd to breathe, a lusty Fellow stampt

" with all his Force, on her Breast and

"Stomach, to put her out of her Pain:

" But by the Affistance of Dr. Peity, Dr.

" Willis, Dr. Bathurst, and Dr. Clark, she

" was again brought to Life; I myself saw

" her many Years after, between which

"Time, and the Date of her Execution,

" fhe had, as I am inform'd, born feveral

" Children."

Tho' these two Histories lay a Foundation for a Variety of Reslexions, yet we shall only observe, that in both Cases a precipitate Interment would have been Murder; and that all the Presumptions of Death are not sufficient to authorize the Neglect of such Precautions and Tests, as are proper to ascertain the real State of the Body.

Kornman, in his Treatise De Miraculis Mortuorum, relates the following Histories.

Saint Augustine from Saint Cirille informs us, that a Cardinal of the Name of Andrew having died at Rome in the Presence of several By-standers, was next Day conveyed to the Church, where the Pope and a Body of the Clergy attended the Funeral Service, in order to do Honour to his Memory: But to their great Surprize, after some Groans, he recovered his Life and Senses. This Event was at that Time look'd upon as a Miracle, and ascrib'd to Saint Jerome, to whom the Cardinal was greatly attach'd.

The following Account seems more to resemble a Miracle, tho' we do not find that it was look'd upon as such.

Gocellinus, a young Man, and Nephew to one of the Archbishops of Cologne, falling into the Rhine, was not found for fisteen Days after; but was discovered to be alive, as he lay before the Shrine of Saint Suibert.

As an Excess of Credulity is unpardonable, especially in a Physician, so I am of Opinion, that there is nothing miraculous

in these two Events; since we ought to suppose no Effects preternatural, which can be produced by Physical Causes. Now the Histories before related give us just Reason to believe, that there was nothing miraculous in these two Resurrections.

Kornman from Galen gives us two other Instances of the Uncertainty of the Signs of Death. The first is that of a Man seiz'd with a Suffocation, which lasted for six Days, during the whole of which Time he continued without Eating or Drinking, and without any manifest Pulsation of his Arteries. The second is that of a certain Man, who happening to interr his Neighbour before seventy-two Hours from his suppos'd Death were expir'd, by that Precipitation prov'd his Murderer; since he was really alive when he was buried as dead.

After these and many other Observations of the same Nature, it is surprizing, that Kornman should be at a Loss to explain, how some dead Persons devour and swallow their Shrouds in their Graves, or how the Woman mention'd in Hondorff's Historical Theatre.

The UNCERTAINTY of

68

Theatre, devour'd herfelf. It is certainly more reasonable to ascribe these shocking Phenomena to the Despair natural to a Perion interr'd alive, than with him to fay, That such things cannot be accounted for; at least, adds he, we must not with the Rabbins suppose, that the Bodies of Men are the Prey and Nourishment of the Serpent, or, to use their own Words, of Azazeli, who is the Master of Flesh and Blood, and whom God, as we find in the Book of Genesis, has condemn'd to eat Dust all the Days of his Life, It is true, that by espousing this whimsical Notion, he would not have had an Opportunity of displaying his extensive Knowledge by proving that human Bodies are only Dust and Earth; a Proposition which no Doubt call'd for an elaborate Dissertation, in order to convince the Incredulous.

But as Distance of Time and Remoteness of Places are Circumstances which generally render Facts less striking and satisfactory, than otherwise they would be, we shall enumerate some Instances of the Uncertainty of the Signs of Death, which have happened in our own Times and in our own Country.

The first Example we shall mention of this Kind then, is that of a certain Canon of Bourges, who returning to Life whilst the Funeral Service was performing over him in the Metropolitan Church, was carried home to his own House, and perfectly cured of the Disorder, which was thought to have cut him off. He surviv'd this Accident a long Time, and was promoted to be Official of the Diocess of Paris.

The fecond Accident of this Nature happened at Toulouse; for a Lady being interr'd in the Church of the Jacobines with a Diamond Ring on one of her Fingers, a Servant of her own Family, concealing himfelf in the Church, when Night came on, went down into the Vault in which the Cossin was laid; but upon opening the Cossin he found, that the Swelling of the Finger hindered the Ring from slipping easily off, for which Reason he began to cut it. Upon this, the Pain extorting a Shriek

70 The UNCERTAINTY of

Shriek from the supposed dead Lady, the Domestic was seized with such Terror and Consternation, that he fell into a Deliquium. The Lady in the mean time continuing to bewail her wretched Situation, till the Hour appointed for Morning Prayers arriv'd, was luckily overheard by fome devout Perfons, who, guided by the Voice, descended into the Vault, where they found the Lady fitting on a Seat, and the Domestic lying by her half-dead. Upon this they run forthwith to awake the Husband, who ordered her to be brought home, where she perfectly recovered from her Diforder. The Indisposition however of the Servant was fo violent, that he could not be recall'd to Life, but died in twenty-four Hours after having accidentally preferved the Life of his Mistress

This is not the fingle Instance of precipitate Interments, which have happened in the Town of *Toulouse*; for I have in my own Possession the following Certificate, wrote and sign'd by Mr. Blau, a Native of Auvergne, and a Man of untainted Veracity.





"I hereto subscribing declare, that fifty"five Years ago, happening to reside at
"Toulouse for the sake of my Studies, and
going to St. Stephen's Church to hear a
"Sermon, I saw a Corpse brought thither
"in order to be interr'd: The Ceremony
however was delay'd till the Sermon
"should be over; but the suppos'd dead
"Person being laid in a Chappel, and at"tended by all the Mourners, about the
"Middle of the Sermon discovered mani-

" fest Signs of Life; for which Reason he

" was quickly convey'd back to his own

"House: So that from a Consideration of

"Circumstances it is sufficiently obvious, that without the Intervention of the Ser-

"mon the Man had been interr'd alive.

Paris, April 27, 1740.

BLAU.

Mr. Mozet, Letter-Founder in Paris, has given me an Account of the three following Accidents which happened at Rheims, the Place of his Nativity.

This Gentleman's Grandmother happening to be at her Prayers near the Coffin of

72 The UNCERTAINTY of

one of her deceased Neighbours, heard a certain Noise, made, as she thought, by some Motion within the Cossin; upon which she told a Clergyman, that the Woman was not dead. The like Noise being heard by some other Persons, who had been inform'd of what Mrs. Mozet had said, the Cossin was opened, and the suppos'd dead Woman found alive. It is about seventy Years since this Accident happened.

A young Girl, the Daughter of a Tradefman, of the Name of Gouge, being convey'd to God's Hospital, and suppos'd to be really cut off by the Disorder for which she was brought thither, happily discover'd the Signs of Life at the very Time she was on the Bier destin'd for carrying her Body to the Grave. After this Accident, which happened about twenty-five Years ago, she was not only cur'd of her Indisposition, but also entered into a Marriage State. This Fact can be as yet attested by her Sister, 'Jean Gouge, a Laundress in the Street call'd Arbaletre, in the Suburbs of Saint Marcel.

About thirty-eight Years ago, a Woollen-Draper of the Name of Husson, having put his Son to a Nurse, who lived pretty near Rheims, was soon after surprized with the melancholy News of the Child's Death. But as he was resolved to have the Evidence of his own Senses for a Fact in which he was so nearly interested, he made the best of his Way to the Place where his Son lay ready to be interred, and ordering the Costin to be opened, found him not only alive, but also so vigorous, that he survived the Accident twenty Years.

Mr. Mozet also inform'd me, that other Accidents of the same Nature had happen'd at Rheims; and it must be own'd, that the unaccountable Precipitation with which Interments are generally perform'd, renders what he said more than probable. Now, if a Multiplicity of Instances evince, that many have had the good Fortune to escape being interr'd alive, it is justly to be suspected, that a far greater Number have sallen Victims to a satal Consinement in their Graves. But human Nature is such

74 The UNCERTAINTY of

a Slave to Prejudice, and so tied down by the Fetters of Custom, that it is highly disficult, if not absolutely impossible to put People on their Guard against such terrible Accidents, or to persuade those vested with public Authority to take proper Measures for preventing them.

The following Accidents happen'd at Paris, and are strong collateral Proofs of the Uncertainty of the Signs of Death. A Person of Distinction being seiz'd with a Disorder which is daily cur'd, though it is mortal in its own Nature, but always difcovers approaching Death by previous Signs, was committed to the Care of a Physician of the Faculty, who at Night left his Patient in Danger, tho' not without Hopes of feeing him once more alive. Upon his calling next Day, however, he was told that he was not only dead, but also laid out as fuch: The Physician, by no Means startled at this, affirm'd, that it was absolutely impossible he could be dead, and accordingly order'd the Cloth with which his Face was cover'd, to be untied, and his Body Body to be laid in Bed, which Measures, in Conjunction with the Assistance of proper Remedies, justified the Assertion of the Physician, since the Patient not only recovered from the violent Syncope which had impos'd on the By-standers, but also lived several Years after the Missortune.

A Woman of the Name of Aubert, who lived in the Street called Chartiere, at the Image of St. Sebastian, happening to be exceffively enrag'd at one of her Children, fell into a Syncope fo profound, that she was not only thought dead, but also put in her Coffin, and laid before the Door of the House: A Woman of the Neighbourhood however, imagining it impossible that Aubert was really dead, prevailed upon the People of the Family to take the Coffin up Stairs again, and open it in the Presence of a Phylician and a Surgeon, the latter of whom, as I am inform'd, was called Chauvet. Upon executing this Design, the Body of Aubert was found all over warm, and her Countenance of a fresh and blooming Colour: The Physician confidering these \mathbf{E}_{2} Circum-

Circumstances affirm'd, that she had not been dead an Hour, and that probably her now irretrievable Fate might have been prevented by Venesection in the Beginning of her Syncope.

A Porter who liv'd in the Street des Lavandiers, falling fick, was convey'd to the Hôtel-Dieu, where, being foon after taken for dead, he was laid in a Grave along with fome other Perfons, who had died in the fame Hofpital; but returning to Life about Eleven o'Clock at Night, he tore the Cloth with which his Face was cover'd, got out of his Grave, and knock'd at the Porter's Lodge, where he readily found Admiffion.

Mrs. Langlois, Wife to an Engraver and Image-maker in Saint James's-Street, near the Street de la Parcheminerie, was laid out for dead, put in her Coffin, and conveyed to the Church: But during the Funeral Service fome Persons perceiving a Motion in the Coffin, open'd it, and found the Woman not only alive, but so vigorous and strong, that she liv'd a long time after.



J.Hulett inv. Saule

About twelve or thirteen Years ago, a poor Woman, who liv'd in the Street de Boucheries, in the Suburbs of St. Germains, was taken for dead, and laid out as fuch, with a Wax-Candle lighted at her Feet, as is usual on the like Occasions. Some young Perfons however happening to watch her, were fonder of diverting themselves than of bewailing the Death of their Acquaintance; accordingly, in the Course of their Mirth, they overturn'd the Wax-Candle on the Straw Bed on which the Woman lay: The Bed being dry, took fire fo fuddenly, that they could not preserve her from the Flames, the Violence of which extorted an hideous Shriek from her. We may readily fuppose, that an Accident so unexpected, put an End to the Mirth of the young People, who all made their Escape in the best Manner they could: But some Persons hearing the repeated Shrieks of the Woman, came to her Assistance, snatch'd her from the Straw Bed, stopt the Progress of the Burning, and put her in a Bed. She then complain'd of an excessive Cold; for E 3 her

her Misfortune happened in Winter; but being duly warm'd and properly treated, she recovered so thoroughly, that she has brought several Children into the World since her Resurrection.

Among the great Variety of Accidents of the like Nature that have happened in *Great Britain*, I shall only at present relate the following.

At Basingstoke in Hampsbire, not many Years ago, a Gentlewoman of Character and Fortune was taken ill, and to all Appearance died, while her Husband was on a Journey to London. A Messenger was forthwith dispatch'd to the Gentleman, who return'd immediately, and ordered every thing for her decent Interment. Accordingly, on the third Day after her supposed Decease, she was buried in Holy Ghost Chapel at the Outside of the Town, in a Vault belonging to the Family, over which there is a School for poor Children, endowed by a charitable Gentleman in the Reign of Edward VI. It happened the next Day, that the Boys, while they were at Play, heard

a Noise in the Vault, and one of them ran and told his Master, who not crediting what he faid, gave him a Box on the Ear, and fent him about his Business; but upon the other Boys coming with the fame Story, his Curiofity was awaken'd, fo that he fent immediately for the Sexton, and open'd the Vault and the Lady's Coffin, where they found her just expiring. All possible Means were used to recover her to Life, but to no Purpose; for she in her Agony had bit the Nails off her Fingers, and tore her Face and Head to that Degree, that notwithstanding all the Care that was taken of her, she died in a few Hours in expressible Torment.

The following Story is related by one Mr. William Toffach, a Surgeon at a Place called Alloa in Scotland, which I shall give in his own Words, as the Reader may find them in the Edinburgh Medical Essays, Vol. V. p. 605.

" November 11th, 1732, early in the "Morning, an usual Steam was observed to come out of a Coal-pit in this Neigh-E 4 "bourhood,

" bourhood, belonging to the honourable " Sir John Schaw of Greenock, which the " People who went down to enquire the " Cause of it, found to be the Smoak of " of Coals that lay about ten Fathoms " from the Bottom of the Pit, and were " fome Way or other fet on Fire in two " Places. This Pit, and all the others " which had any Communication with it, " were shut up close, to smother the Flame, " and continued thus shut till December 3d, " when they were all opened. The one, " where the Fire had been, fent out a most " naufeous Steam, fo that No-body could " come near it, except to the Wind-" ward. After fome Hours the Colliers " and others ventured down by the Lad-" ders into this Pit, which was thirty-four "Fathoms deep; but foon came running " up, all panting and breathless; they that " came lateft, being scarce able to speak " fo much as to tell that one of their " Number, James Blair, was left dead.



Culct ine.

the SIGNS of DEATH.

"Two Men who were no Colliers of-" fered foon after to go down, and others, " animated by their Example, accompa-" nied them, and brought up the poor " Man by Head, Shoulders, Legs, or " Arms; their Hurry was fo great, they "did not think how they carried him. "When he came to the Mouth of the Pit, " which was between half an Hour and " three Quarters after he had been left in " the Bottom of it; two had him by the "Arms, and two by the Feet, with his " Back uppermoft. I made them immedi-" ately fet him down at a little Distance " from the Pit, turning him supine. The " Colour of the Skin of his Body was na-" tural, except where it was covered with " Coal-dust; his Eyes were staring open, " and his Mouth was gaping wide; his "Skin was cold; there was not the leaft " Pulse in either Heart or Arteries, and " not the leaft Breathing could be obser-" ved: So that he was in all Appearance " dead. I applied my Mouth close to his, s and blowed my Breath as ftrong as I E 5 " could.

" could, but having neglected to stop his " Nostrils, all the Air came out at them; " wherefore, taking hold of them with one "Hand, and laying my other on his " Breast at the left Pap, I blew again my " Breath as ftrong as I could, raising his " Chest fully with it, and immediately I 46 felt fix or seven very quick Beats of the "Heart; his Therax continued to play, " and the Pulse was felt soon after in the "Arteries. I then opened a Vein in his 46 Arm, which, after giving a small Jet, " fent out the Blood in Drops only, for a " Quarter of an Hour, and then he bled " freely. In the mean time I caused him " to be pulled, pushed and rubbed, to as-" fift the Motion of his Blood as much I " could, washed his Face and Temples with Water, and rubbed Sal volatile on " his Nose and Lips. Though the Lungs continued to play, after I had first set " them in Motion, yet, for more than half " an Hour, it was only as a Pair of Bel-" lows would have done, that is, he did " not

not fo much as groan, and his Eyes and

" Mouth remained both open.

" After about an Hour he began to yawn, and to move his Eye-lids, Hands

and Feet; I then put Water, in which

"I had dropt some Sal volatile into his

"Mouth, which he swallowed, and caused

" him to be carried into a House hard by,

" where I fet him in a Chair reclining

" backward. In an Hour more he came

" pretty well to his Senses, and could take

" Drink, but knew nothing of all that had

" happened after his lying down at the

" Foot of the Ladders, till his awaking

" as it were in the House.

"Within four Hours he walked home, and in as many Days returned to his

"Work, but complained for a Week or

"two of a violent Pain in his Back, which

"I believe was owing to the Way of car-

" rying up him out of the Pit.

" Lady Schaw, Mr. Bruce of Kennet,

" and the Reverend Mr. Thomas Turner, and feveral other Gentlemen, with three

" or four hundred People of the Neigh-

" bourhood,

" bourhood, were Witnesses to what I have now related.

" I must submit to better Judges to determine whether the Experiment I made

" use of was the Mean of saving the Man's

"Life on whom it was tried; it is at least

"very fimple, and abfolutely fafe, and

"therefore there can be no Harm, if there

" is not an Advantage, in making it pub-

" lick."

Dr. Cheyne, in his English Malady, p. 307, gives us the following surprizing and singular Case, which very well deserves a Place here, as it cannot fail of being very entertaining to the Reader. We shall make use of the Doctor's own Words.

"Colonel Townshend, a Gentleman of excellent natural Parts, and of great

" Honour and Integrity, had for many

"Years been afflicted with a Nephritick

"Complaint, attended with constant Vo-

" mitings, which had made his Life pain-

" ful and miserable. During the whole "Time of his Illness, he had observed

"the ftrictest Regimen, living on the soft-

" eft Vegetables and lightest Animal Foods,

" drinking

"drinking Affes Milk daily, even in the " Camp; and for common Drink Bristol "Water, which, the Summer before his "Death, he had drunk on the Spot. But 66 his Illness increasing, and his Strength " decaying, he came from Bristol to Bath " in a Litter, in Autumn, and lay at the " Bell-Inn. Dr. Baynard and I were called to him, and attended him twice a Day " for about the Space of a Week, but his " Vomitings continuing still incessant, and " obstinate against all Remedies, we de-" fpaired of his Recovery. While he was " in this Condition, he fent for us early " one Morning; we waited on him, with " Mr. Skrine his Apothecary; we found " his Senses clear, and his Mind calm, his " Nurse and several Servants were about " him. He had made his Will, and fettled " his Affairs. He told us, he had fent for " us to give him fome Account of an odd " Sensation he had for some Time observ'd " and felt in himfelf; which was, that com-" poling himfelf, he could die or expire. " when he pleas'd, and yet by an Effort,

" or fome how, he could come to Life " again; which it feems he had fometimes tried before he had fent for us. We heard this with Surprize; but as it was " not to be accounted for from now com-" mon Principles, we could hardly believe "the Fact as he related it, much less give " any Account of it; unless he should " please to make the Experiment before " us, which we were unwilling he should " do, lest in his weak Condition, he might " carry it too far. He continued to talk " very diffinctly and fenfibly above a "Quarter of an Hour about this (to him) " furprizing Senfation, and infifted fo much on our feeing the Trial made, that we were at last forced to comply. We all "three felt his Pulse first: It was distinct, "tho' fmall and thready; and his Heart " had its usual Beating. He compos'd "himself on his Back, and lay in a still " Posture some Time; while I held his right Hand, Dr. Baynard laid his Hand on his Heart, and Mr. Skrine held a clean Looking-Glass to his Mouth. 1 " found

" found his Pulse fink gradually, till at " last I could not feel any, by the most " exact and nice Touch. Dr. Baynard could not feel the least Motion of his " Heart, nor Mr. Skrine the least Soil of " Breath on the bright Mirror he held to is his Mouth; then each of us by Turns examin'd his Arm, Heart, and Breath, " but could not by the nicest Scrutiny " discover the least Symptom of Life " in him. We reafon'd a long Time " about this odd Appearance as well as we could, and all of us judging it inex-" plicable and unaccountable; and finding " he still continued in that Condition, we " began to conclude that he had indeed " carried the Experiment too far, and at " last were satisfied he was actually dead, " and were just ready to leave him. "This continued about half an Hour, " by Nine o'Clock in the Morning, in "Autumn. As we were going away, we " observed some Motion about the Body, " and upon Examination, found his Pulse " and the Motion of his Heart gradually " returning:

" returning: He began to breathe gently " and speak foftly: We were all astonish'd " to the last Degree at this unexpected " Change, and after fome further Conver-" fation with him, and among ourselves, "went away fully fatisfied as to all the " Particulars of this Fact, but confounded " and puzzled, and not able to form any " rational Scheme that might account for " it. He afterwards called for his At-" torney, added a Codicil to his Will, fet-"tled Legacies on his Servants, received " the Sacrament, and calmly and com-" posedly expir'd about five or fix o'Clock "that Evening. Next Day he was open-" ed, (as he had ordered;) his Body was " the foundest and best made I had ever " feen; his Lungs were fair, large and " found, his Heart big and strong, and " his Intestines sweet and clean; his Sto-" mach was of a due Proportion, the "Coats found and thick, and the vil-66 lous Membrane quite entire. But when " we came to examine the Kidneys, tho' the Left was perfectly found and of a " just

" just Size, the Right was about four "Times as big, diftended like a blown "Bladder, and yielding as if full of Pap; " he having often pass'd a wheyish Liquor " after his Urine, during his Illness. Up-" on opening this Kidney, we found it " quite full of a white Chalky Matter, " like Plaister of Paris, and all the fleshy " Substance dissolved and worn away, by "what I called a Nephritick Cancer. "This had been the Source of all his " Mifery; and the fymptomatick Vomit-" ings from the Irritation on the confen-"tient Nerves, had quite flarved and " worn him down. I have narrated the " Facts, as I faw and observed them de-" liberately and diffinctly, and shall leave " to the Philosophick Reader to make what "Inferences he thinks fit; the Truth of "the material Circumstances I will war-" rant."

Though I had refolved to confine myfelf to the Narratives hitherto related, yet the Singularity and Truth of the following Histories, whose most effential Circumstances I shall only recount, will sufficiently apologize for the Insertion. The first occurs in the eighth Volume of Causes celebres & interessantes, where it is told without a Date, but cloath'd with a Train of such moving Circumstances, that it cannot fail at once to convince the Judgment of an important Truth, and warm the Heart with the most noble Sentiments of Friendship and Humanity.

Two Merchants living in the Street of Saint Honorius, were connected with each other by the most sacred and inviolable Ties of Friendship, posses'd of equal Fortunes, and concern'd in the fame Branch of Trade. The one had a Son, and the other a Daughter, nearly of the fame Age. The first Sentiments which made the Daughter fensible that she was capable of Love, also convinc'd her that her Heart belong'd to the Son, who in his Turn was no less attach'd to her. This reciprocal Inclination was encouraged and kept up by frequent Visits, authorised by both Fathers, who with Pleasure observed the Dispositions

tions of their Children exactly fuited to the Intention they had of rendering them Husband and Wife. Accordingly, a Marriage was just about to be concluded between them, when a rich Collector of the King's Revenues made his Addresses to the young Lady as a Lover. The delufive Charms of a superior Fortune soon induc'd her Parents to change their Refolution with respect to their Neighbour's Son; and the Lady's Aversion to her new Lover being furmounted by her filial Duty, she married the Collector, and, like a virtuous Woman, discharged the young Gentleman whom she lov'd from ever feeing her again. The Melancholy brought on by an Engagement fo fatal to her Happiness, threw her into a Disorder in which her Senses' were so locked up, that she was taken for dead, and interred as fuch.

We may readily suppose that her first Lover was not the last Person who heard the melancholy Accounts of this Accident. But as he remember'd that she had before been seiz'd with a violent Paroxysm of a Lethargy,

Lethargy, he flatter'd himself that her late Missortune might possibly be produced by the same Cause. This Opinion not only alleviated the Excess of his Sorrow, but, also, induc'd him to bribe the Grave-Digger, by whose Assistance he raised her from her Tomb, and conveyed her to a proper Chamber, where, by the Use of all the Expedients he could possibly imagine, he happily restor'd her to Life.

The Lady, probably, was in no small Consternation when she found herself in a strange House, saw her darling Lover siting by her Bed, and heard the Detail of all that had befallen her during her lethargic Paroxysim. It was no hard Task to make her entertain a grateful Sense of the Obligations she lay under to her Deliverer. The Love she had always bore him, prov'd a moving and pathetic Orator in his Behalf; so that when she was perfectly recovered, she justly concluded that her Life belong'd to him who had preserved it; and to convince him of her Affection, went along with him into England, where they liv'd



T.Hulelt inv. Soulp.

for feveral Years, superlatively happy in all the tender Endearments of mutual Love.

About ten Years after, however, they went to Paris, where they liv'd without any Care to conceal themselves, because they imagined that No-body could ever fufpect what had happened. But as Fortune is too often an implacable Enemy to the most fincere and rapturous Love, the Collector unluckily met his Wife in a public Walk; where the Sight of her well-known Person made such a strong Impression on his Mind, that the Persuasion of her Death could not efface it: For this Reason, he not only accosted her, but also, notwithstanding the Discourse she us'd in order to impose upon him, parted from her fully perfuaded that she was the very Woman to whom he had been married, and for whose Death he had gone into Mourning.

As the whimfical Nature of this Event cloathed the Lady with a Set of Charms, which the Collector never before imagined her to be Mistress of, he not only discovered her Apartments at *Paris*, in Spite

94 The Uncertainty of

of all the Precautions she had taken to conceal herself, but also claim'd her as his Spouse before the Court authoriz'd to decide in similar Cases.

In vain did the Lover infift upon the Right he had to her, refulting from the Care he had taken of her. To no Purpose did he represent, that without the Measures taken by himfelf the Lady would have been rotting in her Grave; that his Adversary had renounc'd all Claim to her by ordering her to be interr'd; that he might justly be arraign'd as a Murderer for not using the Precautions necessary to ascertain her Death, and a thousand other Reasons suggested by Love, which is always ingenious, where it is fincere. But perceiving that the Court was not like to prove favourable to him, he refolved not to flay for its Decision, and accordingly made his Escape along with the Lady to a foreign Climate, where their Love continued facred and entire till Death conveyed them to those happy Regions, where Love knows no End, and is confined within no Limits.

The following Accident, tho' accompanied with less affecting Circumstances, is yet an equally strong Proof of the Uncercertainty of the Signs of Death, and equally authentic; for I have the Account of it from the before-quoted Mr. d'Egly, who has heard the greatest Part of it about thirty Times related by the very Woman to whom it happened.

Mr. Devaux, a Master-Surgeon of Saint Cosme, who lives in Saint Antony's-Street, had in his Family two Servant Maids, one of whom, call'd Mary Isabeau, was three Times carried from her home in order to be interr'd, and the third Time did not discover that she was alive, till the Bearers were letting her down into the Grave. The Habit, however, the had contracted of counterfeiting the State of the Dead, in order to impose on the Judgment of the Living, inspired her Friends and Acquaintance with so much Diffidence, that when the really died, they were unwilling to run the Risk of a fourth Mistake; for preventing

96 The UNCERTAINTY of ing which they kept her fix Days before

they interr'd her.

Bhonius, in the first Differtation of the Appendix to his Treatise of the Reports concerning mortal Wounds, relates the two following Facts.

In the Year 1619, a young Woman, who was no Model of Chastity, had the Misfortune to bring a Daughter into the World in a Meadow near Torgaw. In order to conceal the Infamy of her Character from the Public, she interr'd the Fruit of her Body alive: But the Judge being inform'd of her Crime, ordered the Grave to be opened, where the Infant was found alive. This Fact is sufficiently vouch'd by the criminal Process rais'd against the Mother on that Account.

An Accident of a fimilar Nature happened in the Year 1674; for two young Perfons, whose criminal Amours had rendered them the Parents of a Daughter, wrapt her up in Linen and Woollen Cloths, and interr'd her in a Pit about a Foot deep made in a Barn: After throwing a little

Earth over the Body, they covered it with fome Bottles of Oat-Straw, imagining that these Precautions were sufficient to secure the Honour of the Mother. But the slagrant Crime was soon discovered, and the Infant who had suffered so much from a salse Point of Honour, raised alive, seven Hours after its Interment; by which unexpected Circumstance the Parents were freed at once from the Imputation of Murder, and the Punishment due to that barbarous Crime.

These inhuman Parents, who had, as they thought, expos'd their own Offspring to inevitable Death, and consequently committed Murder, in the strictest Sense of the Word, ought no doubt to have fallen unlamented Victims to impartial Justice, and only owed their Lives to a Desect of Rigour, or rather a Want of Equity in the Laws of their Land.

But as moral Reflexions do not belong to the Province of a Phyfician, I shall confine myself to the physical Consequences F which

98 The UNCERTAINTY of which may be justly drawn from these Histories.

From these Facts then, 'tis sufficiently obvious, that a Person may live for several Hours without Respiration, since in the fecond Accident the Infant was found alive feven Hours after its Interment. And though Bhonius does not specify how long the Infant mentioned in the first Narrative was confin'd to its Grave; yet 'tis highly probable, that it must have remained confiderably longer in that wretched Situation, fince, before a Report could be given in, before the Judge could run thro' all the Formalities requifite on fuch Occasions, and before the necessary Searches could be made, more than feven Hours must necessarily have passed. And what renders this Conjecture still more probable, is, that by precipitating their Procedure, they could hardly suppose they could come in time enough to rescue the Infant from its Grave with any Degree of remaining Life. We have, therefore, just Reason to believe that the first Infant was interred longer than the the fecond, and may consequently ask, why a Person may not live the double of that Time in the like Situation? Such a Progression would carry us farther than we, perhaps, imagine; since the Conditions necessary to the Preservation of Life are hitherto a Mystery, which, for ought we know, will never be cleared up.

Numerous Histories of fimilar Refurrections might be collected: But either the Curious or Incredulous may, for their farther Satisfaction, have recourse to the Medicinal Observations of Forestus, those of Amatus Lusitanus, the Chirurgical Observations of William Fabri, the Treatife of Levinus Lemnius on the fecret Miracles of Nature, the Observations of Schenkius, the Medico-Legal Questions of Peter Zacchias, Albertinus Bottonus's Treatife of the Diforders of Women, Terilli's Treatife on the Causes of sudden Death, Lancist's Treatise concerning fudden Deaths, and Kornmann's Treatife on the Miracles of the Dead: But tho' these Authors furnish us with a great Variety of the most palpable and flagrant F 2 Infrances

Inflances of the Uncertainty of the Signs of Death, yet I cannot help relating two Accidents which happened, the one to *Vefalius*, and the other of a nearly fimilar Nature to another celebrated Anatomist.

(2.) Andreas Vesalius, successively first Physician to Charles the Fifth, and his Son Philip the Second of Spain, being persuaded that a certain Spanish Gentleman, whom he had under his Management, was dead, ask'd Liberty of his Friends to lay his Body open. But his Request being granted, he had no fooner plung'd his Diffecting-Knife in the Body, than he observed the Signs of Life in it; nor could he be mistaken in this Conjecture, since upon opening the Breast, he saw the Heart palpitating. The Friends of the Deceas'd, prompted by the Horror of the Accident, not only pursued Vesalius as a Murderer, but also accus'd him of Impiety before the Inquisition. As the Fact was notorious, the Judges of that unrelenting Tribunal inclined that he should suffer as a Murderer. By the Authority, however, or rather

rather by the Intreaties of the King of Spain, he was rescued from the threatning Danger, on Condition he would expiate his Crime by undertaking a Voyage to the Holy Land. Upon the Death of Fallopius, the Senate of Venice invited him to succeed that great Anatomist. With this View he embarked, but was in his Voyage, thrown, by a violent Storm, into the Island of Zante, where having wandered fome Days in the Defarts, and suffered the last Extremities of Hunger, he at last died in a deplorable Manner for want of Relief, on the 15th of October 1564, and in the fiftyeighth Year of his Age.

The Account of the Accident which befell the other Anatomist, is taken from Terilli, and runs thus.

A Lady of Distinction in Spain, being feiz'd with an hysteric Suffocation, so violent, that she was thought irretrievably dead; her Friends employ'd a celebrated Anatomist to lay open her Body, perhaps with a Defign to discover the Cause of her Death. Upon the fecond Stroke of the

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102 The Uncertainty of

Knife she was rous'd from her Disorder. and discovered evident Signs of Life by her lamentable Shrieks, extorted by the fatal Instrument. This melancholy Spectacle struck the By-standers with so much Consternation and Horror, that the Anatomist, now no less condemn'd and abhorr'd, than before applauded and extoll'd, was forthwith oblig'd to quit not only the Town, but also the Province in which the guiltless Tragedy was acted. His Escape was neceffary, not only to prevent the Reproaches with which he was loaded, but also to preferve his Life, now expos'd to Danger rather by his Misfortune than by his Fault. But though he quitted the now disagreeable Scene of the Accident, a groundless Remorfe prey'd upon his Soul, till at last a fatal Melancholy put an End to a Life whose Calamities could only terminate with itself.

As Accidents of this Nature are not only melancholly in themselves, but also productive of the worst of Consequences to those in whose Hands they happen, so we

cannot

cannot use too many Precautions in convincing ourselves of the Death of any Person, before we attempt the opening of his Body; for it is not to be supposed, that two so celebrated Anatomists as these now mention'd plung'd their Knives in the Bodies of the suppos'd dead Persons without a sufficient previous Scrutiny; nor is it at all probable that Vesalius, who attended the Spanish Gentleman through all the Stages of his Disorder, wanted Reasons to believe him dead, both from the prognostic and diagnostic Signs of that State; and if that great Man was imposed upon by these Signs, 'tis but modest and reasonable we should not confide too boldly in their Certainty. I shall not, however, derogate too much from these Signs, nor divest them of those Advantages which really belong to them. "I know, fays Celsus, that if fu-"ture Death is to be foretold by certain "Signs, fome may ask how it comes a-" bout, that Patients given over as dead " by their Physicians, sometimes recover,

" and that some have even return'd to " Life in the very Time of their Fune-" rals?"

Before I give a direct Answer to this Objection, it is proper to observe, that a Patient given over by his Physicians is only a Subject in whom is observed an unlucky Concurrence of the Signs, which prognosticate a quick approaching Death; for so long as there are any Remains of Hope, it is not only the Duty, but also the Honour and Interest of the Physician, to afford his Assistance cheerfully. Celsus however fully answers the Objection in the sollowing Manner:

"Medicine is a conjectural Art, and fuch is the Nature of Conjecture in general, that what fucceeds most frequently, may yet prove fallacious in particular
Instances. It is therefore by no Means
reasonable absolutely to divest that of
Credibility, which hardly proves fallacious once in a thousand Times; since
there is no Comparison between the Success and the Error. What I affert is not

" only

"only applicable to the Signs of Death, but ought also to extend to Marks and Prognostics of the salutary Kind; for Hopes are sometimes deceiful, and those Patients frequently die, for whose Lives the Physician would have answer'd in the Beginning of their Disorders."—But its certain, (which ought to be carefully adverted to) that the Signs of Recovery or Death, are far more fallacious and desective in Acute, than in Chronical Disorders.

'Tis not without Reason, that I intreat the Reader to pay a due Regard and Attention to the Observation of *Celsus*; since the Patients whose Histories we have al-

i Acute Disorders are such as of their own Natures terminate speedily either in the Death or Recovery of the Patients, as Desluxions of the Breast, Pleurisies, and Small-Pox; whereas Chronical Disorders are such as of their own Natures continue a long Time on Account of the Obstinacy of their Causes, as a Dropsy, a Scurvy, and a Palsy.

ready related, may be faid to have been cut off by acute Diforders; for tho' fome of them have been attack'd by Difeafes habitual, and consequently chronical of their own Natures, fuch as the Hysteric Suffocation; yet these Indispositions have Intermissions so perfect, or Remissions so considerable, that every one of their Paroxysms ought to be look'd upon as a particular Difeafe, which, confidered in this Point of Light, is certainly an acute Diforder. This Truth is fo evident, that every one who has but the least Acquaintance with the Healing Art, makes an infinite Difference between these habitual Disorders which return by Paroxysms, and a Phthisis produced by an Ulcer of the Lungs, or a Dropfy brought on by an Obstruction of the Vis-And a Person must even be a sagacious thinking Physician before he can know the Reasons why these different Disorders are class'd among those of the chronical Kind.

(3.) If Persons are rarely interr'd alive, they still more rarely have the good Fortune to be taken from their Graves before it is too late. But as Life is of an ineffimable Value, it is necessary we should propose the Measures proper for recalling to Life, or rather to a durable Life, those taken from their Graves, tho' during a whole Century, or a still longer Tract of Time, we should only preserve a single Person, or tho' we should only be able by these Meafures to prolong Life for fome Hours; fince judicious Perfons are fensible, that a few Hours of additional Life are fometimes of the last Importance, both with respect to the Concerns of this World and that which is to come.

On Supposition then, that a Person was taken from the Grave, the Cossin, the Water, or from any other Situation in which the Defect of respirable Air should necessarily produce a Suffocation, it would be no better than murdering him, suddenly to expose him to the entire Action of the

Atmo-

108 The Uncertainty of

Atmosphere, for that Fluid entering precipitately into the Thorax, produces in the Vessels of the Lungs a Dilatation, which, instead of facilitating the Passage of the Blood through that Organ, produces a fresh Obstruction in it: because the Action of the Heart is not strong enough to surmount the Resistance which the Air makes to the Pasfage of the Blood: And this must the more inevitably happen, because the Lungs in fuch a State become flaccid, which is the unavoidable Fate of all Fibres deprived of the Influx of the Spirits, which necessarily depends on the free Passage of the Blood through the whole Body, and the Velocity of its circular Motion. The Precaution, therefore, mentioned by Pecblin, of wrapping Persons taken from the Water in Blankets, is highly proper, and excellently fuited not only to this Species of Suffocation, or Privation of Respiration, but also to all others, as is obvious from the Example of the Franciscan, whose Fate laid a Foundation for these Observations.

the Signs of Death.

109

But it is not fufficient to guard fuch Perfons against the rude Impressions of the Air, since it is also requisite they should only be permitted the free Use of that Fluid by Degrees.

As the Decrease of the Circulation is necessarily succeeded by a proportionable Diminution of Heat, so it is justly to be expected, the Bodies of Persons suffocated, or deprived of Respiration, have lost the greatest Part of that Warmth, which is so necessary to the Support of Life: For this Reason it is absolutely necessary they should be warm'd. But it would be equally pernicious fuddenly to expose them at once to the Fire, or precipitately to exhibit Medicines, which by the Volatility of their Principles might produce a Rarefaction of the Blood. It is far more fafe and prudent to begin by gradually augmented Frictions of the Extremities with warm Cloths, than all at once to expose such Persons to the Fire, or call in the Assistance of volatile Medicines, both of which may be fafely though gradually used, when the Circulation is so restor'd,

restor'd, that their bad Effects are no longer to be fear'd.

These Precautions are founded on a phyfical Reason, which the fufficiently known to Physicians, may yet afford new Pleasure and Entertainment to Readers of another Class.

The Blood of the Vena Cava discharges itself into the right Auricle of the Heart, whose Contraction forces it into the right Ventricle, which in its Turn contracting itself, propells the Blood into the pulmonary Artery. That these Operations may be perform'd, 'tis necessary the Quantity of Blood discharged into the right Auricle should not overpower its Action, that the contractile Force of the right Ventricle fhould be fufficient to propel the Blood into the pulmonary Artery, and that in this Artery there should be nothing to obstruct or oppose the Distribution of the Blood which ought to be made in it. Now, according to this Doctrine, the Contraction of the right Auricle and Ventricle are in fuch Cases extremely weaken'd, fince these Muscles

the Signs of Death. 111

Muscles partake of the Relaxation of all the System of the Fibres; and we have elsewhere shewn, that the Lungs are collaps'd, and confequently oppose the free Circulation of the Blood, or its free Distribution through themselves. If, therefore, in affording Affistance to Persons in this wretched Situation, we should precipitately convey too quick a Motion to the Blood. we should by that very Procedure produce invincible Obstacles to its Circulation, and confequently make the Means of recalling Life subservient to the Production of irretrievable Death; for the excessive Quantity of Blood which enters the right Auricle, will overpower and furmount the weak Force which refifts it. Besides, though this Auricle had contractile Force enough to convey the Blood into the Heart; yet the Action of that Muscle will not be sufficient to propel the Blood into the Lungs, or at least to surmount the joint Resistance made by the collapsed State of the Lungs, and the Air compressing their Blood-Vessels. The Precautions, therefore, we have propos'd,

pos'd, are not only highly proper and expedient, but also absolutely necessary and in-

dispensible.

Tis needless to observe, that when the Circulation begins to be carried on freely, we may reduce it to its natural State by means of Cordials and anti-apoplectic Remedies; though these, and especially the latter, as having most Energy, ought to be us'd with the utmost Caution in the Beginning: Nay, I'm of Opinion that the fafest Method is totally to abstain from the anti-apoplectic Medicines, and to begin with the mildest Cordials, whose most energetic Parts being dissolv'd in a large Quantity of some proper Vehicle, may more infenfibly mix themselves with the Blood, and consequently produce their Effects more flowly. 'Tis, however, necessary to observe, that the same Danger is not to be dreaded from the external Use of the most efficacious Remedies. Thus we need not hesitate to apply Topics to the Temples, the Nostrils. the Wrists, the Pit of the Stomach, and all the Parts where the Arteries lying near the the Surface of the Body, are expos'd to their Action and Influence: And, as the membranous Parts are none of the leaft confiderable Infruments of the feveral Motions perform'd in the Body, a very particular Regard ought to be had to them. Frictions then of the Hands and Feet, as well as the Applications of spirituous Medicines to these Parts, are extremely useful; for though the Propriety of this Practice could not be shewn by Reasons drawn from Anatomy and Physiology, yet we might be convinc'd of it by the Observation of Mr. Deventer, who orders Frictions with Hair-Brushes to be made on the Soles of the Feet of fuch new-born Children as discover no Signs of Life, in order to restore the Circulation of the Blood, which is the Foundation or first Beginning of it.

Mr. Deventer, 'tis true, does not in this Case advise the Application of spirituous Medicines to these Parts: But as every one knows that these Remedies, as well as all other Liquors, penetrate the Surface of the Body,

114 The Uncertainty of

Body, and enter the Cavities of the Vessels, their external Application must necessarily produce a very happy Essect. Besides, this Method of using spirituous Medicines is of all others the safest, both because their Mixture with the Blood is not so quick as when they are exhibited internally, and because the Parts to which they are applied are most remote from the Center.

When Persons are taken from the Water, 'tis almost the universal Practice to hang them by the Heels, in order, as 'tis pretended, to make them throw out the Water they have swallowed: But this Method is not only entirely useless, but also conduces very much to destroy the small Remains of Life which may possibly be left; for the Water swallowed by a drowning Person descends into the Stomach, and not into the Cavity of the Thorax, as is obvious from laying open fuch Persons; so that the Water swallowed cannot prevent their Recovery. For the Truth of this I have the Evidence of my own Senses; since, being plunged under Water, I opened my Mouth Mouth three times for Air, and each time swallowed a Mouthful of Water, which produc'd no other Sensation than that excited by the Liquors which I commonly swallow; a manifest Proof that the former went the same Way with the latter.

It will possibly be objected, that this may happen so long as the Person retains a Sense of his State and Condition, tho' not afterwards. But as the Water is hindered from entring into the Arteria Trochea and Lungs by a mechanical Effort, in which Reason has no Share, so the Lungs may in this State be compar'd to an empty Bottle plunged in Water, into which the Fluid does not enter, because the Air it contains resists its Access; and this the rather happens, because the Motion of the Breast, destin'd to attack the Air, at that Time totally ceafes, and consequently nothing forces the Water to enter and fill up its Place.

Thus, the Practice of hanging by the Heels is not only entirely useless, but also greatly conduces to destroy the Remains of Life, which may possibly be left; for by such

fuch a Suspension, the whole Column of Blood conveyed to the Heart by the inferior Vena Cava will necessarily press upon that conveyed by the superior Vena Cava, where the Blood being interrupted in its Course, regurgitates into the Jugular Veins, and consequently into the Head, where, by its Quantity and Weight, it retards the Motion of the Spirits, whose free Progress is absolutely necessary to restore the Circulation of the Blood, on which Life depends.

'Tis also to be observed, that one of the most efficacious Expedients for restoring to Life such as have been hang'd or suffocated, is to use Venesection without Delay, especially in the Parts most proper to relieve the Head, such as the Ankles for Instance, and the Jugular Veins. Mr. Sylva advises to the former, and Mr. Tralles to the latter: But I shall not give the Presence to one above the other, till my own Experience shall authorize my Determination.

The Use of Venesection in such Cases must be sufficiently obvious to every one, who considers that hang'd Persons die of an Apoplexy Apoplexy of he bloody Kind, and not for want of Respiration, or as is commonly thought, on Account of a Repletion and choaking up of the Breast by Blood; for when fuch Persons are laid open, the Breast is found almost entirely void of Blood, and the Brain extremely inflam'd, both which Phenomena are highly agreeable to the Laws of the Circulation; fince the Heart producing a Contraction of the internal and external Jugular Veins confequently hinders the Blood from descending, whilst at the fame Time the strong Membranes of the Arteries conveying the Blood to the Head, hinder them from being equally compress'd; fo that the Blood continuing to ascend, without the Liberty of descending, must consequently be collected in too large a Quantity in the Brain, and there form an Apoplexy of the bloody Kind. The Breaft, on the contrary, contains but little Blood, because the Air, whose Egress is hindered by the Rope, dilates itself so considerably, as to elevate the Ribs in a very perceptible Manner: Now this Air cannot dilate itself

118 The Uncertainty of

fo strongly without at the same Time compressing the Membranes of the Pulmonary Vessels, which in Consequence of this Circumstance cannot contain their usual Quantity of Blood.

4. (4.) Kirchman is of Opinion, that Celsus here speaks of a Treatise wrote by Democritus, and entitled, HEPI' "AHNOY, concerning the Want of Respiration. This Work was compos'd on Account of the Tale of a certain Woman, who return'd to Life after having continued feven Days without the least Signs of it: Other Authors, such as Galen, Pliny, and Diogenes Laertius, ascribe the same Production to Heraclides of Pontus, who liv'd long after Democritus. But, without deciding this Controversy, 'tis certain, from the Treatife itself, that the Phyficians of the earliest Ages knew, that there were Diforders which fo lock'd up, or destroyed the external Senses, that the Patients labouring under them appear'd to be dead. According to Mr. le Clerc, in his History of Medicine, " Diogenes Laertius " informs

" informs us, that Empedocles was particu-" larly admir'd for curing a Woman fup-" pos'd to be dead, tho' that Philosopher

" frankly acknowledg'd that her Diforder

" was only a Suffocation of the Matrix, to

" which he gave the Name "ATTVBS, a Greek

" Word, fignifying without Respiration, and

" affirm'd, that the Patient might live in

" that State for thirty Days."

Mr. le Clerc, in the Work already quoted, tells us, that " Heraclides of Pontus " wrote a Book concerning the Causes of

" Diseases, and another concerning the

" Disease in which the Patient is without

" Respiration, (περί τῆς ἄπνε) in which he

" affirm'd, that in this Diforder the Pa-

" tient fometimes continued thirty Days

" without Respiration, so that he appear'd

" dead in every Respect, except the Cor-

" ruption of the Body."

To these Authorities we may add that of Pliny, who, after mentioning the lamentable Fate of Aviola and Lamia, affirms, " That fuch is the Condition of Huma-" nity, and fo uncertain the Judgment

" Men are capable of forming of things, that even Death itself is not to be trusted to."

Colerus, in Oeconom. Part VI. Lib. xviii. Cap. 113, observes, "That a Person as "yet not really dead, may for a long "Time remain apparently in that State, "without discovering the least Signs of Life; and this has often happened in the Times of the Plague, when a great many Persons interr'd have return'd to Life in their Graves. Authors also inform us, that the like Accident frequention of the Matrix."

Forestus, in Obs. Med. L. xvii. Obs. 9. informs us, "That drown'd Persons have return'd to Life after remaining forty-

"Iy befalls Women feiz'd with a Suffocation of the Matrix."

Forestus, in Obs. Med. L. xvii. Obs. 9. informs us, "That drown'd Persons have
return'd to Life after remaining fortyeight Hours in the Water; and sometimes Women buried during a Paroxysim
of the Hysteric Passion, have return'd
to Life in their Graves; for which Reafon it is forbidden by the Laws of some

" Countries, to bury the Dead sooner than

" feventy-two Hours after their Death."

This

the Signs of Death.

This Precaution of delaying the Interment of Persons thought to be dead till seventy-two Hours after their Deaths, is of a very ancient Date, since Dilberus, in Tom. I. Disput. Philol. observes, that Plato ordered the Bodies of the Dead to be kept till the third Day, in order to be satisfied of the Reality of the Death. Now, from the Histories already related, we may judge whether this Precaution, tho' more prudent than the Conduct of a great many others, is yet sufficient to ascertain the Death.

(5) Tho' in this and some other Passages Mr. Winslow informs us, that we may thro' Inadvertence take those who are really dead to be alive; yet we are not for this Reason to run the Hazard of interring living Persons, through a culpable Precipitation; since this very Error is a Reason sufficient to authorize Delay till all our Doubts are resolv'd.

This Observation of Mr. Winshow is founded upon an History related by Lancisi in Tr. de Morb. Subit. Lib. 1. Cap. 16.

where that Author tells us, that a certain Physician of Rome, happening to be prefent when a Person of the highest Distinction at Court died fuddenly, after Lancist had given him over, he, to the great Surprize of the whole Family, and especially of his Brother Physician, who could not enough admire his Folly, affirm'd that the dead Person was still alive, because his Pulse was perceptible. "The ignorant Fool, " continues Lancisi, was not sensible that " the Pulsation he ascribed to the dead Body, " was only that of his own Fingers, with " which strongly pressing the Wrist of the "dead Person, which was dry and lean, " he hindered his own Blood, which was " in an highly fervid State, from paffing " from his Arteries into his Veins, by which " Means augmenting the Action of the "Blood in the Extremities, he also in-" creas'd the Pulsation of the Arteries " lodg'd in them." Such a Blunder, as Lancist observes, must necessarily render the Healing Art contemptible in the Eyes of those who are not able to distinguish between her genuine and spurious Sons.

(6.) The Vibrations of the Arteries refemble those of the Strings of an Instrument; the larger the String is, the more sensible its Vibrations are. The Stroke of the Bow on the largest String of a Violin renders its Vibrations not only perceptible by the Touch, but also visible by the Eye. And the Vibrations of the large Strings of the Counter-Basse are so strong, that Gloves are necessary in order to play upon that Instrument; whereas 'tis quite otherwise with the Treble Strings, especially of the Violin, where the short and slight Strokes of the Bow produce only a simple Undulation.

The Vibration, then, or Pulsation of an Artery, considerable for the Largeness of its Diameter, and consequently for the Thickness of its Membranes, is very sensible; whereas that of the arterial Extremities is almost entirely lost, and the Pulsation is felt in an intermediate Degree in the Middle of the Artery. Hence it follows, that the Vi-

brations of the carotid and crural Arteries must be stronger than those of the Artery lodg'd in the Wrist, that situated between the Thumb, and those call'd the temporal Arteries. The crural and carotid Arteries may therefore afford Signs of the Circulation, when the others cease to furnish any Marks of it. For this Reason 'tis commonly faid, that the Pulse of dying Persons ascends; for in this State, the Pulse of the Wrist is subject to the following Alterations, which I carefully observ'd in a Person near Death. First I perceiv'd a great deal of Frequence, tho' the Pulfations were diftinguishable from each other. Soon after they became fo quick, that it was an hard Task to find the Intervals between them, and at last a simple Undulation succeeded; which happening at a critical Hour for fick Persons, induced me to prognosticate a quick approaching Death, which, however, contrary to all Appearances, was deferr'd till next Day, the Circulation being in some Measure restor'd. In these Circumstances, the Pulse whose Motion

the SIGNS of DEATH.

125

tion is almost insensible in the Wrist may be perceiv'd, by ascending along the Fore-Arm when the Artery is fo fituated that it may be felt, or when the Extenuation of the Patient readily exposes it to the Touch. But it is to no purpose to seek for the Pulse above the Flexure at the Elbow, fince the Artery is there too far from the Surface to render its Vibrations fensible. This Circumstance has, no doubt, laid a Foundation for a common, though erroneous Opinion, among the Vulgar, that when the Pulse ascends to the Flexure of the Elbow, the Patient is past Recovery. If this Doctrine is not univerfally true, it has at least some Foundation in Reason: fince 'tis certain from what has been faid, that the Circulation must be extremely languid when it is not perceiv'd in an Artery so considerable as that of the Arm at the Flexure of the Elbow.

But tho' the Motion of the Artery should not evince the Reality of the Circulation, yet we are not from the want of the former to infer the Non-existence of the

126 The UNCERTAINTY of

latter, fince all that Reason authorizes us to conclude, is, that the Vibrations of the Artery are perhaps become so short and slight that they escape the Touch. A Circumstance, which, though sufficient to evince a highly preternatural State, can never amount to an Infallible Proof of Death.

(7.) In this Passage, Mr. Winslow only speaks of that Respiration which is perform'd in the free or open Air. But be-Gdes the Histories related from Pechelin of two Perfons, one of whom returned to Life after remaining fixteen Hours in the Water; and the other, after he had continued in it for at least forty-two Days, since Pechelin fays he was found in the feventh Week after he was drown'd; and besides the already quoted Observation of Forestus, with respect to Persons who have reviv'd after they had been forty-eight Hours in the Water, Naturalists speak of celebrated Divers, who have remained a confiderable Time

the SIGNS of DEATH.

Time under Water without losing either their Life or their Vigour.

It would be a Task both curious and useful, to examine whether, and in what Manner Respiration has been carried on in these different Persons; or if it has not substited, how the Circulation has continued without its Assistance.

It has been always thought, that in such Cases Respiration is not quite lost, tho' there is neither in the human Body, nor those of other Animals, any Organ adapted to attract and receive the Air, which is copiously mixed with the Water. It has therefore been fuppos'd, that the Circulation is in fuch Persons perform'd in the same Manner it is in the Fœtus, which is, that the Blood which enters the Right Auricle of the Heart passes also in a great Measure through an Aperture, which communicates betwéen it and the Left Auricle, whence it is convey'd into the Left Ventricle: and that the remaining Blood of the Right Auricle, which has not pass'd thro' the Aperture of Communication, commonly called the Foramen G_{Λ} ovale.

ovale, is forc'd into the Right Ventricle, whence it is express'd into the Pulmonary Artery, which for want of Air, opposing itself to its Passage, forces it to take its Course into the Aorta, which is perform'd by Means of a Canal of Communication between these two Vessels, commonly call'd the Arterial Canal.

'Tis in vain to oppose this Dostrine, by faying that fuch a Circulation becomes inpossible in Adults; because the Arterial Canalis in them chang'd into a Ligament, and because the Valve which shuts the Foramen ovale adheres to its Margins; for we are here speaking of a preternatural State, at least with respect to Adults, or rather of an Exception from the general Rule. But if it is true, that after the Birth of the Infant the Arterial Canal fo changes its Position, that its Orifice, which opens into the Pulmonary Artery, becomes higher than it was before the Fœtus respir'd, because the Lungs, when dilated by the Air, draw that Orifice upwards, which is the Reason that the Blood enters no more into it, and that

that the Canal itself has its Sides so collaps'd and shrivel'd up, as to be chang'd into a Ligament: This is, no doubt, a considerable Objection against the Continuation of the Circulation in Adults in the same Manner it is perform'd in the Fœtus.

But the Difficulty is still greater, if the Remark of Mr. Cheselden on the Foramen ovale is true; for he affirms, that this Foramen is almost never open either in Adults or in amphibious Animals, and adds, "That if it was, it could never be of " the fame Use to these Animals under "Water, as it is to the Fœtus in the Ute-" rus, unless the Arterial Canal was also " open." If we admit all these Principles, we must necessarily conclude, that a Person may for fome Time live without Respiration. The Example of amphibious Animals which remain whole Days under Water, and confequently without Respiration, renders this Doctrine probable according to the Principles of Mr. Cheselden. From what has been faid, we may in the fecond Place conclude, that the Way or Road of the G 5 Circu-

130 The UNCERTAINTY of

Circulation in these Circumstances is as yet unknown, or that the Circulation may remain suspended without its being necessary that Death should follow.

'Tis not, however, reasonable to conclude, from the Observations already made, that in no Adult the Circulation can be perform'd in the same Manner as in the Fœtus; for tho? it should be granted, that there is generally such a Change of Position in the Orifice of the Arterial Canal, which opens into the Pulmonary Artery; yet there may be Exceptions from this general Rule, and particular Inflances are fufficient for our Purpose. Besides I see no Reason why, tho' the Arterial Canal should make an obtuse Angle with the Heart of an Adult, whereas it form'd an acute Angle in the Fœtus, this Polition of it should hinder the Blood, which finds a Difficulty in paffing thro' the Pulmonary Artery, from returning towards the Orifice of the Canal, fince this is the only Passage which presents itself, that of the Heart being closely shut up by the

the Signs of Death. 131 the Valves, which prevent the Return of the Blood.

It will, no doubt, be objected, that this Canal is generally chang'd into a Ligament by the Adherence of its Sides, in Confequence of which it becomes useless: But I answer, first, that I only contend for particular Exceptions from the ordinary Laws of Nature; and Tecondly, that I am as much authoriz'd to believe that the Arterial Canal may remain open, as that the Navel-String continues in that State; and it is fufficiently known, that this Canal sometimes discharges a considerable Quantity of Blood, when it has the Misfortune to be wounded. Besides, it is not always candid to conclude the Non-existence of a thing, because we never saw it.

I am not certain, whether Mr. Chefelden is absolutely in the right, when he afferts, that tho' the Foramen ovale remain'd open in amphibious Animals, it would be of no Use to them, unless the Arterial Canal was also open; since it is sufficient for sustaining the Circulation, that the Foramen ovale allow

allow a Part of the Blood conveyed into the Right Auricle to pass into the Left Ventricle; for the Blood of the Right Ventricle may pass into the Lungs, and return to the Left Auricle. In order to establish this Assertion in Opposition to Mr. Cheselden, I need only mention what he himself says of the Blood of the Fœtus, which is, that it passes into the Pulmonary Artery in a Quantity sufficient to keep its Vessels open. Now it cannot be suppos'd, that the Condition of a Person who has respir'd, is worse than that of a Fœtus; on the contrary, the Lungs of the former being always more dilated, fince they never totally discharge the Air after its first Entrance into them, must of course afford a freer Passage for the Blood: This will appear still more probable, if we observe that the Circulation becomes flow in Proportion as the Respiration is rendered difficult; and perhaps from this Observation we may account for the Continuation of an infensible Perspiration, without having Recourse either to the Artetial Canal or the Foramen ovale.

(8.) The Passage taken by Lancist, from the eighth Book of Quintilian, and quoted by Mr. Winflow, first induc'd me to read various Treatifes on the Funeral Ceremonies, not only of the Ancients, but also of different Nations among the Moderns, in order to know whether they us'd any Precautions to ascertain the Death of those suppos'd to be dead; and if they did, what these Precautions were. I shall therefore give an Abstract of what I have read in these Treatises; in the Execution of which Defign, if every thing faid has not a direct Relation to the present Subject, yet it will not only amuse, but also instruct the Reader, and convince him of the Truth of what Quenstedt says, when he affirms, that with respect to the Manners and Times of Interment there are as many various Customs as there are Nations.

As no Principle in the human Breast is more prevalent and universal than the Love of Life, we might reasonably think, that Mankind would neglect no Methods of preserving

preserving that inestimable Treasure. But fo inconsistent is human Nature with itself, that if we were to form an Estimate of things from the general Conduct, we should conclude Life to be a mere Trifle not worth the keeping. This is fo true, that a chimerical, and often a ridiculous Point of Honour, the most brutal and unmanly Pleasures, the most unaccountable and unreasonable Customs, and even the most despicable Things are preferr'd to Life, univerfally accounted the greatest of Blessings. But that we may not deviate from our Subject, we shall now briefly enumerate the Customs of various Nations with respect to Interments, after having observ'd, that in this Point the Greek Philosophers were of different Opinions; for Heraclitus, who maintain'd that every thing was made of Fire, ordered the Bodies of the Dead to be burn'd; Thales ordered them to be laid in the Earth, because every thing ought at last to return to the univerfal Principle, which according to him was Water; and Democritus, who believ'd the Refurrection, ordered them to be preserv'd in Honey.

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The antient Perfians us'd but few Ceremonies on this Occasion; for as soon as any Person was thought dead, his Body was forthwith expos'd as a Prey to the Mercy of ravenous Animals: And this Cuftom was held as facred as any peculiar to that People. When the Body was quickly deyour'd, it was accounted an honourable Circumstance for the surviving Family; whereas its long Continuance was thought to carry fomething infamous in it, fince the Animals despis'd it so much that they would not feed upon it. This Custom, however, did not always subsist in Persia, since, in fome Periods of Time, they interr'd the Bodies of their Dead, but never burnt them. Cicero informs us, that they covered their dead Bodies with a Crust of Wax: and 'tis fufficiently evident, that their Intention by this Practice was only to preferve themselves from being infected by the noxious Exhalations arifing from them. was for the fame Reason, according to Herodotus, that the Scytbians used the like Practice, and that the Æthiopians covered their dead

dead Bodies with Plaister; for different Methods have been us'd in order to attain the same End. Thus Salt, Nitre, Cedar, Asphaltus, Honey, Myrrh, and Baums, have been employed to the like Purposes; as also Quick-lime, which, according to Galen, in Tr. de Med. Simp. Facult. Lib. 9. dries very powerfully, without corroding when frequently wash'd.

As the modern *Persians* are *Mahometans*, they interr their Dead in their Mosques without any remarkable Ceremonies.

As foon as any Person dies among the Turks, they wash his Body, shave off his Hairs, and wrap him up in a Sheet, soak'd first in Soapwater, and then in Rose-water. After this they lay him out at his full Length in a Bier, and interr him.

The Chinese also inter their Dead, after having put them in Cossins, and conveyed them to the Grave with lamentable Shrieks. But tho', as will afterwards appear, such Lamentations were in some Countries instituted with a political View; yet in China they seem only to be the natural Expressions of intense Grief and Sorrow.

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The fame may be faid of the Custom of the Americans, whose Lamentations are extreme, when a young Person dies; moderate when one of a middle Age is cut off; and so transitory as hardly to testify the smallest Degree of Sorrow, when old Persons fall the Victims of Death.

The Inhabitants of *Mexico* and *Mechua-can* embalm'd and burnt the Bodies of their Dead, at least those of their Kings, whose Funerals were perform'd with incredible Pomp and Solemnity. But I cannot determine whether their Method of Embalming was the same with ours, or whether it resembled that of the *Hebrews*, which we shall afterwards describe.

The Inhabitants of Japan interr them with the most exalted Demonstrations of Joy and Satisfaction; and as they are thus transported to see their Friends releas'd from Life, and set at Liberty from all its Miseries, 'tis by no means probable that they should use any Pains to recall to this World those whom they suppose Death has conveyed to the other.

138 The UNCERTAINTY of

The Inhabitants of Moldavia wash the Bodies of their Dead, and interr them with great Lamentations.

Some Nations wash'd the Bodies of their Dead, probably with a View to the greater Decency and Cleanliness; tho', as will afterwards appear, other Countries used the same Practice with quite different Intentions.

The Inhabitants of Greenland have a mighty frugal Method of disposing of their Dead; for after dragging them out of the Caves in which the piercing Cold of the Climate obliges them to live, they expose them to be indurated by the Frost; a Method excellently calculated to destroy the small Degree of Life which may possibly remain in a Body apparently dead. This Country must, no doubt, abound with Statues, tho' not of the Colossal Kind.

Among the Tartars, the Methods of difposing of the Dead have been various at different Times, since, during one Period, they hung up the Bodies upon Trees, in order to be rendered hard; and during another.

the Signs of Death. 139

other, eat them, at least such of them as were far advanc'd in Years. But the most common and universal Custom was to interr them. Among this People there was no Distinction made, except with respect to their Kings, whom they embalm'd in the ordinary Manner.

The antient Inhabitants of the Balearian Islands, now called Majorca and Minorca, covered the Bodies of their Dead with an Heap of Stones. But this Ceremony was preceded by an Operation, which, according to the the Method in which it was perform'd, might be useful either in ascertaining Death, or putting an infallible End to Life, if any Degree of it still remain'd. This Operation confifted in cutting the Body into fmall Portions, which were put into a large Pitcher. Now 'tis fufficiently obvious, that the Method of conducting this Operation render'd it irretrievably mortal, or proper to recall the Dead to Life; for if they begun by cutting off the Head, or by giving some Wound in itself mortal, Death was then the necessary Consequence; whereas the Operation,

peration, when gently begun on one of the Extremities, might by the Pain have recall'd the Person to Life, if he was not totally dead.

The Massagetæ, Dervises, and Essedons eat the Flesh of their decrepit old Men along with Mutton. The Dervises strangled their Women, and interr'd them, after they were feventy Years of Age. The Effedons expos'd the Bodies of fuch as died of any Diseases to the Mercy of ravenous Beasts. The Caspians did not embrue their Hands in the Blood of their Neighbours, but expofed Persons above seventy Years of Age to the wild Beafts of the Defarts. If a Transgression of the Laws of Truth is in any Case pardonable, the Concealment of Age was certainly excuseable in a Country whose Inhabitants were for shock'd at the Infirmities of superannuated Nature, that they invented fuch barbarous Methods to preferve those they lov'd from them. These Cruelties recall to my Mind two Lines of the celebrated Corneille, when speaking of the Daughters of Pelias, whose Motives, however.

the Signs of Death.

141

however, were very different from those of the Caspians.

A Force de Pitié ces Filles inhumaines De leur Pere endormi vout épuiser les Veines.

The Hircanians kept Dogs for devouring their Dead, which were for that Reason call'd Sepulchral Dogs. The Iberians expos'd the Bodies of the Dead to Vultures; and the Iclithiophagi, a People who liv'd on nothing but Fish, threw their Dead into the Lakes and Rivers; imagining that it was but equitable to restore them that Nourishment they had received from them; or perhaps they were induc'd to this Practice by the Hopes of rendering the Fish they were afterwards to use, fatter, and more fit for the Purposes either of Nourishment or Luxury. The Lotophagi threw their Dead into the Sea; but the Hyperboreans thinking it more noble to meet Death, than patiently to wait for his Attack, threw themselves headlong into the Sea when they were weary of Life. The Colchians us'd no Methods

thods to abridge the Period of Life, which is generally thought too short already; but when it was ended, they shut up the Bodies of the Dead in Bags of Leather, which they hung upon the Trees.

I might here give an Account of the Funeral Ceremonies us'd by a great many other Nations; but as the Authors I have confulted only inform us, that they either interred or burned the Bodies of their Dead, I shall proceed to speak of those Countries whose different Practices seem to have some Signatures or Traces of the Truth I intend to establish; or at least appear calculated to guard against burying Persons as dead, before they are really depriv'd of Life.

The Method, then, of embalming us'd by the *Egyptians*, was a Kind of chirurgical Test, with respect to the State and Condition of the Person suppos'd to be dead; for they first opened the Abdomen, from which they took the Intestines; thence they ascended to the Thorax, which they also laid open, tho' without displacing its contain'd *Viscera*, which they only wash'd.

Then,

the Signs of Death. 14

Then, according to *Muretus*, they extracted the Brain, by means of an Instrument introduced thro' the Nose, and afterwards filled all the Cavities of the Body with Aromatics, more or less costly according to the Condition and Circumstances of the Family to which the Deceas'd belonged.

But notwithstanding the Authority of Muretus, it must be own'd, that, considering the Consiguration of the Cranium, it is hard to conceive how the Substance of the Brain could be extracted from it in this Manner. The Persons employed in embalming, were by Public Authority appointed for that Purpose. But what is surprising is, that it became customary to throw Stones at the Embalmer, as soon as his Work was over; which, if we may believe Muretus, was owing to the Horror with which the By-standers were struck upon seeing this Species of Cruelty exercis'd on their Friends and Relations.

If these Stones were thrown in earnest, we may justly suppose that it was no easy Matter to find Embalmers, since 'tis far from

from being agreeable to run a Risque of losing Life several Times a-Day in the Difcharge of a Public Office. Besides, the Friends and Relations of the Deceas'd might have prevented this Sentiment of Horror, by abfenting from the mournful Spectacle which produced it. But 'tis more probable, that the Custom of infulting the Embalmers arose not so much from a pretended Horror excited by an imaginary Piece of Cruelty, as from this Circumstance, that several Perfons suppos'd to be dead discovered Signs of Life under their Hands. And this Conjecture is strengthened by the same Muretus, who tells us, that Persons were embalmed as foon as they were thought to be really dead. But whether this Custom of Embalming proceeded from a Principle of Respect to the Deceas'd, or a Fund of Vanity in his furviving Friends, 'tis certain that it prevented the Interment of such as were alive, and render'd fuch Deaths as were before dubious, certain and unexceptionable.

the Signs of Death. 145

The Inhabitants of Florida, perhaps, with as little Design to ascertain Death, as the Egyptians, used a Method, which, though different, was yet equally proper to discover the Truth: For, according to Muretus, as soon as any Person died in Florida his Body was expos'd to a large Fire, and turn'd now and then from one Side to the other, in order to dry it; then they cloathed it in the richest Habits they could afford, and kept it, like a Piece of Statuary, in a Niche made for that Purpose in the Wall of the House.

Tho' this Custom, no doubt, proceeded from Tenderness and Respect, yet it is equally certain, that exposing the Body to the Fire was an infallible Method of discovering whether it had any Remains of Life in it or not.

The Funeral Ceremonies used in the Caribbee Islands are in a great Measure conformable to Reason: For they wash the dead Body, and after having put it into the same Posture with that of an Infant in the Uterus, wrapt up in a Cloth, they then H begin

begin their Lamentations, which are intermixed with comical Discourses made to the dead Person. They talk to him of every Object or Circumstance which they suppose capable of making him in Love with Life; fuch as his Wife, his Children, his Riches, the Offices he bore, and the Veneration that was paid him; and each of these Details is followed by a Repetition of these Words, How comes it then that thou hast died? They fpeak to him for Instance, according to Muretus, in the following Manner; "You " could have lived very comfortably, fince " you wanted neither Manioc, nor Potatoes, or Banances, nor Ananas; How comes it "then that you have died? You was very " confiderable in the World, fince every " one both esteem'd and honour'd you; " How comes it then that you have died? "Your Relations carefs'd you, did all they could to preferve the Serenity of your " Mind, and allow'd you to want for no-"thing; How comes it then that you have " died? You was necessary to your Coun-"try, you had fignaliz'd yourfelf in many " Battles.

"Battles, and you was the Man who " screen'd us from the Insults of our Enemies; How comes it then that you have " died?" Thus they expostulate with the

Dead, in a Strain fuited to his particular Situation and Character during Life.

When the Lamentations are over, they place the Body on a small Seat, in a Grave about four or five Feet deep, and for ten Days present Aliments to it, intreating it to eat; then, convinced that it would neither eat, nor return to Life, they for its Obstinacy throw the Victuals on its Head, and cover up the Grave.

'Tis certain, that it would be more reafonable to have the Body at home laid out at its full Length, than to huddle it up in a Grave; but notwithstanding this Overfight, it is evident from the Practice of this People, that they wait so long before they cover the Body with Earth, expecting that it will return to Life, and this Expectation is undoubtedly founded upon Experience; fince they have had Instances of Persons recall'd to Life by these Measures,

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which are still the less exceptionable, because Cold, which in some other Countries would prove mortal, is unknown in that Climate.

These Lamentations, as we shall shew when we come to speak of the Jews and Romans, are neither so unreasonable nor useless as some may imagine. But what is still more surprizing is, that according to Meletetus, quoted by Quenstedt, the antient Prussians us'd similar Lamentations; as also the Inhabitants of Servia, according to Busheque, in the History of his Embassy into Turky. 'Tis certainly hard to determine, why Customs of so particular a Nature could prevail in Countries so distant and remote from each other, whilst the smallest Traces of them were not to be found in the adjacent Nations.

The Thracians, according to Herodotus, kept their Dead only for three Days, at the End of which Time they offered up Sacrifices of all Kinds, and, after bidding their last Adieu to the Deceased, either burned or interr'd their Bodies.

According

the SIGNS of DEATH.

149

According to Quenstedt, the antient Rusfians laid the Body of the dead Person naked on a Table, and wash'd it for an Hour with warm Water. Then they put it into a Bier, which was fet in the most public Room of the House. On the third Day they convey'd it to the Place of Interment, where the Bier being open'd, the Women embrac'd the Body with great Lamentations. Then the Singers spent an Hour in shouting and making a Noise, in order to recall it to Life; after which it was let down into the Grave, and covered with Earth. So that this People us'd the Test of warm Water, that of Cries, and a reafonable Delay, before they proceeded to the Interment.

Quenstedt also informs us, that in a certain City of the East, called Sachien, the Inhabitants keep their Dead without Interment, sometimes for seven Days, sometimes for a Month, and sometimes for ten Months, in which Case they shut them up in Cossins, or Boxes, in order to prevent the distance of the same of the sam

150 The UNCERTAINTY of agreeble Smell which they would otherwise diffuse.

Tho' the Funeral Ceremonies last mention'd feem to evince, that the People who us'd them intended, by their Means, to satisfy themselves of the Reality of Death, before they proceeded to Interment; yet I have endeavoured to discover whether the Practices of the most considerable Nations contained any Scrutinies or Tests of a similar Nature. With this View I had recourse to the Laws and History of the Jews, but was greatly surprized to find only one Regulation with respect to Interment, in the 21st Chapter of Deuteronomy, where the Jewish Legislator also orders Persons hang'd to be buried the same Day.

'Tis hard to discover the Reasons why Moses is so silent with respect to the Funeral Ceremonies of his Country, that even some of the Jews themselves find fault with their Law on this Account; for we cannot suppose that the Unerring Spirit by which Moses was guided, would have forgot an Affair of such Importance as the Discover-

Discovering whether Persons were really dead or not. We may therefore reasonably conclude, that the Funeral Ceremonies of the Yews, as handed down from Adam, were fo perfect and unexceptionable, as to require no Reformation or Change.

Gierus and Quenstedt have, however, from the History of the Jews, collected the following Particulars with respect to the Funeral Ceremonies of that People.

As foon as a Perfon was dead, they clos'd his Eyes, tied up his under Jaw with a Fillet, and cut off his Hairs, stopp'd the Orifices from which the Excrements are discharg'd, wash'd the Body, persum'd it, wrapped it in a Shroud, and put it in a Bier.

Gierus observes, that it was the Office of the nearest Relation to shut the Eyes, which, however, was thought Homicide when perform'd before the Person was certainly dead; because in Circumstances where Life depends on so little, the slightest Motion is fufficient to extinguish the small Remains of it.

H 4

152 The UNCERTAINTY of

We have already observ'd that they perfum'd the Bodies, but not embalm'd them, by which we mean an Operation in a great Measure similar to that we describ'd when we were speaking of the Egyptians; whereas the embalming of the Jews was only an external Application of Perfumes. This is evident from John, Chap. xix. ver. 40. where 'tis faid, They took the Body of Jesus and wound it in Linen Cloths, with the Spices, as the Manner of the Jews is to bury. Another equally strong Proof of this Truth may be drawn from the Words of our Saviour, recorded in Matthew, Chap. xxvi. ver. 12. For in that she hath poured this Ointment on my Body, she did it for my Burial. Now these Words would have been so far from being worthy of our Saviour, that they would have been direct Nonsense, if it had been customary for the Jews to embalm in our Manner.

The Shroud us'd by the Jews confifted of two Pieces, which is perhaps meant by St. John, when he fays, the Body of Jesus was wound in Linen Cloths. One of these

Pieces

Pieces was a kind of Napkin, which covering the Face, was tied behind. The other was employ'd in covering all the rest of the Body, after the Hands and Feet were secured by Fillets. This at least was the Condition of Lazarus, according to the Account St. John gives us of his Resurrection. Father Calmet thinks, that the Bodies of the Dead were swaddled up almost in the same Manner Insants generally are: But he must have either mistaken this Passage, or else there must have been different Methods of interring the Dead among the Jews.

The Bier in which the Body was laid was not shut at the Top, as our Cossins are, as is obvious from the Resurrection of the Widow of Naim's Son, recorded in the seventh Chapter of Luke, where these Words occur; And he came and touched the Bier, and they that hare him stood still. And he said, Young Man, I say unto thee arise; and he that was dead sat up, and began to speak.

H 5

Gierus

Gierus and Calmet inform us, that the Body, before its Interment, lay for fome Days in the Porch, or Dining-Room of the House. According to Maretus, it was probably during this Time that great Lamentations were made, in which the Name of the Deceas'd was intermix'd with mournful Cries and Groans; and that the Family might receive some Comfort, and avoid the Sight of their dead Relation, Women were hir'd for this Purpose, and accompanied with Players upon Instruments.

Mr. Boyer, Member of the Faculty at Paris, observes, in a Letter with which he favoured me, that such Lamentations are still us'd by the Eastern Jews, and even by the Greeks who embrace the Articles of the Greek Church. These People hire Women to weep and dance by Turns round the Body of the dead Person, whom they interrogated with respect to the Reasons he had for dying, since he was in a happy Condition in this World. Mr. Boyer says, he has often been a Spectator of those Ceremonies, and that they have frequently interrupted

the Signs of Death. 155

terrupted his Sleep, when any Person in his Neighbourhood died. But he does not mention the Number of Days they kept their Dead before Interment; nor is this Point determined either by Gierus or Calmet.

In order to satisfy myself with respect to this, I had recourse to the History of the Death and Resurrection of Lazarus, where we are told, That when Jesus came to his Relief, he found that he had lien in the Grave four Days already. Which Words, when compared with Martha's Answer to Jesus, Lord, by this Time he stinketh, for he hath been dead four Days, induce the Commentators to affirm that he was buried the same Day on which he died.

On the Day appointed for the Interment, they took the Body on their Shoulders, and carried it out of the City in order to bury it, in the strict Sense of the Word, or to lay it in a Tomb, cut in a Rock. The Sepulchres of the Rich were at least of this Kind, as is obvious from the Accounts we have of the Cave which Abraham bought

of Ephron, and of the Tomb of Jesus Christ, which Joseph of Arimathea had ordered to be made for himself.

The Talmud regulates the Dimensions of these Caves, which were six Cubits broad, and four in Depth, with seven or eight Graves in the Bottom to contain as many Bodies.

Hence, we have Reason to believe that the Custom of washing and perfuming the Bodies of the Deceas'd among the Jews, was instituted less for the Sake of the Dead, than for the Advantage of the Living; for as they kept the Bodies feveral Days before Interment, the bad Smell would have either render'd this Ceremony impracticable, or the House contagious, without the Precaution of washing and perfuming, since Judea being a warm Country, the Bodies of the Dead must of Course have been much fooner subject to Corruption than in colder Climates. As this was the Reason which determined the Greeks and Romans to practife thefe two Ceremonies, we have also Ground to believe that the Jews us'd them with ' with the same View. The modern Jews are in this respect far more delicate than their Foresathers, since in the Water employ'd in washing the Dead they boil Chamomile, dried Rose-Leaves, and other aromatic Flowers.

'Tis also to be observ'd, that as their Biers were open, they were not attended with the same Inconveniences which accompany our close Cossins, in which Persons alive, and in persect Health, would be quickly suffocated; so that it can hardly be imagin'd that Patients suppos'd to be dead could recover Life in them.

When we come to treat of the Romans, we shall consider the Funeral Lamentations of the Jews, and only here observe, that in the Tombs of this last mentioned People, the Dead, if they should happen to return to Life, run a smaller Hazard of being suffocated, than in our Graves; since theirs, at least such as were destin'd for Persons of Distinction, were large and spacious Caves. But of whatever Kind their Tombs were, there was no Hazards run, if they did not

158 The UNCERTAINTY of

lay the Bodies in them till their disagreeable Smell and Corruption had convinc'd them of the Certainty of their Death.

The Examples of some Romans burned alive, notwithstanding all the Precautions taken by that People, are hard to be accounted for.

Lanzoni, a Physician of Ferrara, informs us, that when any Person died among the Romans, his nearest Relations clos'd his Eyes and Mouth; and when they saw him ready to expire, they catch'd his last Words and Sighs. Then calling him aloud three Times by his Name, they bid him an eternal Adieu. This Ceremony of calling the dying Person by his Name, was call'd Conclamation.

The Custom of Conclamation was of a Date prior to the Foundation of Rome, and was only abolish'd with Paganism, under which it was generally and religiously observ'd. Servius, in his Commentary on Virgil, tells us, "That the Romans were "for punctual in this Affair, that if any "Person died out of his own House, they "forth-

"forthwith conveyed him thither, that they might have the Liberty and Conveinience of performing fo effential a Piece of Duty to the Dead." But what more effectually proves the inviolable Attachment of the Romans to this Ceremony, is the extravagant and foolish Rigour with which they observed it; since they used it in their Houses with respect to those Persons, who had died in foreign Countries.

Propertius acquaints us with the Effect they expected from this first Conclamation; since there were several of them, as we shall afterwards see; for in Lib. IV. he introduces Cynthia as saying,

At mihi non oculos, quisquam inclamavit euntes; Unum impetrassem, te revocante, diem.

"No-body called me by my Name at the Time my Eyes were closing, and I

" should have enjoyed an additional Day,

" if you had recall'd me to Life."

I shall not pretend to determine either the Number or Form of the various Conclamations

clamations used: It appears from this Pasfage of Propertius, that the Poet only speaks of a Conclamation made by the Voice, at the Time the Soul was leaving the Body. But we may venture to affirm, that all the Conclamations were not made in the fame Manner, as is certain from a Piece of Statuary preserv'd among the Collection of Antiquities at the Louvre, which exactly represents what pass'd immediately after the Death of Persons of Distinction; and on which a Renedictine has wrote a curious Differtation, in a Work printed at Paris in 1739, and intitled, An Explication of remarkable Monuments, relating to the Religion of the most ancient People.

This curious Piece of Antiquity greatly illustrates our Subject, and represents a young Lady in a reclining Posture, with her Head supported on her Lest Hand, and her Neck and Bosom uncovered. At the Head of her Bed is a Child, represented as drown'd in Tears, and retiring towards a Lady sitting in an Arm-Chair, with a Foot-stool before it. Behind this Lady is

the Signs of Death.

161

a Woman, who has just torn her Garments, and consequently has her Bosom and Arms bare, with a Bracelet on the Left Arm. Behind her is another Woman, who with an Air of Indifference feems to look on the Persons standing at the Foot of the Bed. Before this Woman is a Genius holding an inverted Flambeau. On the Right Hand of the Lady, feated in the Arm-Chair, is a Man founding a Trumpet. On the Right Side of the Boliter of the Bed, which pretty much resembles one of our Sopha's, is a Man founding a Horn. At the Middle of the Head-board of the Bed is a Child, whose forrowful Looks are fixed on the dead Lady. At one Extremity of the Head-board is a young Man, holding in one of his Hands a Box, whose quadrangular Lid or Covering terminates in a Point; at a little farther Distance are two other. Men, whose Attitude represents them as beholding the Whole with an Eye of Satisfaction. Opposite to the Head-board is a Fire, on which is a Veffel whose Cover is almost concealed by the Steam arising from

from it. Under the Bed are the Slippers of the Deceas'd, and a Dog fitting on his Tail. The Statue thus describ'd is explain'd in the following Manner.

The Lady lying on the Bed, according to the Benedictine, is one who has just died, and I do not in the least doubt of the Truth of his Conjecture, though she rather refembles a Person fast asleep, than one who has just expir'd. But the Author is not accountable for the Faults of the Statuary; and the other Figures of the Piece fufficiently prove that the Woman is dead, fince it would not only be Folly, but even Madness, to found Trumpets and Horns in the Ears of a Person struggling with the Agonies of Death. The Neck and Breast are uncovered, that the Sound of the Instruments may make the greater Impression upon her, and more easily agitate the Parts fubservient to Life. The Child drown'd in Tears, appears to be the Offspring of the Deceas'd; and the Lady fitting in the Arm-Chair with the Foot-stool, her Mother. The Foot-stool and the Bracelet which

the Signs of Death. 163

which the other Woman has on her left Arm, are Proofs that they were Women of Distinction. The Genius holding an inverted Flambeau, represents Hymen extinguishing the Marriage Torch. The two Men, one of whom founds the Trumpet, and the other the Horn, are two Servants of the Goddess Libitina, hir'd to make the Conclamations with the Sound of Instruments. He who holds the Box is another Officer of Libitina, and the Box contains the Perfumes they are about to use. The two other Men are Funeral Officers. perhaps Perfumers, who with an Air of Satisfaction wait till the Conclamations are over, that they may wash and perfume the Body. The Veffel from which the copious Steam arises, is that in which they boil'd the Water destin'd for washing the Deceas'd.

The only Observations relative to our Subject made by the *Benedictine*, are, 1st. That the Persons who performed the Conclamations with Trumpets and Horns put themselves in such a Posture, that the Sound

Sound of these Instruments might act upon the Head, enter the Ears, and perhaps penetrate into all the Cavities of the Body, to which, as the Antients imagin'd, the Soul might possibly make her Retreat. 2d. That it was for the fame Reason they uncovered the Neck and Breast of those over whom the Conclamations were perform'd with Instruments. 3d. That there was sometimes an Interval between the Death and the Conclamation. 4th. That the first Conclamation was made immediately after the Death, and the last immediately before the Body was lifted in order to be interred: And 5th. That they frequently repeated the Conclamations during the Time they kept the Body in the House.

That the Romans fometimes performed the Conclamations by means of Instruments, is certain from a Passage of Petronius, who informs us; that one Trimalcion being intoxicated with Drink, order'd the Servants of Libitina to be brought; and laying himself on a Bed, as if he was dead, ordered them to play something that was pretty.

Upon

the SIGNS of DEATH. 165

Upon this one of them founded his Horn fo ftrong, that he not only alarm'd all the Neighbourhood, but also brought the Guard about the House. This, therefore, is a Species of Conclamation not perform'd by the Voice; and besides that, there is not in this Piece of Statuary the least Mark of Conclamation by the Voice: 'Tis certain that the Voice could have produc'd no Effects, being drowned by the shrill and penetrating Sounds of the two Instruments.

'Tis pretty probable, that this second Kind of Conclamation is even of a Date prior to the other, as may be naturally deduced from the Passage quoted by the Benedictine from Hyginus; who, in order to prove the Antiquity of Conclamation, derives its Original from Tyrrhenus, the Son of Hercules, who, when he came to reside in Etruria, invented the Trumpet; for as the primitive Inhabitants of that Country imagined that he and his Companions eat Men's Flesh, he assembled them by the Sound of a Trumpet, in order to shew them that one of his Companions who

had died, was interred, and not eatens

Since which Time, continues Hyginus,

the Romans, in Imitation of Tyrrhenus,

have always us'd the Custom of sound
ing the Trumpet when any one dies,

and by that Means affembling his Friends,

that they may be convinced that he was

neither killed nor poison'd."

After a Person had expir'd, his Body was taken out of the Bed, and wash'd with warm Water by the nearest Relations or Friends. This is very naturally accounted for by Quenstedt and Caspar Barthius, who in Advers. Lib. 37. Ch. 17. tells us, "That it was customary among the Antients to wash the Bodies of their Dead in warm "Water, before they burned them, that the Heat of the Water might rouse the languid Principle of Life which might

" possibly be left in the Body."

By warm Water we are to understand boiling Water, as is obvious from the copious Steam arising from the Vessel represented in the Piece of Statuary already explain'd,

the Signs of Death. 167 plain'd, as also from the two following Lines of the Sixth Book of Virgil's Eneid:

Pars calidos latices, & abena undantia flamis Expediunt, corpusq; lavant frigentis, & ungunt.

"Some of the Companions of Æneas with boiling Water taken from Brasen Vessels, wash the dead Body, and then anoint it." This is also one of the chirurgical Tests recommended by Mr. Winslow. But it appears from the Conduct of the Romans that they repos'd no more Considence in it than he, however essications it may be for exciting the Signs of Life in Persons who have any [Remains of it; since they kept the Bodies of their Dead for several Days, lest thro' Precipitation they should interrithem with any Remains of Life.

After the Body was wash'd, it was perfum'd with precious Essences, which, according to Arnobius, were not spar'd on such Occasions; since in speaking of a Corps, he tells us that it was Opobalsamo udum, moist with Opobalsam. Kirchman informs us, that "The Design of this "Practice

" Practice was to prevent the difagree" able Smell arifing from the Corps."

After the Body was anointed, it was cloath'd with the Toga, if the Person was only a Citizen; but with the Pretexta, or Robe of State, if he bore any Office.

When the Body was cloath'd, it was laid in a Chamber, where it was kept for feven Days: And as the disagreeable Smell of the Corps must have been more than a Balance for the grateful Odour of the Perfumes with which it was rubb'd, they erected at the Foot of the Bed, a Kind of small Altar, which they call'd Acerra, and on which they continually burned Persumes, for fear of disgusting or incommoding those who approach'd to the Corps, the Design of which we shall afterwards shew.

This Custom is, perhaps, the Origin of our Beds of State, on which Persons of Distinction are laid. But surely they are degenerated from their original Institution, since generally the Body is not laid upon them till it is embalm'd in the ordinary Manner:

the SIGNS of DEATH.

Manner; fo that 'tis now only Pride which fupports this Custom.

The Romans, as Lanzoni informs us, kept the Bodies of the Dead seven Days before they interr'd them: And Servius, in his Commentary on Virgil, tells us, "That on the eighth Day they burned the Body, and on the ninth put its Ashes in the Grave." They therefore kept the Bodies seven Days, and 'tis probable, that they did not before next Day put the sepulchral Urn into the Grave, since the Funeral Convoys were made in the Night, and since a considerable Time was requisite to separate the Ashes, and prepare them according to the usual Method.

Polydorus in Tr. de Rer. Invent. Lib. 6. Cap. 10. and Alexander ab Alexandro in Dier. Genial. Lib. 3. Cap. 7. are also of Opinion that the Romans kept their Dead seven Days: And Gierus affirms, that they sometimes did not bury them till the Ninth. But Quenstedt says, that he could adduce a great many Arguments to prove that they had not always a fix'd Number

of Days for this Purpose. Without the Force, however, of these Proofs, I can easily induce myself to believe that they deviated from the most universal Custom, when evident and incontestable Marks of Death rendered it safe to interr before the usual Time. Alexander ab Alexandro also observes, that it was customary among the Greeks to keep the Bodies of their Dead seven Days before they put them on the Funeral Pile; and it was, no doubt, for this Reason that they perfumed them, as appears from the Accident which happened to Asclepiades, and which we have already related.

It would have, perhaps, been sufficient, to have kept the Bodies of the Dead seven or nine Days, or till Putrefaction evinc'd the Certainty of Death; but the Romans carried their Circumspection farther, since, to use the Words of Quenstedt, "Those who were employed in watching the Dead, now and then began their Conclamations, and all at once, called the dead Person aloud by his Name;" because,

the SIGNS of DEATH.

cause, as Celsus informs us in the Preface to his first Book, "The Principle of Life "is often thought to have lest the Body "when it still remains in it; for which "Reason Conclamations were made, in or-"der, if possible, to rouse and excite it." Father Pomey informs us, that the Romans now and then threw cold Water on the Faces of their dead Bodies; and every one knows, what happy Effects such a Practice produces on Persons in a Deliquium.

All these Measures proving ineffectual, they crown'd the Dead with Flowers, and laid him in the Porch of the House, with his Feet towards the Door, where he remained till Night, the Time generally destin'd for Interment. Then after the last Conclamation, by Quintilian call'd the Cenclamata Suprema, and to which Terence alludes in the Words, Desine, jam conclamatum est; "Give over, the Conclamation is now made," the Recovery of the dead Person to Life being despaired of, his Body is either interred or burned; for the Romans had their

Choice of these two Methods of Burial, the latter of which, according to Pliny, was not of a very antient Date; and the Reason he gives for this Change of Institution, is, that Persons who died when waging War in foreign Countries, were raifed after their Interment. But in his Hift. Nat. Lib. 7. he tells us, "That a great Number of Ro-" man Families followed the antient Cufco tom, fuch as the Cornelian Family, for "Instance, no Branch of which was burned " before Sylla the Dictator, who chose this " Method, left his own Body should be " treated in the same Manner he had done "that of Caius Marius, which he order'd " to be rais'd from the Grave." Cicero also informs us, that Sylla was the first of the Cornelian Family who was burned.

'Tis furprising that Kirchman should, from a Law enacted by Numa, forbidding to sprinkle the Funeral Piles with Wine, find fault with Pliny for afferting, That the Custom of burning the Dead among the Romans, was but a new Institution made in his own Time: For it is by no means to

be supposed, that Kirchman was better acquainted with the State of Rome than a celebrated Author of that Nation, who liv'd fifteen Centuries before him. All that can be reasonably inferr'd from the Law of Numa is, that Wine should not be wasted in Burials, if the Custom of the Greeks, who long before that burned the Bodies of their Dead, should ever happen to prevail in Rome; and perhaps this Law was founded on what Numa himself had sometimes seen practiced. But these Examples may be look'd upon as Deviations from the general Custom, and Pliny's Authority must in this Case be more depended on than Kirchman's.

Some of the Roman Customs, as well as their original Laws, were, no doubt, borrowed from the Greeks, who at first interr'd their Dead, but in Process of Time burned them. The Origin of this Custom, according to Kirchman, was the Subtilty of Hercules, who having fworn to Licymnius to fend back his Son Argaus, whom he took with him to beliege Troy on Account of the Perfidy of Laomedon; that he might perform his I 3

his Promife, ordered the young Prince to be burned, after he had been killed in Battle, and fent back his Ashes to the Father. It is by no means surprizing to observe, that Actions done without any Design to establish surure Customs, should yet produce that Effect, since Novelty and a Love of Singularity are Motives which have in all Ages had a great Influence on Human Nature. But to return to the Funeral Ceremonies of the Romans.

During the Time the Body was conveying to the Grave, the Lamentations, Cries, Tears, and Mournings were redoubled, so that the whole Company seem'd to unite their Efforts, in order to recall the Dead to Life, as is obvious from the Passage before quoted from Quintilian, relating to the Use of these Cries and Shrieks. 'Tis not, therefore, so much Lamentations, as the Excess and Indecency of them, or perhaps a Degree of Fury, which prompts Persons to kill themselves, or tear their Faces, that it is forbidden in the 34th Law of the Twelve Tables, in these Words:

the Signs of Death.

We forbid Women to tear their Faces, and make Lamentations at Funerals. For Quintilian not only mentions the Reasons and Advantages of this Custom, but it also appears that the Law relating to it was very ill observ'd. Besides, this Law of the Twelve Tables, perhaps, extended only to the Women of the Family to which the Deceas'dbelong'd, and not to those who were hir'd to perform the Lamentations.

This Conjecture is render'd very probable by two Circumstances; the first of which is, that the Lamentations are forbidden to the same Women, who are ordered not to tear their Faces. Now, 'tis certain that this Prohibition extended only to the Women of the Family, and not to the hired Mourners, who were wifer than to disfigure themselves daily for those very Deaths by which they themselves liv'd. The second Circumstance confirming this Conjecture, is, that the Laws of the Twelve Tables were originally wrote in Greek. Now, if we may believe Quenstedt, Plato in his Republic condemn'd excessive Demonstrations of Grief;

175

and Solon forbid the Athenians to use Lamentations, or any external Marks of Grief, since they were useless, and by no Means subservient to any Purpose in Life.

This is a full Detail at least of all the Roman Funeral Ceremonies relating to our Subject. I have endeavoured, but in vain, to discover, whether the Conclamations, the Cries when the Corps was carrying to the Grave, and the Precaution of keeping the Body for so many Days, were prior or posterior to the deplorable Fates of Aviola and Lamia; for if they were prior, I should thence conclude that feven or nine Days are not fusficient to ascertain Death: And this would greatly confirm the Doctrine of Zacchias, and other Physicians, who affirm, that there is no infallible Sign of Death but a beginning Putrefaction. Besides, the before-mentioned Accident which happened to Asclepiades, and which is of a far older Date than that related by Pliny, evinces that the Greeks were fufficiently convinc'd of the Incertainty of those Signs which are commonly thought the Characteristics of Death,

even

the SIGNS of DEATH.

177

even when they have subsisted for a considerable Number of Days successively.

But fince the Signs of Death are fo uncertain, that the most fagacious have often been deceiv'd by them, 'tis hard to give a Reason why the wise and reasonable Precautions of the Romans should be so much neglected among Christians: For if we look back into the Practice of the Primirive Church, we find but few Tests us'd in order to ascertain Death, since they only shut the Mouth and Eyes of the Deceas'd, embrac'd him, wash'd and perfum'd his Body, and then put Cloths on it. After this, the Officers of the Church came and carried the Body, which was expos'd for fome Time at the Door, to the Place of Interment.

The Practice of washing the Body subfisted longer than any of the rest, since it was observed in the Time of Gregory of Tours. The Custom of persuming the Dead has been abrogated ever since, so that we have now only faint Remains of it in some Popish Countries.

By our unaccountable Inclination to recede from the Customs of the Heathens, whether reasonable or not, we have also lost other Practices highly beneficial to Society. Baruffaldi greatly extols the Synodical Statutes of Cardinal Laurentius Magalotti, Bifhop of Ferrara, who thinks that "Ridi-" culous Mournings and effeminate La-" mentations are unworthy of Christians, " and better become Heathens, who have " no Hope, and whose Practice of bewail-" ing the Dead was fo indecent, that they "not only run up and down the Streets like " mad Persons, but also hir'd Singers and "Mourners to honour those who were "dead, by feign'd and counterfited Tears." 'Tis however certain from what has been faid concerning these Customs of the Heathens, that they were wife Institutions, and fufficiently conform to the Laws of God and Man, which forbid Murder. But Cardinal Magalotti was no Antiquary, and which is still more, he not only misunderflood, but also applied a Text of St. Paul, who, in order to exhort the Thessalonians from

from grieving like those who had no Hope, tells them, That a Departure from this was a Passage into a far happier and more glorious Life: For, fays he, in I Theff. Chap. 4. ver. 12. I would not have you to be ignorant, Brethren, concerning them which are asleep, that ye sorrow not as others which have no Hope. By which Words the Apostle Paul neither condemns that Grief. which Tenderness and Humanity authorise, nor the Precautions which the Fear of lofing those whom we love may induce us to use, in order to ascertain their Death: since he only diffuades from that unreasonable and excessive Sorrow which results from the Thoughts of being for ever separated from those who are dear to us. So that this Pas-. fage only relates to a Grief fimilar to that of the Sadducees, and some of the Heathens, who did not believe the Immortality of the Soul: For as the Apostle Paul, abstracting from his Inspiration, was well acquainted with Human Learning, 'tis by no means probable that he was ignorant of this, that the greatest Part of the Heathens expected

expected to rejoin their Friends in the Elifian Fields, as we hope to see ours in Heaven.

The Custom of making Lamentations still prevails in *Picardy*, especially in the Country, where, when the Body is about to be carried to the Grave, all the Women embrace it, make terrible Lamentations, and call the deceas'd Person by his Name. Nor does this Practice proceed from a Principle of Humanity and Tenderness, since they set about it, without shedding a Tear, and persorm the like Office to all dead Persons they have an Opportunity of seeing about to be carried to the Grave; and the only Reason they give for such a Conduct, is, that it is customary.

It is true, Interments are not made with fuch Precipitation and Hurry thro' all the Christian World, as they are in *Paris*, and the adjacent Towns, where 'tis common to interr the Dead before they have been twenty-four Hours depriv'd of Life.

Mr. Winflow informs me, that in Denmark they do not bury their Dead till the fourth,

or the End of the third Day, on account of the Preparations requisite for the Interment. But as their Funeral Ceremonies are almost the same with those us'd at *Marfeilles*, I shall for a Description of them, take the following Passage from the foremention'd Letter wrote me by Mr. Boyer.

"At Marseilles, says he, we have preserv'd " the Custom of washing dead Bodies, or " at least their Face and Hands. As they " are generally interr'd with the Face " uncover'd, we dress them according to " their Rank and Dignity, or cloath them " with the peculiar Habits of the Frater-" nitics of Penitents in which they were " enroll'd; and these Habits are of diffe-" rent Colours, for the Sake of Diftinc-"tion. This Method is even us'd with " those who die of the Small-Pox, un-" less they are very much disfigured. But " those who are cut off by malignant Fe-" vers, especially in the Summer Time, are " interr'd with the Face cover'd, and with-" out the usual Ceremonies. In Marseilles " we do not interr so precipitately as at " Paris.

" Paris, but leave the Corps in the Bed, " and under the Cloths, till the whole Fu-" neral Apparatus is prepar'd, which re-" quires feveral Days; for we cloath the " dead Perfons with new Habits, the young "Women in white, the married in black, " and the Men in Dresses suited to their " respective Professions. "These Precautions and Ceremonies " were not us'd in the Time of the last " Plague; for living Persons were hurried " to the Grave, and I myself have seen some " of them return to their own Houses. " In reading your Work, continues Mr. " Boyer, I have observ'd some Affinity be-" tween what is practis'd in Paris in the "Winter, and what you observe with re-" fpect to the Customs of some Nations. " lying near the Poles; for as foon as any "Person is dead, or appears to be so, the " Windows are opened, and the Person is " laid out as foon as possible. To observe " the Expedition with which Servants and " Officers fet about these Things, we " would be ready to conclude that they

had

" had a fingular Satisfaction in them, and look'd upon them as religious Duties which could not be too foon perform'd. So that I cannot help thinking with Mr. Winflow and you, that at Paris Interments are made with too great Precipitation."

The Christians, in Imitation of the fews, have always interr'd their Dead. Minutius Felix, in his Apology for Christianity, informs us, that the Heathens upbraided and reproach'd us on Account of this Method of Burying, as if we were afraid of the Fire: But the Answer made by that Author is, "That without any Dread of particular Methods of Burial, we adhere to the best and most antient Custom, "which is that of interring."

Those who want a more particular Account of the Funeral Ceremonies us'd in all Ages, may consult Lanzoni's Treatise de Lustu Mortuali Veterum; that of Jerom Baruffaldi de Præsicis; that of Muretus concerning the Funeral Ceremonies of all Nations; that of Martinus Gierus de Ebræorum Lustu

Luciu, Lugentiumque Ritibus; that of Quenfiedt, de Sepultura Veterum; that of Kirchman, de Funeribus Romanorum; that of Father Pompey, de Ritibus Funereis omnium Gentium; that of Panvinius, de Ritu Sepeliendi; Father Lamy's Commentary on the Gospels; together with Calmet's History of the Bible, and Dissertation upon Church History.

If our Senses are so imperfect, that the Signs of Life may escape them; if the languid State of the sensitive Powers, or of the Origin of the Nerves, is such, that the most painful chirurgical Operations are fometimes infufficient to put the Spirits in Motion; if the Duration of a perfect Infensibility for a confiderable Number of Days, are precarious and uncertain Marks of Death: and if Situations, apparently the most inconfiftent with Life, in which Persons have remained for a confiderable Time, amount only to strong Presumptions that Life is destroy'd, we ought, with Mr. Winslow, and a great many other celebrated Authors. to conclude, that a beginning Putrefaction

is the only certain Sign of Death. Frederic Hoffman, in Patholog. Part I. Cap. 1. tells us, " That it is fometimes very difficult to " diftinguish such as are really dead from " those who are seiz'd with a violent Syn-" cope, because the alternate Motion of " the Air which enters the Thorax, and is " discharged from it; as also the Motion " of the Heart and Arteries are fo infen. " fible, that they escape the most minute " and careful Attention: There are howe-" ver various Signs of Death—But the " most certain and infallible of these is, " a beginning Putrefaction." Which, as he afterwards observes, "depends less on " the Cessation of the various Motions of " the Animal Machine, than on the long "State of Rest in the Fluids, and the "Action of a warm and humid Atmo-" fphere upon a Body already full of " Moisture; " and whose Fluids, appears from their Analysis, are pos'd of heterogeneous Principles, which confequently make a continual Effort to recede and separate from each other: For

For in order to preserve their Union, a Motion which continually presses them against each other is absolutely necessary. Besides, their most loose and disengag'd Parts are continually making their Escape, and nothing is more susceptible of Corruption than the animal Fluids, when destitute of that compressory Motion which produces their Union and Connection.

To these Reflexion I shall only add, that the Certainty of Death arising from Putrefaction is in some measure canoniz'd by the Refurrection of Lazarus. Fesus, when going with his Apostles to Bethany, tells them that Lazarus was dead, and that he was glad of this Opportunity of confirming their Belief in him as the Messias. For this Purpose he orders himself to be conducted to the Tomb where Lazarus had now been four Days. Martha, the Sifter of the Deceas'd, with a feeming Defign to divert our Saviour from his Purpofe, tells him that the Body was already corrupted fo as to diffuse an ungrateful Smell; Lord, by this Time he stinketh. Now we cannot suppose that

the Signs of Death.

that this Circumstance is related without fome important Design: Jesus Christ was fure of the Death of Lazarus; his Sifter did not doubt of it; the Spectators were perfuaded of it, and the Corruption of the Body render'd the Fact unquestionable. Our Saviour, therefore, in order to work a Miracle to which no Objections could be made, restores Life to a putrished and corrupted Carcass; by which Means Incredulity is render'd inexcusable, and his Divine Mission attested by the most irrefragable Proof. The Force of this Miracle, though sufficient to gain the Assent of the most Incredulous, yet influenc'd the Jewish Doctors to take all the Measures they could to get rid of the Person who was able to work fuch Prodigies.

Having thus shewn that Putrefaction is the only infallible Sign of Death, I shall subjoin some Resections of the last Importance relating to the same Subject.

First, then, we ought to be very diffident with respect to Deaths which have not been preceded by these Signs which are generally

the Fore-runners of Death. Accidents of this Nature principally happen in all convulfive Diforders; fuch as Syncopes, and the Suffocations of hyfteric and hypocondriac Patients, of those who are seiz'd with violent Passions, or tormented with racking Pains, and in all the Diforders in which the nervous System is affected. The same holds true with respect to all sudden Diseases, whether they proceed from an internal Cause, or an Apoplexy, or Catalepsy; or whether they are produc'd by external Accidents, such as Wounds, Falls, Contufions, or Suffocations occasioned either by a Compression of the Arteria Trachea, by Water, by continuing in a Place where there is not a due Quantity of Air, or whose Air is impregnated with noxious Vapours, or pernicious Exhalations, fuch as those of Charcoal, Narcotics, Arfenical Substances, Vitriolic Acids, and Fermenting Wine; for these Disorders, at least some of them, acting principally on the Nerves, may be justly class'd among those of the convulsive or nervous Kind.

the Signs of Death.

Secondly, When Death is dubious, or as yet not fufficiently evinc'd by a beginning Putrefaction, its infallible Sign; we ought fo to treat the Body as not to hinder it from returning to Life, which would be the Confequence of laying it out in the usual Manner: Much less ought we, by a precipitate Interment, or shutting it up in a Coffin, to deprive it of any of the Means subservient to the Preservation of Life in general; such as a free Air, for Instance, since 'tis demonstrable that two hundred and fifty-two Paris Pints of Air are hardly sufficient to keep a Man alive for an Hour, fo quickly do the Vapours of Respiration corrupt the Air which furrounds us. It must be own'd, that, as in the Cases we now consider, the Respiration is very languid, so the Danger arifing from the Corruption of the Air must be proportionably less. But as a Balance to this, it is to be observed, that there is but a very small Quantity of Air contain'd in a Coffin already nearly filled by the Body; and 'tis, no doubt for this Reason, that some Joyners make Holes in the Tops of the Coffins,

Coffins, a Precaution which ought to be always and univerfally taken.

Thirdly, We ought to be in a particular Manner diffident with respect to those Deaths which succeed such Diseases as are not in their own Natures mortal, and which are easily distinguishable from less dangerous Disorders.

As we have already recommended a Diffidence with respect to all the Deaths which are not preceded by those Signs which are generally the Fore-runners of Death, 'tis but reasonable we should specify these Signs, in order to prevent Mistakes.

Every one, therefore, who has attentively observed Patients labouring under Disorders which terminated in Death, has perceiv'd, that Medicines seemingly the most proper, have either prov'd prejudicial, produc'd no Effect at all, or only afforded a very transitory Relief; and each of these Cases is an inauspicious and unlucky Sign.

According to Celsus, in Lib. 2. Cap. 6. the Signs of a quick approaching Death, or at least of a very dangerous Disease, are these

the SIGNS of DEATH. 191 these following. The Nose is pinch'd, the Temples funk, the Eyes hollow, the Ears cold, the Skin of the Forehead hard and tense, and the Colour of the Face black, or extremely pale. Celsus, however, obferves, that these Signs are not absolute Prognoftics of Death, except when they do not proceed from previous Watchings, from Fluxes, or from Hunger; in which Cases they only last for a Day. But if they are prolong'd beyond the Time, the Prognostic is the same. If they continue for three Days in a Diforder of long standing, Death is not far off; especially if at the same Time the Patient can't endure the Light; if he sheds Tears; if the Whites of his Eyes become red, and the Veins dispers'd through them pale; if the Liquor in the Eye adheres to its Angles; if one of the Eves becomes fmaller than the other; or if both of them become either hollow, or fo inflated that the Eye-lids cannot touch each other during Sleep, but allow a fmall Portion of the White to be feen: if the Eye-lids, Lips, and Nose are pale;

if the Eyes, the Nostrils, the Eye-lids, the Lips, the Eye-brows, or any of these Parts, are chang'd from their natural State; if the Weakness of the Patient is so great, that he neither hears nor sees; tho' at the same Time too exquisite a Sense or Hearing, is also a very bad Sign.

Death is also prognosticated when the Patient lies on his Back, contracts his Knees, falls down to the Foot of the Bed, uncovers his Arms and Legs, and toffes them from one Part to another, has his Extremities cold, is continually afleep, and being feiz'd with a Delirium, contrary to his Cuftom when in Health, has a Shattering of his Teeth: when an Ulcer form'd before or during the Diforder, is dried up, or becomes livid; when the Nails and Fingers become pale; when the Breath is cold; when, in Fevers, any acute Diforders, Madness, Pains of the Lungs or Head, the Patient picks the Bed-cloaths, and pulls any Eminences off the Wall; when Pains which have attack'd the inferior Extremities, and pass'd from thence to the Viscera, cease all

of a sudden; when the Pain of inflam'd Parts ceases all of a sudden; when without any Tumor a feverish Patient is suddenly fuffocated, or cannot fwallow his Saliva, or has his Neck so turn'd that he can swallow nothing; when the Fever is continual, and the Patient extremely weak; when in a Fever the Skin becomes cold, and the internal Parts are rendered fo hot as to produce Thirst; when in a Fever a Difficulty of Breathing or a Delirium comes on; when Sleep augments the Pain, and when in the Beginning of the Disorder the Patient vomits or purges black Bile; when the like Evacuations happen after the Body is exhausted by a long continued Disease; when cold Sweats happen in acute Diseases, or when in any Disorder the Patient vomits Blood, or a mix'd Substance of various Colours, and when the Urine is for a long Time aqueous, or becomes fo all of a fudden.

The greater Number of these Signs concurs, the more surely Death will be prognosticated. But we are with Celsus to ob-

ferve, that these Signs are not absolutely infallible, and that they are more fallacious in acute than in chronical Diseases.

These Signs are generally the Fore-runners of Death, because they proceed from an internal Instammation, or Gangrene, or a convulsive Motion of the nervous and membranous Parts, which is soon succeeded by a Stoppage of the Circulation, and consequently a Cessation of Life.

I intended to enlarge no farther on this Subject, my only Defign being to apprize the Reader of the Danger to which he is continually expos'd of being interr'd alive; a Danger not to be overlook'd, fince nothing is less certain than Life, or more uncertain than the Signs of Death, at least fuch Symptoms as are commonly taken for Signs of Death. But that the Work may be the more perfect, I shall add some important Reflections on the Accident which befel Vesalius, and an Account of the Meafures most proper to be taken for the Relief of drown'd Persons; and this Account, which was first published in 1740, has has gained such a Reputation in the World, that it has been abridg'd by Mr. Reaumur, inserted in the Memoirs de l'Acad. Royale, and by Mr. Argenson, first Minister of State to the King of France, distributed through all the Parts to which his Influence extended.

Mr. Winflow evidently proves, that the most cruel chirurgical Operations are sometimes insufficient to ascertain Death; and that Putrefaction is the only certain and infallible Sign of it.

From these Principles I conclude,

1st. That it is to no Purpose to use the most cruel chirurgical Operations: And

2d. That it is necessary to abstain from such as may prove mortal to the Patient. Mr. Winslow is indeed so far from recommending Operations of this last-mentioned Kind, that he calls the plunging a long Needle under the Nail of an Apoplectic Patient's Toe, rash.

But if Mr. Winflow thinks it rash to make a simple Puncture in a nervous Part, we ought not surely to entertain a favourable

Notion of the large and enormous Incisions made in Dissections.

Those, indeed, who are diffected, run no Risque of being interr'd alive. The Operation is an infallible Means to secure them from so terrible a Fate. This is one Advantage which Persons diffected have over those who are, without any farther Ceremony, shut up in their Cossins.

As those who reflect upon the Accident which happened to Vesalius, that before related by Terilli, and another which lately happened in France, are sensible that these Anatomists did not perceive their Subjects were alive, till they had rendered it impossible for them to escape Death; they must no doubt conclude that Dissections may sometimes prove mortal.

Though it is not faid that the Woman mentioned by Terilli died of the Operation, yet this no doubt happened, because she discovered the Signs of Life at the second Stroke of the Knife. But 'tis very certain that she underwent an Operation, which was not only dangerous in its own Nature,

the SIGNS of DEATH. 197 but also which laid a Foundation for long continued subsequent Dressings, during which the Patient is continually expos'd to fatal Accidents. In order to be convinc'd of this, no more is requisite than to consult such Authors as have wrote concerning the Gastroraphy, or Suture of the Abdomen.

The two unfortunate Persons who are the Subjects of the other two Histories, were not so happy, since they did not discover the Signs of Life till the Operation had rendered their Death infallible. These two Instances sufficiently convince us of the Uncertainty of the Signs of Death, of the Insufficiency of Chirurgical Tests, and their Danger when mortal in their own Natures, and of the Possibility of such an Abolition of all the Senses as would not be credible, was it not confirm'd by well attested Instances.

Hence it follows, that Perfons in fome Situations may fuffer crucial Incisions thro' the whole Extent of the Abdomen, without discovering any Signs of the remaining Principle of Life they have in them. Hence

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it also follows, that some Persons may, without the least Signs of Sensibility, suffer an Incision not only of the Abdomen, but also of the Teguments and Muscles which cover the Breast; of the Cartilages of the Ribs; of the intercostal Muscles; of the Pleura, that highly sensible Membrane which lines the Thorax, and even the Fracture of the Ribs, in order to discover the Heart.

The Historians, indeed, who relate the Accident which happened to Vefalius, do not inform us that he began his Operation on the Abdomen; but I have just Reason to believe that he did so; first, because he was passionately fond of Anatomy, and confequently cannot be suppos'd to have neglected any Opportunity of examining the State and Condition of the Abdominal Viscera: Secondly, because it was in his Time become customary to begin Diffections on the Abdomen, unless the Operator was absolutely certain that nothing preternatural was to be found there: And, thirdly, because the Causes of the Disorder being

the Signs of Death. 199

being unknown to that celebrated Phyfician, he cannot be prefum'd to have neglected the Examination of any Cavity of the Body in order to discover them. On which Supposition he must, no doubt, have begun by the Abdomen.

But granting that Vefalius began by opening the Breaft, 'tis still certain that he could not discover the Heart without taking the Steps already mentioned; and the History informs us, that he was not appriz'd of the Patient's being alive, 'till the Palpitation of the Heart evinc'd that important Circumstance.

It would be frivolous to object, that in the History of Vesalius Embalming is not meant; for it is not the Intention of the Operator which constitutes the Temerity, but the Nature of the Operation, and the Circumstances in which it is perform'd. Besides, 'tis easy to shew that Embalming is still more inevitably mortal than the Operation perform'd by Vesalius.

For that Anatomist only made a simple Incision in the Abdomen, in order to examine

200 The Uncertainty of

amine its Viscera; whereas in Embalming, the Intestines are taken out, and the Arteries and Nerves cut in the Mesentery adhere to the Border of the Intestines; a Circumstance which renders Death inevitable.

It may, perhaps, be faid, that the Pain excited by the Wound inflicted in these Membranes and Nerves may discover the Signs of Life.

The Answer is easy: Perhaps such a Thing may happen, but it must necessarily happen too late; for Embalmings are not fet about with the fame Precautions us'd in anatomical Diffections or chirurgical Operations. The fooner the Work is over the better. No Part is spar'd; the Knife and Biftery are us'd without Caution or Referve. But what is still more terrible is, that it is possible to make an Incision in the Mesentery, without rousing the Signs of Life; for 'tis certain that the Mesentery is much less sensible than the Pleura; and yet the Incision of the Pleura and Fracture of the Ribs, fucceeded by a Dilaceration of that Membrane, much more painful than

the SIGNS of DEATH.

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a fimple Incision, did not produce the Signs of Life in the Patient, who died under the Hands of *Vefalius*.

The third Accident I mention'd, also happen'd in Embalming.

Tis therefore certain, that Embalming may prove infufficient to produce the Signs of Life in due Time to preserve the Patient; that a Surgeon cannot proceed to that Operation without Danger of murdering the Patient, till he is absolutely certain of the Death; and that no one ought to attempt the Operation till the Signs of Putresaction are evident, and consequently an Error is rendred impossible.

Some Surgeons before they begin this Operation make Incisions in the Soles of the Feet; and their Intention is certainly laudable, since by this Means they think to ascertain the Death of the Subject. But if, as Mr. Winslow judiciously observes, it is Rashness to plunge a long Needle under the Nail of the Toe, it certainly must be the Height of Madness to make deep and long Incisions in these highly nervous and

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202 The Uncertainty of

fensible Parts, especially since such a Procedure may after all prove insufficient to produce the Signs of Life; for to what Missortune does not such an Incision expose a Subject, as yet alive, and consequently capable of being cur'd. The most superficial Knowledge of Anatomy and Surgery is sufficient to evince this, so that we may justly conclude, that Embalming cannot be safely undertaken, till Putresaction has sully ascertain'd Death.

MEASURES

To be taken for the Relief of those, who are thought to be drown'd.

HAT in populous Towns, and even in less considerable Places, situated on the Banks of Rivers, some Persons have almost every Year the Missortune to be drown'd, is a Truth not to be call'd in Question; but it is not equally known and believ'd, that many Persons taken out of the Water without any Appearance of Life, would be rescu'd from approaching Death, if, for a sufficient Time, the proper Means of Relief were afforded.

After some short Attempts, we continue to esteem as dead, those in whom all Appearance of Life feems to be extinguish'd, especially if they have remain'd for a considerable Time, a few Hours for Instance, in the Water; in which Case no Measures are taken for their Recovery. Histories, however, related by Authors worthy of Credit, fufficiently evince, that the Lives of Men who for feveral Hours have been not only in, but under Water, have been preferv'd, and that fometimes two Hours have elaps'd, before there appear'd any Sign that they were not really dead. The steep and dangerous Banks of some deep Lakes at Switzerland frequently occasion dismal Accidents of this Nature. The good Success of the Measures us'd for restoring such Perfons, fometimes fooner and fometimes later. have been publish'd in the Swiss Mercury, and these Measures we shall here enumerate: fince it is to be wish'd that they were univerfally known, that they could be put in Practice on all Occasions that require them, and that in putting them in Practice, the World

the SIGNS of DEATH. 205 World might discover Measures still more

efficacious and infallible.

Formerly it was thought the best and most expedient Thing that could be done, for the Recovery of the drown'd Person, to hang him up by the Heels; but fince, from the Diffections made by skilful Anatomists, 'tis certain, that drown'd Persons have generally less Water in their Stomachs, than if they had voluntarily drank a confiderable Quantity, it does not feem expedient to put the drown'd Person in a Position, which would prove uneafy as foon as the Humours of the Body should resume their ordinary Motion. It may however, happen, that the Person may have swallowed too much Water; then, in order to know whether he has or not, and to make him vomit it up if he has, 'tis proper to put him into a Tun, open at both Ends, and which for some Time is to be roll'd. backwards and forwards in different Directions. He may also be excited to vomit the Water by frequent introducing into the Œsophagus the bearded End of a Feather.

After

After taking off the Cloaths of the drown'd Person, instead of letting him lie stretch'd and naked on the Shore, which is too often the Practice, we ought with the utmost Expedition to shelter him from the Impressions of the cold Air, and begin to warm him by wrapping him up with Cloaths and Coverings.

In order to warm him the more effectually, he is afterwards to be put into a Bed, the Clothes of which are pretty warm, applying also frequently to his Body hot Napkins and Cloths.

There are Instances of drown'd Persons, on whom the Instances of a hot and scorching Sun, to which they have been expos'd, have produc'd the same happy Effects, which the warm Clothes have upon others. Some have been warm'd in hot Baths, but these are not on all Occasions to be had.

The great Intention to be pursued is, to put the folid Parts of the Machine in Action, that thus they may restore the Motion of the Fluids. In order to answer this

this Intention, the drown'd Person is not to be left in Bed in a State of Rest, but agitated in an hundred different Manners. turn'd from one Polition to another, lifted up and let fall, and shak'd in various Directions in the Arms of Persons of Strength fufficient for that Purpose,

Spirituous Liquors ought also to be poured into his Mouth; and where these cannot be had, it is customary to pour warm Urine into it, which has been observ'd to produce happy Effects. Some prescribe a Decoction of Pepper and Vinegar to be us'd as a Gargarism.

We must also attempt to irritate the internal Fibres of the Nose, either by volatile Spirits, and the Liquors used in Apoplectic Cases, or by tickling the Nerves distributed to the Nostrils by the bearded Part of a Feather, or by blowing into the Nostrils, thro' a Quill, Snuff, or some more powerful Sternutatory.

One of the Measures taken with such drown'd Persons as have been restor'd to Life, has been by Means of a Quill, or finall

fmall Pipe, to blow warm Air into their Mouths, that thus it might be convey'd into their Intestines; into which it has also been successfully introduc'd by Means of a Pair of Bellows. For this Purpose we may also use a Syringe, which might perhaps be still employ'd to better Purpose, in injecting warm Clysters capable of irritating the Intestines, and producing more considerable Effects than the Air generally convey'd to them.

But perhaps the most efficacious Method that can be taken with a drown'd Person, is by Means of a proper Pipe to blow the Smoke of Tobacco into his Intestines: There have been several Instances, at once of the speedy and happy Effects of this Smoke on drown'd Persons *.

None

^{*} The celebrated Dr. Mead in his Mechanical Account of Poisons, after mentioning that many who have been drowned, and dead to all Appearance, have been surprisingly recovered to Life, says, "This should certainly incourage

None of all these Measures specified ought to be neglected, since they may possibly concur to produce an happy and salutary Effect; but they will prove most successful, when taken under the Management and Inspection of a judicious Physician. If a Surgeon can be had, Venesection is by no Means to be neglected, and perhaps it is most commodiously instituted in the Jugular Vein; for in drown'd Persons, as well

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"the Use of all Means upon such Accidents, "especially since the Trial is not difficult. The first Step should be, to blow up the Smoke of Tobacco into the Intestines; then to warm the Body by shaking and rolling about, and rubbing it with warm Cloaths in Bed: In a Word, to put the Blood into Motion by all manner of Ways; and not to be discouraged, though no Signs of Life should be discovered after an Hour or two spent in this good Work: towards the latter End of which volatile Spirits and Salts may have a good Effect. Neither should Bleeding be omitted, when the Blood is become warm enough to drop out of the Veins."

as in those that are hang'd, or seiz'd with an Apoplectic Fit, the Veins of the Neck are too much distended and choak'd with Blood: Now if these Veins can happily be in some Measure emptied, they will be in a more proper Condition to act upon the Fluid they contain, and which, in order to restore the Patient, they ought to put in Motion.

When these Measures prove unsuccessful, the Surgeon's last Recourse is to Bronchotomy, or opening the Arteria Trachæa; for perhaps the Air entring freely into the Lungs, thro' the Aperture made in the Canal, thro' which they receiv'd it in their natural State, and the warm Air which may be blown thro' this Aperture, will restore the Playing of the Lungs and all the Motions of the Breast.

But we must carefully advise all those, who shall employ themselves in the humane and beneficent Office of restoring drown'd Persons, not to be discouraged, if the first Appearances do not answer their Expectations; for 'tis certain from Experience, that

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fome drown'd Persons have not begun to discover any Signs of Life, till they have been tossed about and tormented for more than two Hours. Besides, the Man who has succeeded in restoring to Life a Person, whose Death without his Assistance was certain, is sufficiently rewarded for his Pains by the Success; and if his Pains and Diligence should fail of their desired Effects, he will still receive an exalted Pleasure from a Restection on his having acted with the most noble and generous Views.

That the Plan of Mr. Winflow and Dr. Brubier may want no Circumstance to render it perfect, we shall in the last Place observe, that Bronchotomy, tho' commonly look'd upon as a formidable Operation, is yet of the last Importance for the Preservation of Life; since 'tis no less beneficial and effectual in Suffocations arising from Quinfeys and Inflammations of the Throat, than in those produc'd by Submersion, or what we commonly call Drowning.

Thus the celebrated Heister tells us, that if Perfons drown'd are already, tho' but just dead, their Aspera Arteria is to be open'd with all Expedition, either with an Incision-Knife, or any other Instrument the Surgeon shall judge proper; then 'tis expedient to blow strongly into the Orifice made either with the Mouth, or by Means of a Pipe, if any fuch thing is at hand, because in this Case above all others Delays are dangerous: For that justly celebrated Phyfician Dethardinguis, some time Professor of Physic at Rostoch, now at Copenhagen, in a Differtation on this very Subject, publish'd not long ago, informs us, that by this Method, if speedily put in Execution, Life returns to the suffocated Patient together with the injected Air, and that he is in a Manner miraculously rais'd from the Dead. For this Reason, I think the Operation is not in Cases of this Nature to be neglected, but performed whenever the Opportunity offers, with all the Haste and Expedition imaginable.

the Signs of Death. 213

I'm sufficiently appris'd, that a great many Physicians forbid an Incision in the Aspera Arteria, and consequently condemn this Operation, because they think it productive of Death, and are therefore prompted by a foolish Zeal to brand their Fellow-Physicians, who attempt an Operation so dangerous in their Eyes, with the odious Appellations of barbarous and inhuman. But the Gentlemen who are of this narrow and confin'd Way of thinking, are grofly mistaken; fince in this Operation the small Incisions made in the Aspera Arteria are so far from killing the Patient, that they do not even produce that Effect, when made confiderably large: For this Reason, we think ourselves justly authoriz'd with Casserius [in Tract. de Vocis Auditusque Organis] to pronounce those Surgeons unskilful, cowardly, and even cruel, who in Cases of this Nature foolishly neglecting the Operation, which is often fafe in itself, and attended with the most speedy and falutary Effects, fuffer the Patients to die for want of this proper and seasonable Assistance.

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214 The UNCERTAINTY of . "

That the Surgeon may not therefore be at a Loss to perform his Duty, and afford Relief, and even fresh Life to those who are drown'd, he may even perform this Operation in such of the following Methods as he shall judge most expedient, observing that the Part of the Trachæa most proper for the Aperture, is that situated between its second and third cartilaginous Annuli of Ringlets, tho' the Incision may be made a little lower without any Danger.

1. First then, the Patient is to be placed in a reclining Posture, either in a Bed, or in some convenient Chair, and his Head is to be held firm by an Assistant standing behind his Back; then a longitudinal Incision thro' the Skin, Fat, and Muscles is to be made from about two Fingers Breadth below the Cartilago Thyroides, or Scutiformis, or the Pomum Adami in the Middle of the Trachea down to the superior Part of the Sternum; so that the Length of the Incision may be equal to two or three, or even in tall Patients to sour Fingers Breadth.

Then

the Signs of DEATH. 215

Then an Affistant is carefully to draw the Lips of this Orifice from each other, either with proper Hooks or his Fingers; and having abforb'd and wip'd away the Blood, either by a Sponge or a Linen Cloth, for that the Afpera Arteria may be feen, three or four of the Ringlets of this Spiral are to be cut in fuch a Manner, as that the Incisions made in the whole may form one continued Line. This Method is but little us'd by modern Surgeons, and feems more proper to afford Relief, when a Bean, a Pea, a Cherry-Stone, or any other foreign Substance, falls into the Aspera Arteria, than to restore Life, when the Patient is suffocated, for want of Air, or by Means of Submerfion or Drowning, in which Cases the following Methods are more expedient.

2. The Patient is to be placed in a Bed or Chair with his Head reclin'd at the Surgeon's Discretion, and held firm by an Assistant, as we have already said; then let the Surgeon make an Incision in that middle Part of the Throat, and in that Man-

ner we have above directed, till he reaches the Trachea itself; or if 'tis thought proper, the Skin also on both sides may be laid hold of by the Surgeon and his Assistant; then it may be rais'd and cut longitudinally; after which, the Fat and Muscles lying above the Trachea may be cut: Some would have these Muscles previously disengag'd and warily separated from the Trachea; but there is no Occasion for all this Labour, fince they may be cut fafely and without any Danger. Then the Surgeon cleanses the Wound with a Sponge wrung out of warm Wine or Spirit of Wine, for the more effectual stopping of the Blood, and orders his Affistant to separate and retract its Lips, either by Means of proper Hooks or his Fingers: Then he passes his Knife between two of the Ringlets of the Trachea, or he may even pass it in such a Manner, as to divide one of them, fince by that Means any Silver or Leaden Pipe, whether round or flat, may the more conveniently be inserted into the Wound, for making the Inflation. But before the Sur-

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the SIGNS of DEATH.

geon withdraws his Knife a proper Probe is to be introduced by its fide, that the Pipe may be afterwards the more eafily inferted.

- 3. Another and more expeditious Method of opening the Trachea is this: A two-edg'd Knife is applied to the abovemention'd Part of the Throat, and cautiously pass'd thro' the Skin, Fat, and Muscles, into the Cavity of the Trachea itself, and a Pipe for making the Instation forthwith inserted into the Wound in the Manner already directed. This Method is not only more expeditious, but also leaves a less considerable Cicatrix than the former.
- 4. The fourth and last Method of performing this Operation is by Means of a Trocar, which is to be so applied to the Middle of the Trachea, as that it may at one Thrust be pass'd thro' the Skin, Fat, and Muscles, into its very Cavity; and having drawn out the perforating Part, let the Pipe remain in order to make the Instation.

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218 The Undertainty of

This Method was invented by Fredericus Dieker, sometime Professor of Physick at Leyden, who has describ'd it in his Exercit, Pract. This Method of performing the Operation seems in one Respect to have one Advantage of all the rest, which is, that it is soon over; and the Pipe at the same Time introduced into the Wound with far greater Ease, and with much less Pain to the Patient, if he has still any Life in him. But even when the Operation is perform'd in this Manner, great Caution and Circumspection are necessary.

After the Operation is perform'd in any of these Manners, the Wound is to be heal'd by keeping its Lips in Contact by Means of adhesive Plaisters, and the Application of proper Compress and Bandage. 'Tis afterwards to be carefully conglutinated by the vulnerary Balsams proper in other Wounds of the Aspera Arteria. Some, in order to induce a more speedy and seemly Cicatrix, recommend the Method of Conglutination by Suture, as in the Cure of the Hare-Lip

the Signs of Death. 219

by passing Needles thro' the Lips of the Wound: But 'tis no doubt highly improper to follow a Practice, which is attended with immense Pain to the Patient, when at the same Time a Method, which is not only far milder, but also equally safe and secure, may be fallen upon.

FINIS.



